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Strategic Mobility
TRANSFORMATION
Can the USAF get there?
. . . See page 11
Short-notice Deployment:
the US Army in East Timor
. . . see page 2

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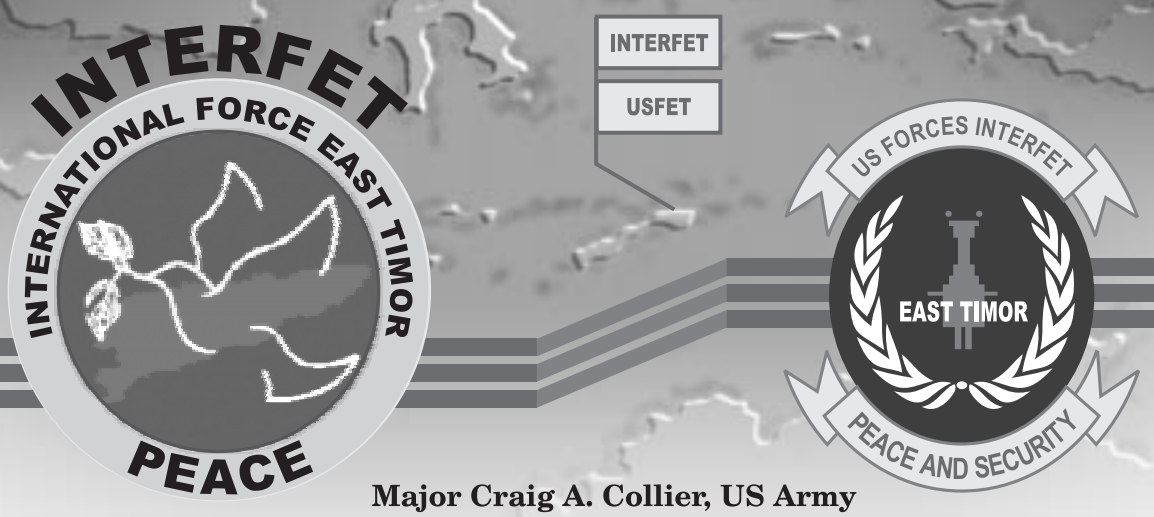
CONTENTS

A New Way to Wage Peace:

US Support to Operation *Stabilise*



Major Craig A. Collier, US Army

East Timor represents the past, present and future of US Army operations. Worldwide deployments were a hallmark of 20th-century operations, and peacekeeping missions have dominated the past decade. In the coming years, support to coalitions may become the new paradigm as the US military leaves leadership roles to other countries. Collier reports on the Army's deployment in a surprising direction and its participation in successful multinational operations.

AS THE UNITED STATES GROWS increasingly weary of taking the lead in peace operations, it may prefer providing discrete support to ally-led coalitions. For a small, succinct and inconspicuous mission, successful US support to the Australian-led Operation *Stabilise* could have a greater influence than its obscurity would otherwise indicate.

The island of Timor lies near the eastern end of the Malay Archipelago, roughly 350 miles north of Darwin, Australia. East Timor was a Portuguese colony for more than 400 years until the Portuguese dismantled their empire and abruptly left in mid-1975. Indonesia filled the vacuum, invading East Timor on 7 December 1975. Since then, the often-bloody and internationally ignored campaign has continued between independence-seeking guerrillas and the Indonesian military (TNI). In the 1990s international awareness began to grow as details of the conflict's more horrific atrocities reached Western news organizations. Indonesia faced mounting international criticism and threats of economic sanctions for its uneven stewardship of East Timor.[1]

The conflict boiled over on 30 August 1999 after the results of a United Nations (UN)-sponsored referendum became public. The people of East Timor voted overwhelmingly to reject Indonesian rule in favor of independence. Supported by elements of the Indonesian army, local militia groups immediately began a rampage throughout East Timor. Unable to control the situation and with international pressure mounting, the Indonesian government reluctantly agreed to allow a UN-authorized force to enter East Timor.

On 15 September 1999 the UN authorized the creation of International Force-East Timor (INTERFET). Requesting support from other nations, Australia volunteered to take the lead and provide the bulk of the troops. INTERFET's mandate from UN Security Council Resolution 1264 was to restore peace and security in East Timor; protect and support the UN Mission in East Timor (UNAMET), the

organization tasked with administering the referendum; and within force capabilities, provide humanitarian assistance.[2]

When the first Australian and coalition units arrived on 20 September, much of East Timor lay in smoldering ruins. News reports showed block after block of burned-out buildings in the capital, Dili. Most of the terrified populace had either retreated into the hills or been rounded up and sent across the border either into Indonesian-controlled West Timor or neighboring islands. The press frequently reported that as many as 300,000 people had fled East Timor—out of a population of 850,000—and that most of those who remained were in the hills starving, too scared of the militia to return to the cities. Rumors abounded of Balkan-style atrocities. As many as 30,000 were reported killed in the three-week rampage.[3]

Asia-Pacific Defence Reporter

(*Above*) Australian soldiers patrolling East Timor. (*Left*) INTERFET Commander Major General Peter Cosgrove speaking with Brazilian troops in East Timor.

Forming US Forces INTERFET

On the same day that the UN authorized INTERFET, US President William J. Clinton established US Forces INTERFET (USFI). Clinton said that "a few hundred [personnel], in a clearly supportive capacity would deploy."[4] The United States would provide logistics, intelligence, communications, civil affairs, and operations and planning augmentees for the INTERFET staff.[5]

Commander in Chief, US Forces Pacific, Admiral Dennis Blair directed the III Marine Expeditionary Force (MEF) to establish a headquarters for USFI in Darwin.[6] Blair designated US Marine Brigadier General John G. Castellaw as commander, US Forces INTERFET. Most of Castellaw's key staff members came with him from the III MEF, but all services provided individual augmentation.

The 613th Air Expeditionary Group, Pacific Air Forces, provided three C-130s. The US Navy initially supplied heavy-lift support, using helicopters from the amphibious ships USS *Belleau Wood* and USS *Peleliu*. The Army provided most of the intelligence and communications assets and all of the civil affairs support. All of the services provided individual planning expertise to INTERFET, most notably on the C2, C5, C6, Air Coordination Command and Naval Coordination Command staffs. More than 6,000 US forces personnel eventually participated in Operation *Stabilise*, with the majority assigned to the two Marine expeditionary units/amphibious readiness groups that supported the mission. More than 230 US soldiers deployed to support Operation *Stabilise*, so at any time, about 70 percent of the ground forces in East Timor were Army.[7]

USARPAC conducts 35 joint and combined command post and field training exercises annually as part of its Expanded Relations Program. . . . Australia and Singapore regularly exchange officers with US units. Five Australian signal officers involved in Operation* Stabilise *were alumni of this program . . . and a former exchange officer served as a signal officer with Australia's Land Component Headquarters. . . . He was able to match Australian requirements precisely with US capabilities.

From Australia to East Timor

On 1 October, after establishing the headquarters and while gathering the support forces in Darwin, USFI began to send INTERFET planning staff augmentees and other mission-essential personnel into East Timor. The primary concern throughout the operation was force protection. Dili remained tense despite the arrival of INTERFET forces because of continued TNI presence, hidden militia

News media covering the fighting on East Timor. As many as 30,000 people were reported killed in the three-week rampage.

Journal do Exército

Most of the terrified populace had either retreated into the hills or been rounded up and sent across the border either into Indonesian-controlled West Timor or neighboring islands. The press frequently reported that as many as 300,000 people had fled East Timor — out of a population of 850,000 — and that most of those who remained were in the hills starving, too scared of the militia to return to the cities.

members and skirmishes with Australians near the border. No one was really sure how the militia or the Indonesian army would respond to INTERFET. One militia leader boasted, "We East Timorese are thirsty for the blood of white people."[8]

Castellaw designated Army Component Commander Colonel Randolph P. Strong as Commander of US Forces-East Timor (USFET), subordinate to USFI.[9] Strong and his staff deployed to Dili in mid-October. Most of the USFET staff came from Headquarters, US Army Pacific (USARPAC), with some augmentation from the other services. The USFI staff remained in Darwin.[10] Remaining US forces deployed to East Timor when force-protection conditions allowed.

Intelligence support. USFI provided 46 personnel to INTERFET for intelligence support. Six personnel operated Trojan Spirit II, which downlinked classified information via satellite; eight others provided counterintelligence support and expertise; the rest were integrated into the INTERFET C2 staff.

US intelligence support personnel began to redeploy in mid-November, much earlier than originally planned. With the situation calming, INTERFET could assume US intelligence responsibilities. After demonstrating its reliability, the Australian Joint Intelligence Support System (JISS) replaced Trojan Spirit II in late November. The remainder of the intelligence support team redeployed after training their INTERFET counterparts.

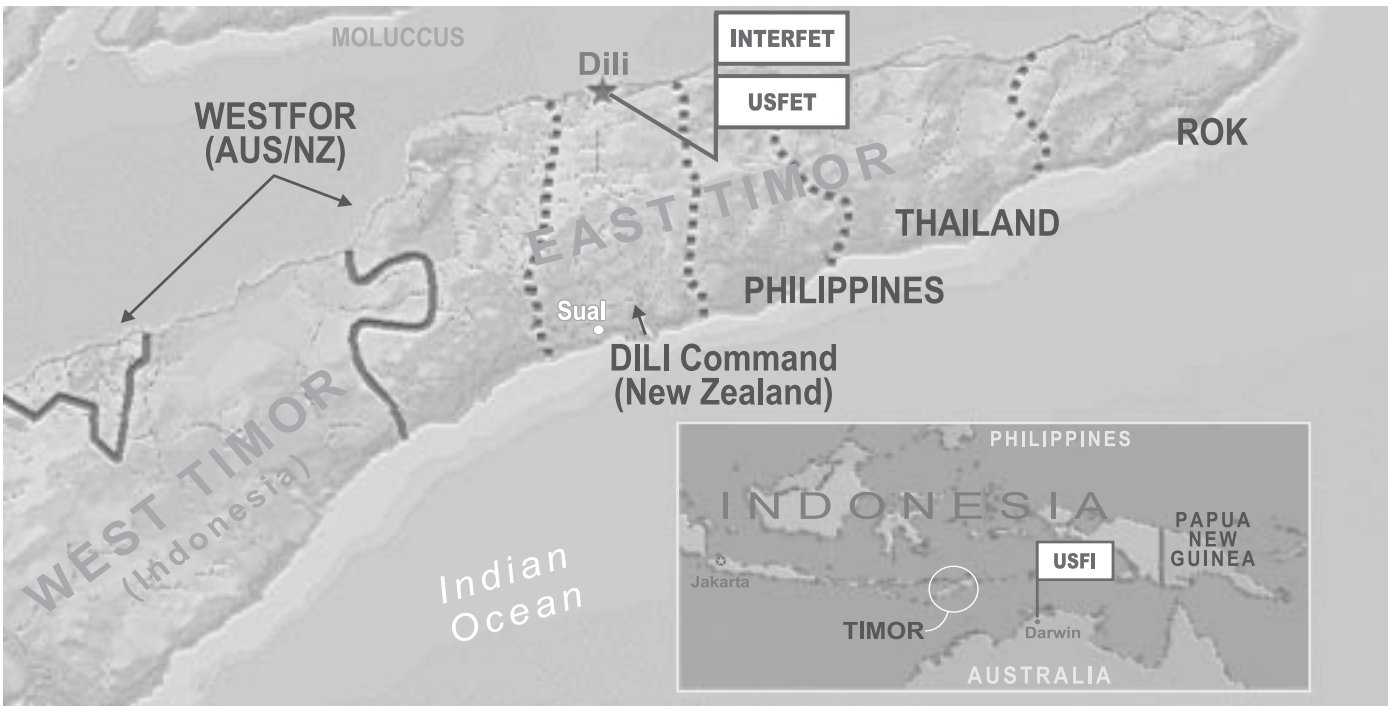
Task Force *Thunderbird*. The 11th Signal Brigade, Fort Huachuca, Arizona, provided long-haul voice- and data-communication support to INTERFET. The brigade studied the requirements and tailored a communications support package based on INTERFET needs.

Task Force (TF) *Thunderbird* was the largest US asset in East Timor and by far the most expensive to bring into theater. It arrived at Darwin Royal Australian Air Force Base in 12 C-5s and one C-17 in early October.[11] At the height of the operation, communicators had 57 pieces of rolling stock and 83 soldiers deployed at six locations throughout East Timor, with another 40 remaining in Darwin to provide communications support to USFI headquarters. Most of TF *Thunderbird's* equipment deployed to East Timor from Australia by sea. Like other assets, TF *Thunderbird's* elements often waited to move to their final locations while supported units made the necessary force-protection preparations.

The East Timor communication infrastructure, largely destroyed during the militia rampage, had to be rebuilt before TF *Thunderbird* could redeploy. The Australian government contracted the rebuilding of the communication system, with a planned completion date of 15 December 1999.

The civil-military operations center. Twelve soldiers from B Company, 96th Civil Affairs Battalion, Fort Bragg, North Carolina, were the first US Army personnel to arrive in Darwin. Their mission was to establish a civil-military operations center (CMOC) in East Timor and then train INTERFET forces. The CMOC coordinated nongovernment, private voluntary and UN relief efforts with military operations.[12] Humanitarian-assistance organizations benefited greatly by having access to military helicopters. The CMOC's efforts helped INTERFET facilitate humanitarian assistance.

Most of the civil affairs soldiers waited in Darwin until force-protection conditions became accept-



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able. Before deploying to Fort Bragg, the 96th Civil Affairs Battalion established the CMOC and handed off control in early November to 10 US Army Reserve soldiers from the 322d Civil Affairs Battalion, Fort Shafter, Hawaii.

All civil affairs soldiers had the additional mission of working themselves out of a job—that is, teaching and training foreign soldiers assigned to the CMOC. From the beginning the goal was to hand over civil-military operations to other INTERFET forces as soon as they could operate the CMOC.

Heavy lift. The only way to bring food and supplies into the difficult-to-reach interior was by truck or helicopter. INTERFET forces lacked vertical lift, so some of the most important US lift assets were medium- and heavy-lift helicopters. From early October through November the *Belleau Wood* and *Peleliu* took turns providing CH-46 Sea Knight and CH-53E Super Stallion helicopters.

Operation *Kitchen Sink* was a typical heavy-lift helicopter mission that showed Army assets supporting INTERFET. At one CMOC daily meeting, a representative from a relief organization requested assistance to transport kitchen utensils and other supplies to Suai, a small border town on the south coast. He had only one truck with which to move 12,000 pounds of supplies across Timor's spine. He estimated that getting the supplies to Suai would take at least two months, provided the monsoons did not wash out the dirt roads across the mountains. The 96th Civil Affairs Team at the CMOC referred him to the US Marine liaison officer from Dili, who coordinated with the *Peleliu* using communication equipment installed by TF *Thunderbird*. A few days later, two CH-53s moved the 12,000 pounds of supplies to Suai in one afternoon.

Replacing the *Peleliu* with another amphibious ship was simply too costly, so the US Pacific Command decided to contract the services, then tasked the US Navy to provide funding for heavy-lift helicopters.

Ironically, the Navy turned to the Army to administer the $10-million contract. A contract representative from Army Materiel Command's newly formed Logistics Civil Augmentation Program Support Unit arrived in East Timor in mid-November to begin coordinating with INTERFET. The prime contractor, DynCorp, agreed to provide two Russian

COL Randy Strong, US Army

Concertina wire, sandbags and a makeshift guard post improved security at the US forces headquarters compound, but generally USFI relied on coalition partners for force protection.

In most cases the supported unit welcomed the US perspective and immediately improved security. However, several times supported units believed their security was adequate and that US personnel were being too rigorous. This disconnect required diplomacy, but foreign contingents understood that failure to provide adequate force protection would delay US support. In every case the host unit complied with requirements, and US forces moved in.

MI-26 Halo helicopters and two MI-8 Hip medium-lift helicopters. A new section of runway apron was built at Dili's Komoro Airport to accommodate the huge MI-26s. The MI-8s arrived first, with the MI-26s on station by mid-December. All four aircraft supported INTERFET missions from December 1999 through the end of February 2000.[13]

Force protection. In any deployment, balancing force-protection requirements with mission needs is unavoidable and sometimes contradictory. Operating in a supporting role as part of a coalition further complicates the issues. Other armies may not share US force-protection concerns. The contingents supporting Operation *Stabilise* were no exception.[14]

Protecting US forces meant ensuring that USFI had rock-solid measures in place, but establishing the appropriate level of force protection at ransacked and vandalized compounds took time.[15] Until USFI had proper security, INTERFET staff augmentees worked in Dili but slept aboard US Navy ships anchored in Dili Harbor. By mid-October the main US compounds had adequate force protection in place, allowing US assets to stay permanently.[16]

Every nation involved in Operation *Stabilise* had different standards for force protection. Even within a nation's armed forces the standards varied from service to service and unit to unit. US measures for force protection were usually significantly more stringent than others.[17]

Before Americans could work at these locations, a USFI team inspected and certified them for force protection. The USFI team met with the supported officer in charge, reviewed the entire defense plan and explained what measures needed to be established. The team verified that the necessary corrections were in place before US personnel moved in. Castellaw decided which compounds met US force-protection standards before US assets deployed to East Timor.

Most often the supported unit had some force-protection measures already in place, but they were not considered adequate to protect US forces. In most cases the supported unit welcomed the US perspective and immediately improved security. However, several times supported units believed their security was adequate and that US personnel were being too rigorous. This disconnect required diplomacy, but foreign contingents understood that failure to provide adequate force protection would delay US support. In every case the host unit complied with requirements, and US forces moved in.

Sometimes various forces simply agreed to disagree. For example, after the monsoon's first rain season, backed-up sewers and drains flooded the INTERFET-run outdoor dining facility. The USFET preventive medicine noncommissioned officer recommended that US personnel return to meals, ready to eat, until several measures ensured that food preparation complied with US sanitary standards. The decision saved US personnel from the gastrointestinal illnesses that plagued other contingents.

The USFI established familiar force-protection procedures. For example, any US citizen deploying to East Timor wore Ranger body armor or a flak vest; USFI monitored the movement of all personnel; and all vehicles carried communication equipment. Also, all US military personnel brought extra malaria pills, carried mosquito netting and wore permethrin-impregnated uniforms. Through these efforts—and good fortune—only one US soldier contracted a vector-borne disease. However, from 20 September 1999 to 1 April 2000, INTERFET and UN forces suffered 191 cases of malaria and 324 cases of dengue fever.[18]

The terrain and climate of East Timor made transportation a challenge and provided a breeding ground for disease. (*Inset*) A giant MI-26 (note the man standing below the nose), one of four contract helicopters USFI provided for INTERFET. The heavy-lift helicopter contract was funded by the US Navy and administered by the US Army. The US prime contractor subcontracted Russian-built helicopters flown by former Warsaw Pact pilots to support an Australian-led coalition.

COL Randy Strong, US Army

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Unique, limited support. USFI was at the end of a long line of communication, brought only essential personnel, and supported missions planned largely by Australia and other INTERFET contingents. US forces were clearly members of the supporting cast—without a sector or area of responsibility of their own. In this environment, establishing a good working relationship with INTERFET was critical. Castellaw established rapport by assigning US liaisons to key INTERFET staff sections, which benefited both INTERFET and USFI. INTERFET received expertise and a visible sign of US commitment, and liaisons kept USFI informed of upcoming missions.

Because of limited assets, USFI often coordinated with INTERFET for logistic requirements, particularly transportation. Visiting dignitaries usually required additional transportation and security. Since INTERFET also had limited assets, missions to support and dignitaries to entertain, meeting those requirements was not easy.[19] Keeping a small footprint required innovation and flexibility to do more with less. For example, the J2 and J6 performed the additional duties of watch officer and public affairs officer.[20]

"Mil-to-mil" engagement. USARPAC conducts 35 joint and combined command post and field training exercises annually as part of its Expanded Relations Program (ERP). Most of them involve one or more members of the Association of Southeast Asian Nations. In fact, at the same time Operation *Stabilise* began, so did *CROCODILE '99*, a combined Australian-US exercise. These exercises train US soldiers and strengthen the relationship between the United States and its allies.[21]

A useful byproduct of these exercises is the interaction among the services. Within a three-year tour, soldiers often find themselves working with the same sailors, airmen and Marines with whom they worked in earlier exercises. In fact, many personnel involved in Operation *Stabilise* had worked with familiar members from sister services in one or

TF *Thunderbird*, based at the ravaged Dili University compound, provided critical secure and nonsecure voice and data communications to both INTERFET HQ and US forces. TF *Thunderbird* made up almost half of US personnel deployed to East Timor.

11th Signal Brigade

The US effort in East Timor validated the concept of focused US support as a subordinate command in successful multinational peace operations. Establishing a joint headquarters helped US forces translate national commitment into the right troop-to-task support. Although it is difficult to quantify the benefit of combined exercises and officer exchanges, these opportunities smooth operations with allies when crises arise.

more exercises. This experience reduced the time needed to integrate staffs.

In addition, as part of the ERP, Australia and Singapore regularly exchange officers with US units. Five Australian signal officers involved in Operation *Stabilise* were alumni of this program.[22] One extraordinary example of the value of these exchanges involved TF *Thunderbird*. Australian Army Major John Wilson, a former exchange officer with the 11th Signal Brigade, served as a signal officer with Australia's Land Component Headquarters during Operation *Stabilise*. He was able to match Australian requirements precisely with US capabilities. "I could tell you what we needed right down to the bumper number on the vehicles," he claimed.[23]

Redeployment strategy. Before all US assets deployed to East Timor, Castellaw began devising a redeployment strategy. Fortunately, even as early as October, the situation in East Timor appeared to be improving. The Indonesian army began to evacuate its forces, and when unrepentant militia stood and fought, they lost to INTERFET ground forces in lopsided border skirmishes. The timetable for completing the mission was actually pushed forward. Based on INTERFET's goal to complete the peace enforcement by 15 January 2000, Castellaw's goal for the redeployment of US assets was 15 December 1999.[24]

The ambitious time line forced USFI to define the end state quickly and begin executing actions necessary to meet the target date. The key step was determining when US support would no longer be required. The supporting US role made it easier for USFI to plan and execute its exit strategy.[25] Castellaw based redeployment time lines on successfully setting up commercial alternatives, training replacement forces and knowing US support was no longer required.

Castellaw briefed INTERFET Commander Major General Peter Cosgrove on the redeployment plan.[26] Cosgrove supported the plan and ensured Australian communication contractors stuck to their time line, which was crucial to TF *Thunderbird*'s redeploying on schedule. US forces redeployed as the mission and available sea- and airlift allowed.

The last major US Army element to leave East Timor was TF *Thunderbird*, which remained until

most of the commercial communication system was up and running. Except for three officers left behind on the INTERFET staff, the last 50 soldiers, sailors, airmen and Marines redeployed to Darwin on 17 December. The mission was successful, with no embarrassing incidents or US casualties.

The US effort in East Timor validated the concept of focused US support as a subordinate command in successful multinational peace operations. Establishing a joint headquarters helped US forces translate national commitment into the right troop-to-task support. Although it is difficult to quantify the benefit of combined exercises and officer exchanges, these opportunities smooth operations with allies when crises arise. The ubiquitous US concern with force protection can be reconciled within a coalition without putting US forces at unnecessary risk. Finally, a supporting US role helps establish exit criteria and the early redeployment of US forces.

More than 6,000 US forces personnel eventually participated in Operation* Stabilise, *with the majority assigned to the two Marine expeditionary units/amphibious readiness groups that supported the mission. More than 230 US soldiers deployed to support Operation* Stabilise, *so at any time, about 70 percent of the ground forces in East Timor were Army.

During Operation *Stabilise*, US participation was meager in comparison to the 8,000 personnel sent by the other INTERFET forces, yet US assets were significant force multipliers. US support—communications, intelligence, civil affairs, heavy lift and planning expertise—is typical of the unique and important assets that many US allies lack and the kind that will most likely be requested in future operations. ***MR***

NOTES

1. US Department of Defense, "East Timor," *INTERFET Handbook* (October 1999), 36-37.
2. UN Security Council Resolution 1264, para 3, available online at <www.un.org/peace/etimor/docs/9936481E.htm>.
3. The reports of those killed by the militia were exaggerated. Although the militia committed some gruesome atrocities, at the end of November 1999, just under 700 bodies had been discovered. Reports of thousands of starving Timorese also appear overblown.
4. "Remarks made by US President William J. Clinton upon departure from Auckland, New Zealand," available online at <www.fas.org/mad/dod-101/ops/docs99/990914-timor-wh1.htm>.
5. *US Forces INTERFET After Action Report* (USFI AAR), Part I, "Executive Overview" (11 February 2000), 1. Part II contains the detailed individual lessons learned.
6. ADM Dennis Blair decided not to stand up a joint task force (JTF) because of the US supporting role. Instead of JTF *East Timor*, the US effort became known as US Forces INTERFET (USFI). For a discussion of how that decision affected the mission, see the USFI AAR, Part I.
7. Ibid.
8. Ron Moreau and Jeffrey Bartholet, "Marching Into a Trap," *Newsweek* (22 September 1999), available online at <www.newsweek.com/nw-srv/printed/int/asia/ovin0313_1.htm>.
9. COL Randolph P. Strong, a signal officer with previous contingency operations experience in Bosnia, is also Commander, 516th Signal Brigade and Deputy Chief of Staff, Information Management (DCSIM), USARPAC, Fort Shafter, Hawaii.
10. Both BG John Castellaw and COL Strong arrived with a core of Marines and soldiers who had worked together at their home stations. On the ground, and as the mission's size and scope clarified, each commander augmented his staff with subject matter experts. Strong's J2, J3, J4 and J6 staff included US Army officers from USARPAC. The J1, camp commandant, operations noncommissioned officer (NCO) and Marine expeditionary unit (MEU) liaison officers were Marines; the preventive medicine NCO was Navy; and the Catholic chaplain was Air Force.
11. Bill McPherson, "The East Timor Tapes: An Interview with Colonel Randolph P. Strong, commander, US Forces East Timor (October-December 1999)" *Pacific Voice* (Special Edition, Spring 2000), 15.
12. US Army Field Manual (FM) 100-23, *Peace Operations* (Washington, DC: US Government Printing Office, December 1994), 40.
13. James Folk and LTC Andy Smith, "A LOGCAP Success in East Timor," *Army Logistician*, July-August 2000, available online at <www.almc.army.mil/alog/julaug00/ms566.htm>. This issue contains a special section devoted to East Timor, particularly contracted support.
14. To some, US insistence on adequate force protection before moving in was, to paraphrase one INTERFET officer, "beneath the world's only superpower." The US interest in force protection substantially improved everyone's security but may have cost some credibility by insisting on better force-protection conditions than our coalition partners thought necessary.
15. "DoD News Briefing" (12 September 1999), available online at <www.fas.org/man/dod-101/ops/docs99/t09141999_trfg-914.htm>.
16. Most US forces lived and worked in the "cultural section" downtown Dili. USFET headquarters was the former home of the labor ministry, while TF *Thunderbird* shared the partially destroyed Dili University compound with an Australian topographic unit.
17. During the height of US support to Operation *Stabilise*, the United States provided personnel in five towns in East Timor. Within Dili, USFI supported INTERFET at six locations. Within the "Dili Precinct"(a guarded and patrolled area of about five square blocks located in the city center), US personnel worked and lived at six compounds. US forces coordinated force-protection requirements with Australian, New Zealand, Thai, Brazilian, Filipino and British forces.
18. "Malaria, Dengue Take Toll on Troops," *The Age* (Melbourne, Australia) available online at <www.theage.com.au/breaking/0004/03/A46759-2000 apr3.html>.
19. During one memorable discussion while coordinating for two US senators' visits, an exasperated Australian army major in the INTERFET visitor's coordination cell asked me a series of questions on the US legislative branch: "How many congressmen do you have?" "How many senators?" I was mildly impressed that he took such an interest until his last question: "And how many of them intend to visit us?"
20. USFET entertained many dignitaries, including six generals, three ambassadors and several other officials, so public affairs became a significant additional duty.
21. "Expanded Relations Program," available online at <www.usarpac.army.mil/docs/expan.htm>.
22. Robert K. Ackerman, "U.S. Forces Provide Deployable Communications to East Timor," *Signal,* April 2000, 45.
23. Dennis Steele, "End State," *Army Magazine*, available online at <www.ausa.org/armyzine/steele3feb00.html>.
24. In October, MG Cosgrove told his staff that the target date for changing the flag from INTERFET to the UN Transitional Administration-East Timor (UNTAET); that is, when the mission could change from peace enforcement to nationbuilding, was 15 January 2000.
25. USFI AAR, Part I, 25.
26. Mission Analysis/Redeployment Briefing given to Cosgrove in Dili on 11 November 1999.

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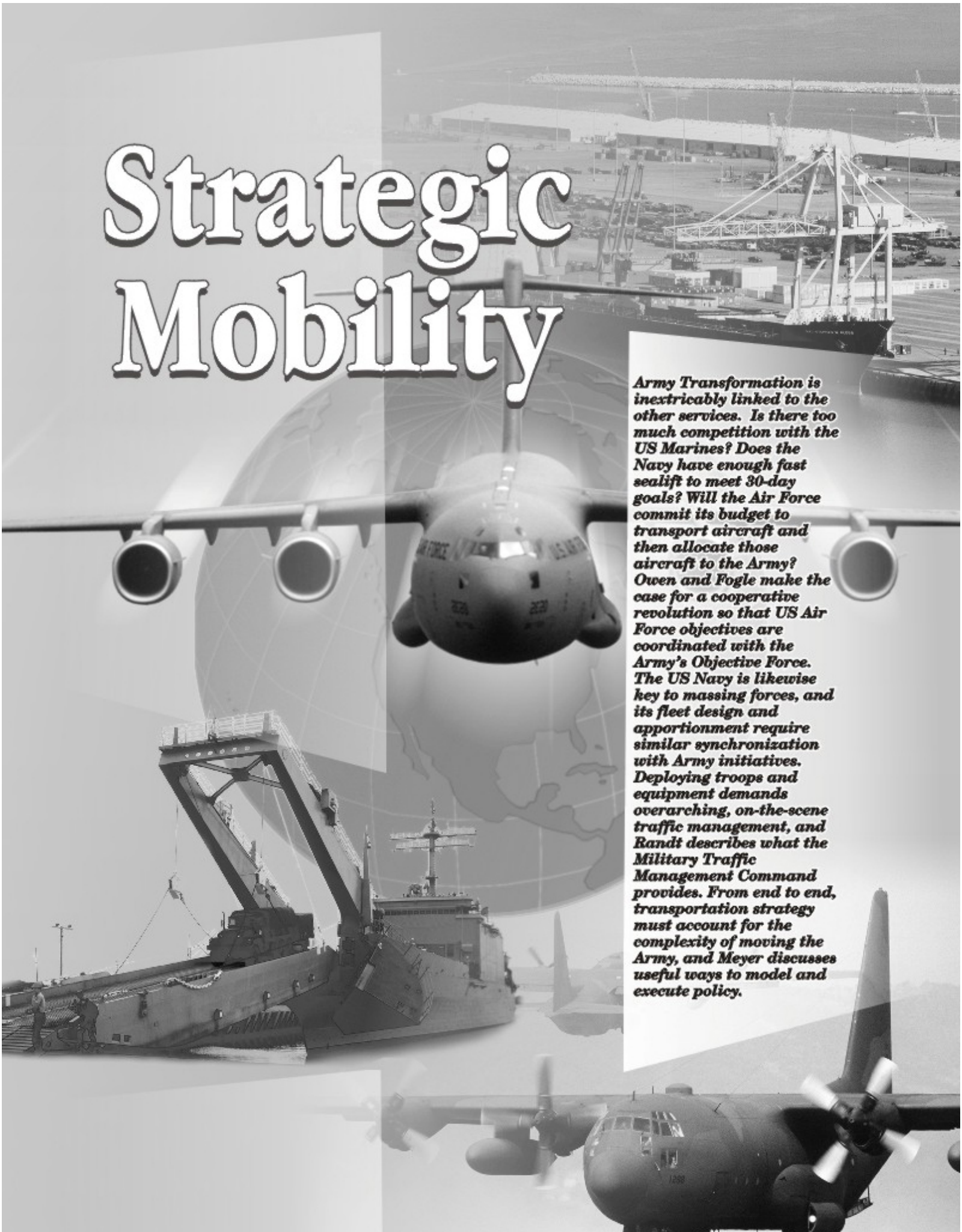
Strategic Mobility



Army Transformation is inextricably linked to the other services. Is there too much competition with the US Marines? Does the Navy have enough fast sealift to meet 30-day goals? Will the Air Force commit its budget to transport aircraft and then allocate those aircraft to the Army? Owen and Fogle make the case for a cooperative revolution so that US Air Force objectives are coordinated with the Army's Objective Force. The US Navy is likewise key to massing forces, and its fleet design and apportionment require similar synchronization with Army initiatives. Deploying troops and equipment demands overarching, on-the-scene traffic management, and Randt describes what the Military Traffic Management Command provides. From end to end, transportation strategy must account for the complexity of moving the Army, and Meyer discusses useful ways to model and execute policy.

Air Mobility Command and the Objective Force: A Case for Cooperative Revolution

Colonel Robert C. Owen, US Air Force, and
Captain Todd A. Fogle, US Air Force

NOW IS A GOOD TIME to explore the correlation between US Army modernization programs and those of the US Air Force's Air Mobility Command (AMC). The Army is in the midst of a fundamental organizational and conceptual transition toward the Objective Force. Whatever its final form, the Objective Force will greatly depend on the ability to deploy rapidly by air.[1] AMC likely will remain the Army's primary source for high-capacity airlift for both inter- and intratheater movement.

Army aviation may evolve to provide specialized portions of the Objective Force's battlefield and perhaps theater air-mobility support. But any effort to replicate AMC's extensive capabilities in the common-user fleet would be wasteful and doubtfully viable in the defense budget process. The Objective Force will not be established fully for 20 years or more. This corresponds roughly to the time required to develop and field any new required aircraft and support systems. It is time to review the Army and AMC modernization programs because the future Army will need abundant air-mobility support. AMC will be the source for most of that support, and there is time—perhaps just barely—to adjust one or both programs to accommodate emerging requirements and technological opportunities.

The Objective Force's Air Mobility Requirements

The Objective Force is the Army beyond 2010. The Objective Force concept emerged from an Army transformation process that began with the Louisiana Maneuvers in 1992, followed by the Army After Next development program that began in 1996, which was adjusted because of the Army's difficult mobility experience during the movement of Task Force *Hawk* in 1999. With the greater complexity of the strategic environment and rapid development of precision weapons, senior Army leaders saw the need for revolutionary change in doctrine, organization and equipment.[2] Their vision is to develop a force that is "deployable, agile, versatile, lethal, survivable, sustainable and dominant at every point along the spectrum of operations."[3] The US Army chief of staff has called for these developments to "enable our divisions . . . to transition rapidly from one point on that spectrum of the future security environment to another."[4] Deployability is an important element of this vision. AMC Commander Major General Charles S. Mahan Jr. stated recently, "You are not relevant if you can't get to the fight."[5]

The Army's transition program has three main axes.[6] The core axis consists of doctrinal and technological developments that lead to converting most of the Army's combat units into a standardized Objective Force configuration. Meanwhile, the Army continues to modernize its "Legacy Force" to preserve its combat capabilities until its units convert to the Objective Force standard. The Army's third transformation axis is a program to transition up to eight of its brigades into interim brigade combat teams. In the near term, this program will allow land commanders to deploy medium-weight, highly mobile forces to crises. The transitional brigades' intermediate objective is to provide unit platforms upon which to refine the Army's understanding of the Objective Force.[7] In the long term, these units also should convert to the Objective Force standard.

The distinguishing characteristics of transitional brigades and the Objective Force are their technological philosophies. The initial brigades at Fort Lewis, Washington, are equipping as medium-weight mechanized units based on off-the-shelf combat vehicles and other equipment. The interim brigades likely will field more-advanced interim armored vehicles and other materiel.

The Objective Force's technological hallmark will be the Future Combat System (FCS). The FCS will be a common vehicle or system of vehicles whose variants will serve as main fire-support vehicles, troop carriers, engineer and transport vehicles, and perhaps self-propelled, indirect-fire-support platforms.

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Although the FCS is still only a concept system, service planners expect that its weight and logistic requirements will be far lighter than current battle tanks and armored fighting vehicles "but still [will] be able to handle any threat."[8] Planners expect the system to achieve power and survivability through advanced weapon and protective systems; tactical agility; extensive fire support from land- and air-based systems; digital links; and organic reconnaissance, surveillance and target acquisition (RSTA) support.[9] The FCS will be "the materiel centerpiece of the Army's effort to create a force that has something like the deployability of current light forces and the hitting power of current heavy forces."[10] Acknowledging the FCS's central importance to its future, the Army announced in January 2000 that it would spend $870 million between 2001 and 2005 to develop the system for fielding by 2012, about 13 years ahead of schedule.[11]

The success of these transition axes depends on global and theater air mobility. The Objective Force will be able to deploy a brigade anywhere in the world in four days, a full division in five days and five divisions in 30 days.[12] Clearly, the "4-day" brigade could only go by air. Army logistic planners are considering very fast ships (55 knots+) to move some of the initial combat elements, nearly all of the sustainment requirements of the "5-day" division and most of the "30-day" force. Those planners assume that initial and some follow-on forces and sustainment will have to move by air. Accordingly, the Army has predicated the Objective Force's physical characteristics on the carrying capacities of the C-5, C-17 and C-130 fleets. In describing vehicles and other combat systems that would go into the initial brigades, one Army spokesman said simply, "If it doesn't fit into a C-130, it doesn't go into the brigade."[13] This restriction also applies to the FCS that Army planners expect to "weigh no more than 20 tons and fit into a C-130."[14] Thus, to an unprecedented extent, the Army is counting on air mobility.

The Objective Force will depend on AMC to support operational-level missions. For example, in a forced-entry scenario, light forces, such as Ranger, airborne or Marine units, will likely still secure aerial ports of debarkation required to receive air-delivered objective units. Once on the ground, medium-weight units will be able to defend or launch offensive operations as required. For offensive power, they will operate with air forces and long-range, land-based fire-support systems.[15] If required, joint force commanders (JFCs) will be able to reinforce medium-weight units with traditional heavy mechanized forces, whose equipment usually will arrive by surface transport. Army leaders and planners anticipate that the Objective Force will give JFCs unmatched flexibility to flow effective combat power into crises or conflicts. This ability will be largely, if not completely, contingent on the availability of appropriate strategic airlift.

Tactically, the high incidence of deep, nonlinear operations anticipated for some of the Objective Force's employment concepts suggest that future Army commanders often may have to depend heavily on theater airlift for success. In a recent article, General Robert H. Scales Jr. suggests that airportable Army combat units would enable the United States to apply a balance of fire and maneuver against its enemies.[16] He compares a scenario using his concept with an air-only campaign to punish the Iraqis for blocking the UN inspection program: "Imagine how much more compelling the impact of military action . . . had we had the ability to follow tactical aircraft and cruise-missile strikes with a sudden aerial assault by hundreds of individual ground units, each capable of landing safely near a known or suspected site and commanding it by direct observation and covering it by fire."[17]

To make such a scenario possible, Scales argues that such a ground force's logistic and maneuver forces would "increasingly have to be delivered by air." Air transport also would "guarantee safety and lower casualties," he claims, since "a force mobile through the air will be practically immune from . . . missiles tipped with weapons of mass destruction."[18] While Scales' proposal raises questions from strategic and warfighting perspectives, its logistic implications are indisputable; if the Army intends to fight that way, it will need agile, capacious and survivable theater airlift support, and lots of it.

The Objective Force's implications for air mobility force structure are not hard to discern—the Army will require national air-mobility support that can make good on AMC's unofficial motto to deliver "anything, anywhere, anytime." To engage in many future conflicts, the Army must access global air mobility that can transport its forces over transoceanic distances, deliver them into any theater and support them as they maneuver and fight on dispersed, nonlinear battlefields. Moreover, those air-

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Prototype high-mobility artillery rocket systems (HIMARSs) taking part in battalion maneuvers with the XVII Airborne Corps, 1999.

Field Artillery Journal

mobility forces probably will have to function where the hostile air defense environment is fluid. Since the Army will not likely be able to pick its future battlefields, its air-mobility support forces must achieve a high level of throughput into even austere aerial ports of debarkation. Army war games and studies have shown that on many battlefields, the Army's ability to maneuver effectively will depend on a reliable theater air-mobility system that can move major forces on any terrain in any weather. The Army Transformation Wargame 2000, for example, involved a multiple-brigade force's operational-level air movements, first to "rip out the enemy's rear, and then to block his retreat from the advance of a friendly coalition army."[19]

The logic of the Army's requirement for agile and high-capacity airlift support for deep maneuver units is compelling. To be effective and survive robust enemy forces, units must move continually and unpredictably to engage the enemy selectively and avoid entrapment. To move continually and unpredictably, units must shed most of the organic supply and support that traditional mechanized units lug around the battlefield. To risk reducing their supply trains, maneuvering units must be confident that the air-mobility system will support them continually under any circumstances. To support unpredictable movement, the air mobility system must be able to put down a given supply increment quickly to reduce the receiving unit's vulnerability.

A notional scenario illustrates how air-mobility support might work for an Objective Force brigade in deep maneuver. A maneuvering brigade commander foresees that in about 12 hours his unit will be in position to receive supplies. Imagery indicates that his force will pass onto a series of large grain fields surrounded by relatively open terrain 100 kilometers out. The brigade commander directs the S4 appropriately, then proceeds on through the enemy's rear areas. About 14 hours later, the battalions approach the edge of the agricultural area. As they roll in, still deployed for battle, the horizon is dotted with advanced theater transports.

Using a dozen landing zones that unmanned aerial vehicles and the Air Force Tactics Team identified and marked in the past two hours, the aircraft land alongside or among specific units. The aircraft's extremely short-landing rolls and low-ground pressures make operating on ribbed, moist soil routine. Immediately, individual companies cycle their vehicles to predesignated, marked aircraft to draw fuel, ammunition and other supplies. Ill and injured soldiers and a few damaged vehicles are loaded onto the aircraft. Meanwhile, a package of sensors and manned and unmanned strike aircraft maintain security overwatch. Two hours after the first aircraft

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lands, the last one takes off, leaving the battalions fully supplied and free to maneuver and fight for several days.

For now, senior Army leaders are not confident that the Objective Force will have the air mobility for such operational deployment or sustainment. Mahan has announced that "the Army cannot expect that its needs will always be at the top of the priority list . . . [H]aving a million C-17s [does not matter] if they are not going to be put at the disposal of the Army deployment."[20] The Army is also concerned about future theater airlift capabilities, both in articulating its relatively high-speed, high-range requirements for the joint transport rotorcraft and through discussing possible follow-on aircraft to the C-130 with aircraft manufacturers.[21] These concerns about priority and giving traditional fixed-wing ranges to helicopters suggest the need to assess the National Air Mobility System's (NAMS') likely availability and capabilities.

Current and Future AMC Capabilities

Overall, AMC's modernization planning focuses on preserving or enhancing existing capabilities, partly through acquiring new aircraft and support systems but mainly through upgrading the existing fleet. *AMC's Strategic Plan 2000* is the roadmap for modernization efforts for the Mobility Air Forces.[22] The plan addresses air mobility as a system of systems, combining airlift, air-mobility support and aerial refueling into an integrated whole. This air-mobility triad is the backbone of sustained combat operations, allowing the command to project air- and landpower rapidly and flexibly. Air mobility depends on the combined efforts of the Active, Air Reserve (Guard and Reserve) and commercial components of the NAMS.[23] Each component makes unique and important contributions to the Air Force's ability to move the Army.

Two aspects of force planning need emphasis. First, no single aircraft design will optimally fill all of the Objective Force's movement requirements. Given the almost limitless range of time constraints, operating distances, load configurations, threat circumstances, terminal characteristics and other operational factors, the Air Force must field a family of air-mobility aircraft and systems. Such a multisystem fleet gives the Air Force flexibility to perform its overall air-mobility mission *optimally*, even if it reduces its ability to perform any specific mission *maximally*. Therefore, Army planners should evaluate the AMC modernization program as a broad effort to serve the full range of authorized military users in accordance with National Command Authority and joint movement priorities. They should evaluate specific aircraft as pieces of a system, paying particular attention to terminal requirements and the internal dimensions of cargo bays, which are the characteristics that will most constrain the ability to support land forces.[24]

The second aspect is the typical difference between the gross and practical throughput capacities of the fleet or a portion of it when applied to a particular mission. Gross throughput capacity is the ability to move cargo and passengers over a given route, including its debarkation terminals. It is calculated by dividing the fleet segment's notional ton-mile capacity by the round-trip distance of the route being flown. For example, a fleet of 10 C-5s expected to carry 100 tons of cargo each, at 440 knots, for eight hours per day to a point 4,000 nautical miles away has a gross throughput capacity of about 465 tons per day. But factors such as weather, terminal limitations and crew-management restrictions might substantially limit practical throughput.

For example, during the 1999 movement of Task Force *Hawk*, physical characteristics of Rinas Airport sharply limited AMC's practical throughput into Albania. The command could not apply its full capacity to the movement because the airfield could not accept more than two C-17s on the ground at once. In gross capacity, AMC could have made the movement in a few days, but its practical throughput capacity, under the circumstances, meant the movement would take a month. Thus, Army planners should understand that concepts and force-structure plans based on the aircraft or fleets' gross capacities can overestimate the actual productivity those systems will achieve in real-world contingencies.

AMC modernization plans begin with the commercial airline industry that is the core of the NAMS. In gross-lift capabilities, the commercial segment dwarfs the military component. The 723 aircraft in the Civil Reserve Air Fleet (CRAF) provide more than 90 percent of the military's readily

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Tents, vehicles, helicopters, connexes—and a C-17—vie for space at Rinas Airport in Kosovo.

US Air Force

available passenger lift and about 40 percent of its net cargo capability.[25] There are legal and practical limitations on the military's use of the voluntary CRAF and its civilian crews in hazardous conditions and on the kinds of military materiel it can carry. Also, commercial aircraft normally operate from long, paved runways, a requirement that greatly restricts their flexibility for military mobility. Nevertheless, the CRAF will continue to be a mainstay of American airlift capabilities, so its modernization is important. AMC's approach to CRAF modernization includes continued economic incentives and program refinements to retain air carriers and modern, high-capacity aircraft. So far, the command considers the program a success and sees no reason why it will not continue to function.[26]

As the spotlight system of the NAMS military component, the C-17 epitomizes the Air Force's long commitment to providing the Army with foxhole-to-foxhole lift. The C-17 Globemaster III can carry any Army armored fighting vehicle, a self-propelled artillery system, 102 troops, 36 litter patients or up to 18 standard cargo pallets weighing up to 80 short tons. Moreover, the direct-delivery C-17 can deliver loads over transoceanic distances to austere forward runways as short as 3,000 feet.

Because the C-17 is so capable and important to so many users—especially the Army—the Air Force is pursuing several initiatives to improve the fleet's capacity and availability. The Air Force is funding extended-range fuel tanks to go into new aircraft after July 2001. These tanks will add about 700 nautical miles to the aircraft's range with a normal payload. AMC's analysis shows that this seemingly modest increase in the Globemaster's range will increase its productivity greatly in many deployment scenarios, even as it decreases the aircraft's demand for air refueling support and en route basing.[27]

One advantage of designing the FCS to fit into a C-130 is that a C-17 or C-5 might carry several of them. . . . But, if the Army wants to fill up a C-17 with FCSs, the Air Force will have to refuel the transports in the air to get them across the oceans without delay-inducing refueling stops. Even with the extended-range tank modification, a C-17 carrying its maximum 170,900-pound cargo load will only be able to fly for about 2,400 nautical miles.

The Air Force is working also to reduce the time required for C-17s to drop an airborne brigade from a current 51 minutes to 30 minutes or less. Initiatives in this area include allowing the aircraft to drop two rows of heavy-equipment pallets in a single pass, installing improved formation station-keeping equipment to allow it to cross drop zones at closer intervals and installing improved systems for personnel drops. When fully implemented in the next couple of years, these three initiatives should allow a C-17 force to deliver an airborne brigade in 26 minutes.[28]

Perhaps the most important decision the Air Force faces is whether to buy more C-17s. Current plans call for an in-place fleet of 134 C-17s by the end of 2004.[29] Those aircraft are coming into the fleet just as the last of more than 250 C-141s retire. The new C-17s will bring more gross capacity into the airmobility system than the retiring C-141 Starlifters will take out. But the net loss of airframes will reduce the airlift fleet's flexibility and increase the competition for airlift support. Accordingly, AMC continually evaluates opportunities to improve the C-17 fleet's flexibility and gross throughput capacity, including a recent, unsolicited Boeing proposal to produce 60 more aircraft after the current production run ends. But 60 C-17s and their support structure are definitely big-ticket items, so military planners must extensively research any decision.[30]

The C-5 Galaxy remains important to the military airlift fleet, but it desperately needs a major overhaul. This workhorse can lift up to 150 tons and 36 pallets of cargo over short distances or, more realistically, about 102 tons for 2,200 nautical miles.[31] It also is the only aircraft that can carry a fully loaded Abrams tank and operate into 5,000-foot runways at maximum gross weights.[32]

To keep the C-5 on line, AMC has launched a mid-life update program, installing new engine turbines, new avionics and other components, and eventually new engines on some or all of the fleet. The turbine program is under way, but funding for the system and engine upgrades is not yet secured.[33] Army planners should not underestimate the importance of securing that funding. Currently, the C-5's mission-capable (MC) rate is down to about 59 percent. For war-planning purposes, its desirable MC rate is 75 percent.[34] The current shortfall equates to a loss of 6 million ton-miles per day (MTMD) from the 49.5 MTMD total airlift capacity goal called for in current Department of Defense (DOD) planning. Taken together, the C-5's turbine, system and engine upgrades should bring its MC rate to approximately 76 percent.[35]

From an Army perspective, perhaps the most important airlift modernization after the C-17 is the C-130 Hercules. Because of its ability to operate in and out of unpaved runways as short as 2,500 feet, with a cargo box of 9 by 10 by 40 or 50 feet and a gross lift capacity of about 18 tons, the Hercules remains the best airlifter to provide general movement and sustainment support to Army forces in the field. Army leaders recognize that the C-130 fleet will likely be their primary source of fixed-wing airlift support for the indefinite future.[36]

To keep the C-130 ready the Air Force is investing billions into modernizing the current fleet and buying new C-130Js. The so-called C-130X program involves modifying most of the 21 different aircraft models, "rationalizing" them to a common configuration.[37] Rationalizing the serving fleet will greatly reduce maintenance costs and deployed logistic footprints while increasing the aircraft's overall productivity. As the C-130X program proceeds, the Air Force will retire older, unmodified aircraft and replace them with the more-capable C-130J. The new C-130J will fly faster and farther with a given load, will take off from somewhat shorter fields, and some will have longer cargo decks.[38] The C-130J will improve the Air Force's ability to move medium-weight units over transoceanic distances and deliver them to a wider range of terminals. Working with the C-17, the improved C-130 will give joint commanders better options to mix land forces into their plans.

To support the Army's future Objective Force, AMC and the Air Force are looking at other systems to improve their ability to deliver and support land forces. At the high end of the spectrum, AMC is considering an advanced theater transport. Among the designs being considered are tilt-rotor and inclining-wing concepts that potentially could get 30-plus ton loads in and out of runways as short as 500 feet.[39] Such aircraft would employ sophisticated aerodynamic and control system features that would make them expensive development projects. AMC is also developing a mission-needs statement for a precision airdrop system that

Notionally, if the resupply increment for a maneuvering brigade were 300 tons, the ideal C-130 field would park about 20 C-130s at one time with enough dispersal to allow individual units to resupply directly from the aircraft while maintaining battle formation. Anything smaller would require multiple waves of C-130s, with each wave increasing the time required to resupply a unit and its consequent vulnerability to enemy detection and attack.

C-130s of the 118th Tactical Airlift Wing, Tennessee Air National Guard.

US Air Force

can deliver 2,000-pound supply bundles from 20,000 feet with an accuracy of 10 meters or less.[40]

The advanced theater transport concept is particularly attractive since it would allow delivery and extraction of medium-weight fighting systems and their supports at a much wider range of airland terminals than is now available. The precision airdrop system also holds promise, although it would not provide a backhaul capability and might load down a maneuvering unit with a lot of expensive airdrop equipment.

The second segment of the air-mobility triad is aerial refueling, which allows Air Force transports to carry greater loads farther. A few examples can illustrate the importance of this concept. One advantage of designing the FCS to fit into a C-130 is that a C-17 or C-5 might carry several of them.[41] That, in turn, should allow medium-weight objective brigades to close more rapidly in forward locations. But, if the Army wants to fill up a C-17 with FCSs, the Air Force will have to refuel the transports in the air to get them across the oceans without delay-inducing refueling stops. Even with the extended-range tank modification, a C-17 carrying its maximum

AMC's planning will result in an air-refueling and airlift fleet that will likely meet the Army's four-day brigade-deployment window but probably not the five-day division movement and the 30-day, five-division requirement under no circumstances. Even the Air Force's ability to meet the four- and five-day windows is contingent on the combatant commanders' priorities. Projecting even a brigade to Europe in four days will consume almost every bit of the airlift the Air Force can muster.

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Kosovo provides an example of the flexibility that air refueling provides to Army mobility. At the end of the conflict, C-17s simultaneously delivered US units to Pristina, Serbia, to participate in NATO operations and redeployed Task Force *Hawk* units back to Germany. By relying on air-refueling support for their return legs, the C-17s carried maximum loads into Pristina; shuttled empty to Tirana, Albania; departed there with maximum loads again; and refueled over the Adriatic Sea to make it the rest of the way home. Without air refueling, the Army's movements would have been slower and more expensive. Thus, Army planners should watch with more than academic interest as the Air Force develops and refines its plans to replace the more than 500 tankers in its current fleet. From the perspective of Objective Force deployment and support, the net effect of the AMC modernization effort should be assessed from at least three perspectives.

Lift priority. AMC's planning will result in an air-refueling and airlift fleet that will likely meet the Army's four-day brigade-deployment window but probably not the five-day division movement and the 30-day, five-division requirement under no circumstances. Even the Air Force's ability to meet the four- and five-day windows is contingent on the combatant commanders' priorities. Projecting even a brigade to Europe in four days will consume almost every bit of the airlift the Air Force can muster. Given the competition for airlift in the early phases of any major theater war, Army planners should anticipate tough battles over lift priority.

Infrastructure requirements. The infrastructure requirements of AMC's evolving airlift fleet will limit its ability to move the Objective Force over strategic distances. To achieve the high throughput the Objective Force's deployment windows require, the Air Force's large, fixed-wing military transports (C-5, C-17) need aerial ports of debarkation with relatively long runways (about 8,300 feet for the C-5 and 3,000 feet for the C-17), large parking ramps and possibly substantial fuel supplies.[43] If CRAF is involved, runways must be in the 10,000-foot range, the parking ramps much larger and the threat level low. Consequently, even in developed regions, the enemy will not have to make too many guesses about where the airlift flow will be going, especially to deliver something as large as a brigade, let alone a division.

Restrictions. At the operational level, airlift infrastructure requirements will restrict maneuver. The C-130 can operate into airfields in the 2,500-foot range. But, even those aircraft need hard-packed runways and parking ramps large enough to handle sufficient aircraft to keep sustainment pauses short. Notionally, if the resupply increment for a maneuvering brigade were 300 tons, the ideal C-130 field would park about 20 C-130s at one time with enough dispersal to allow individual units to resupply directly from the aircraft while maintaining battle formation. Anything smaller would require multiple waves of C-130s, with each wave increasing the time required to resupply a unit and its consequent vulnerability to enemy detection and attack.

Army mobility planners should carefully review maneuver expectations for the Objective Force, particularly the promise to give maneuvering commanders great freedom to pick the time and place for pausing to receive sustainment by air. The Air Force's objective airlift fleet has by far the world's most capable equipment, capabilities, doctrine and training. That fleet will likely satisfy most, if not all, of the Army's future maneuver support airlift requirements but it will not be able to generate a high throughput at every location. Army planners must understand Objective Force maneuver in terms of Air Force airlift. Depending on final shortfalls and costs of rectifying them, the Army must decide whether to live with them or try to convince DOD to fund new Army aviation or Air Force assets and capabilities.

Policy Implications

Perhaps the most important policy implication is that the Army and the Air Force should not continue air mobility planning efforts without close coordination. If the Army plans to use air-deployable medium forces and routine nonlinear operations, the Air Force and AMC must consider how they equip, organize and train the air-mobility fleet. This need will become more acute once combatant commanders begin to factor interim brigades into war plans. Likewise, as the Army refines Objective Force visions and concepts, it must review how they relate

to the capabilities and limitations of the objective air-mobility force. A major disconnect between the two could leave the Army with a "castle in the air."

These considerations suggest that single-service transition planning may be as passé as single-service warfighting. In most cases, the general success of major service warfighting concepts, such as nonlinear warfare and the Air Force's "halt phase," will depend on direct cooperation with other service or functional components. In any case, funding any particular concept will come at others' expense. Thus, there is no merit in arguing that a service's warfighting ideas are its own business. Major General James Dubik, Deputy Commanding General for Transformation, Training and Doctrine Command, recently said, "The Army is building a combat force that can compel people in the full spectrum of combat . . . in joint and combined operations because there are no single-nation or single-service operations anymore."[44] For that reason, the Army must insist on and exploit the cooperative expertise of airmen during this vital effort to revolutionize land warfare. ***MR***

NOTES

1. For a recent view from outside the Army, see Hans Mark, "Complementary Technologies Critical to Military Transformation," *Defense Daily*, (5 July 2000) 1.
2. General Dennis J. Reimer, "The Army After Next: Revolutionary Transformation," *Strategic Review*, (Spring 1999), 41; and MG James Dubik, Deputy Commanding General for Transformation, TRADOC, interviewed by Scott Gourley, *Janes Defence Weekly* (11 October 2000), 48.
3. *National Defense*, "Army To Trim War Wish Lists So It Can Deploy In 96 Hours" (April 2000), 26.
4. General Eric K. Shinseki, "Remarks at the Eisenhower Luncheon at AUSA on 12 October 1999," Army Public Affairs Homepage, online at <www.dtic.mil/armylink.>
5. Army Public Affairs Homepage, "Army Announces Vision of the Future," *US Army News Release #99-095* (12 October 1999), 1, online at <www.dtic.mil/armylink>.
6. The author thanks LTC William Hix, Patrick Holder and Rich Bierre for providing much of this overview of the Army's transition planning during a roundtable interview on 16 June 2000.
7. COL Joseph Rodriguez, "Status of Brigade Combat Team Development at Fort Lewis and the Planned Performance Demonstration at Fort Knox," transcript of TRADOC Press Briefing (16 December 1999), 1, online at www.army.mil/armyvision/briefing_tradoc_press.htm>.
8. *Defense Week*, "Search For Future Combat System," (24 January 2000) 1.
9. "The Army's Future Combat System," *Armed Forces Journal International* (McLean, VA: Armed Forces Journal, International, Inc. May 2000), 25.
10. Ibid.; Hix, Holder and Bierre.
11. "Search for Future Combat System," 1.
12. Shinseki, 5.
12. Rodriguez, 1.
14. *Defense Week*, 1.
15. Mark, 1.
16. Major General Robert H. Scales Jr., "A Sword With Two Edges: Maneuver in 21st Century Warfare," *Strategic Review* (Spring 1999), 45-54.
17. Ibid., 52.
18. Ibid., 53.
19. Hix, Holder and Bierre.
20. *Inside the Army*, "Alternative Strategies Needed to Counter Future Airlift Limitations" (15 May 2000), 1; Army Deployment Modeling Office, "Army Transformation Wargame Deployment Brief," Fort Eustis, Virginia (30 April 2000); Neil Baumgardner, "Army Transformation Wargame Demonstrates Objective Force Capabilities," *Defense Daily* (5 May 2000), 1.
21. Andrew Koch, "US Army's Futuristic Look to Next-Generation Rotorcraft," *Janes Defense Weekly* (15 March 2000), 8. Koch reported that the Army's specifications called for an aircraft with a "500km-1000km operational radius . . . speeds exceeding 175 kt . . . [and] a global self-deployment range of 2,100n miles."
22. *AMC's Air Mobility Strategic Master Plan 2000* , is online at <www.amc.af.mil/xp/index.htm>.
23. For a discussion of the structure and interrelationships of NAMS, see Robert C. Owen, "The Airlift System: A Primer," *Airpower Journal* (Fall 1995), 16-29.
24. "Terminal requirement" refers to the drop-zone or landing-zone characteristics required to support the operation of a particular aircraft. Cargo box refers to the internal dimensions of an aircraft's main cargo deck, but it also should include floor strength. Military air transport floors are designed to support the weight of heavy vehicles or other dense loads, while commercial aircraft floors often cannot support such loads.
25. Interview with MAJ Victor DelMoral, Headquarters, AMC/DOF (9 June 2000).
26. Ibid. Economic incentives for scheduled airlines include the GSA City-Pair program valued at $1.8 billion per year. Incentives for charter airlines include a guaranteed percentage of peacetime passenger and cargo business valued at $700 million per year. Both City-Pair and peacetime passenger and cargo business are offered to airlines as a percentage based on mobility value points (awarded based on type and number aircraft volunteered under CRAF). The CRAF program undergoes continual refinement in the awarding of contracts; a recent refinement was to offer double mobility value points for aircraft volunteered to fill the aeromedical evacuation role.
27. AMC, Directorate of Plans, Requirements Division (XPR) Modernization (MOD) 201 Brief, slide 23.
28. Ibid., slide 25.
29. Ibid., slide 39.
30. Ibid., slides 39-44. The Boeing proposal extended the multiyear procurement contract to purchase 60 additional C-17s at an average cost of $149 million, taking advantage of the optimal production rate of 15 aircraft annually. This proposal expired 31 December 1999, and the Air Force has not received a new proposal. AMC has an initiative to purchase 60 C-17s at a production rate of 8 aircraft per year. This initiative will add 16 aircraft at a total cost of $4.793 billion.
31. *AMC Strategic Plan 2000*, 3.5.1.2.1
32. USAF Fact Sheet, C-5 Galaxy, online at <www.af.mil/news/factsheets/C_5_Galaxy.html>.
33. AMC/XPR MOD 201, slide 52. Secretary of the Air Force and the Acquisitions Division of the Air Force Secretariat have helped AMC shift more than $125 billion to the C-5 Reliability Enhancement and Re-Engineering Program (RERP), so while full funding is not yet secured, it has begun.
34. Ibid., slide 51.
35. Ibid., slide 61.
36. *Defense Daily*, "Meigs: Army Already Becoming More Flexible, More Deployable" (25 May 2000), 4.
37. AMC/XPR MOD 201 Brief, slide 93; *AMC Strategic Plan 2000*, 3.5.5.1. Initially 397 combat delivery aircraft will be modified to the C-130X standard. Additional funds have been requested in the FY02 budget to complete the remaining 122 aircraft. Also, 150 of the worst C-130Es (based on service life and/or structural and corrosion problems) will be replaced with the stretch version of the C-130J.
38. AMC/XPR MOD 201 Slide Brief, slide 102. Improvements over the C-130E: take-off roll: -41 percent; rate of climb: +46 percent; time of climb: -50 percent; range: +40 percent; max speed: +21 percent. Also, the C-130J-30 will carry 2 extra pallets, +23 litters, +8 CDS bundles, +36 combat troops, and +38 paratroops.
39. *AMC Strategic Plan 2000*, 1.7.6.
40. LTC James A. Fellows, et al., *Airlift 2025: The First With the Most, Air Force 2025* (1996), 8. Referenced in *AMC Strategic Plan 2000*, 1.7.6.
41. Rodriguez, 3.
42. *USAF Fact Sheet*, C-17 Globemaster III, online at <www.af.mil/news/factsheets/C_17_Globemaster_III.html>.
43. Ibid.; *USAF Fact Sheet*, C-5 Galaxy, online at <http://www.af.mil/news/factsheets/C_5_Galaxy.html>.
44. Speaking specifically of the need to exploit Air Force and Navy indirect-fire weapons to a greater extent in future warfare, Army LTG Jack Keane reinforced the need for interservice cooperation in the Army's conduct of nonlinear warfare, saying, "This is a paradigm shift I think we have to make with the Air Force and the Navy"; Erin Q. Winograd, "Keane Calls Army's Thinking on Introducing Troops an 'Anachronism,'" *Inside the Army* (17 May 1999), 7.

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A Revolution in Power Projection:
Ready, Set, Go!

Frank B. Randall Jr.

POWER PROJECTION in the 21st century will change little in concept but more in execution. Technological advances and resulting doctrinal changes will require agile minds and nonregimented approaches if US forces are to take full advantage of new opportunities.

The Chairman, Joint Chiefs of Staff, released Joint Vision 2020 in May 2000. The document extended and refined the concepts expressed in the earlier 2010 version, building on 21st-century development and transformation. The new vision's primary focus "remains a joint force capable of full spectrum dominance, persuasive in peace, decisive in war, and preeminent in any form of conflict."[1]

Four significant operational concepts from the 2010 vision remain as the 2020 vision foundation: dominant maneuver, precision engagement, focused logistics and full-dimensional protection. As the US Army moves ahead, it is taking a cautious approach, and rightly so. Unnecessary change is risky business. According to the current Army Posture Statement, changes will be condition-based; advances will be implemented only after carefully considering the conditions necessary to integrate the advance.

While changes are taking place, the Military Sealift Command (MSC) stands ready to help strategically pre-position Army equipment and supplies to global hot spots. The MSC also welcomes the opportunity to exercise the system with realistic tests of the pre-positioning force. Concurrently, MSC's surge sealift is adding new capabilities to rapidly transport sustainment and resupply materiel. These three concepts—pre-positioning, exercises and surge sealift—allow Army forces to perform combat missions where and when directed and for as long as required.

Currently 37 MSC pre-positioning ships are strategically located in the Mediterranean Sea, the Indian Ocean, and near Guam and Saipan in the western Pacific Ocean. The ships carry supplies and equipment for the combat services and fuel for the Defense Logistics Agency (DLA).

The US Marine Corps pre-positions equipment and supplies to support a Marine air-ground task force of up to 17,400 Marines for as long as 30 days. Like US Navy vessels, Air Force pre-positioning vessels carry a variety of munitions. Three tankers carry fuel for DLA's Defense Energy Supply Center. The remaining pre-positioning vessels carry an Army heavy brigade with two armored and two mechanized infantry battalions, port-opening gear, sustainment supplies and other support material.

Pre-positioning ships include long-term-charter commercial vessels, activated Ready Reserve Force (RRF) ships and US Navy ships.[2] Civilian mariners crew MSC-contracted ships, and federal civil service employees crew DLA fuel tankers. By participating in more than 100 exercises annually, MSC pre-positioning and surge ship crews train continuously for real-world contingencies.

To respond to a crisis, warfighters need to deploy as quickly as possible with gear and sustainment supplies. Rapidly deploying large amounts of equipment and supplies by surge sealift is critical to sustainment beyond the 30 days of materiel aboard pre-positioning ships. Fast sealift ships (FSS); large, medium-speed, roll-on/roll-off ships (LMSR); and the US Maritime Administration's RRF are the backbone of MSC's surge sealift capability, offering almost 10 million square feet of capacity.

Ready: Pre-positioning

The equipment, ordnance and supplies needed to conduct any large joint military power projection must move by sea; this has always been the case for the United States. Since the closure of many US overseas bases, sealift has become even more vital to Army regional operations.

Pre-positioning afloat began in the early 1980s to improve the response time for delivering urgently needed equipment and supplies to a theater of operations. Two decades earlier, the US Army had stored brigade-strength equipment aboard ships moored off Okinawa. During a threat to Laos by

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North Vietnamese and Laotian rebels in 1961, a 25th Infantry Division brigade flew to Thailand from Hawaii while ships containing the unit's equipment were moved from Okinawa to Thailand. The brigade joined the equipment at the port, marking the first successful major maritime pre-positioning in the 20th century, proving that pre-positioning could dramatically cut force-closure times and increase intertheater agility.

In 1990 the United States, the largest trading nation in the world, carried less than 4 percent of its trade on US flagships.[3] The US merchant fleet had slowly eroded since World War II, producing a serious shortfall in the cargo capabilities that would be needed in a contingency or major war. Following the Gulf War, the US Transportation Command and MSC "sought to strengthen the nation's military sealift force through a balanced program of new ship construction and purchase of existing ships for the RRF. The proposal suggested adding 21 diesel-powered roll-on/roll-off ships (RO/ROs) to the RRF."[4]

At the same time, a congressionally mandated study identified an urgent need for greater sealift capacity to transport military equipment and supplies during wartime and other national contingencies. The study called for adding two million square feet of military cargo capacity for pre-positioning and three million square feet for surge sealift. To meet these needs, the study recommended adding five converted and 14 new LMSRs to the MSC fleet for pre-positioning and surge sealift. Five active commercial RO/RO vessels were purchased and converted for pre-positioning Army equipment and supplies. Of the 14 planned new ships, seven were for Army pre-positioning and seven for surge sealift.

Strategically placed in three squadrons, the MSC operates 14 pre-positioning ships for the US Marine Corps Maritime Pre-positioning Force. The ships are located in the Indian Ocean at Diego Garcia, near Guam and Saipan in the western Pacific Ocean, and in the Mediterranean Sea. The ships range in RO/RO capacity from 121,000 to 152,000 square feet and in displacement from 44,000 to 51,000 long tons. All carry their own ship-mounted cranes, varying in capacity from 30 to 50 tons, for offloads in ports with reduced capability or where no port exists. Lighterage is also embarked, permitting total ship offloads across an unimproved beachhead without port facilities.

The Marine Corps is adding three vessels, called Maritime Pre-positioning Force (Enhanced) ships, to their pre-positioning force. The first ship was delivered in April 2000. The second and third—an LMSR formerly used for surge sealift—will arrive in 2001.

The US Air Force uses three ships to preposition ordnance at various locations in the Mediterranean Sea and Indian Ocean. All three vessels have onboard cranes to on- and offload containerized cargo. Two have small RO/RO capabilities (10,000 and 56,000 square feet). The MSC and the Air Force developed a new capacity aboard two vessels called "cocooning," which allows up to 45-percent additional capacity per vessel. Cocooning provides sealed space on the ships' weather decks where containers are stored in a temperature- and humidity-controlled environment. This added capability eliminates the need for another vessel to carry the munitions stock levels the Air Force desires, saving up to $9 million a year in operating costs.

The MSC's Naval Fleet Auxiliary Force normally resupplies US Navy fleets. However, additional munitions are carried aboard one of two Navy pre-positioning ships homeported at Diego Garcia. The second ship carries a 500-bed Navy fleet hospital.

The DLA's Defense Energy Supply Center obtains and distributes petroleum products for DOD use worldwide. Three DLA pre-positioning ships carry a total of 660,000 barrels of fuel for aircraft, turbine-powered ground vehicles and equipment. Two vessels are at Diego Garcia; the third at Guam.

The Army's pre-positioning fleet of 15 vessels carries a heavy brigade consisting of two mechanized and two armored battalions and additional gear for opening and operating a seaport. Three ships carry Army watercraft (seven utility landing craft, six mechanized landing craft, four side-loadable warping tugs, three large tugs, two liquid cargo barges, a derrick barge and 135 40-foot ISO packs) that merge together to form a RO/RO discharge facility platform/floating pier. These ships also carry miscellaneous equipment in containers and aboard the watercraft and 335 pieces of logistic rolling stock such as trailers; bulldozers; tank trucks; and high-mobility, multipurpose wheeled

Gulf War observations showed that a full onload of containerized ammunition could take anywhere from 48 hours under optimum conditions to 70 hours under worst-case conditions. A break-bulk ammunition ship onloading the same cargo could take from eight days under ideal conditions to 14 days with multiple problems. Putting five divisions on the ground in 30 days will be impossible with 14-day loading times.

vehicles (HMMWVs). The ships also carry 21,000 barrels of diesel fuel for the watercraft and various logistic vehicles.

Three additional vessels are lighter-aboard-ship (LASH) vessels that each carry up to 60 barges preloaded with ammunition, containerized ammunition and two small pusher boats. Two container ships carry rolling stock, flatrack and containerized equipment associated with port-opening operations. The remaining seven ships are RO/RO vessels that carry rolling stock and containerized supplies for the two armored and two mechanized battalions, plus the requisite combat support equipment for headquarters, intelligence, reconnaissance and medical support missions. Altogether, Army pre-positioning ships offer almost two million square feet of RO/RO capacity.

Future needs. According to the 2001 Army Posture Statement, power projection, enabled by an overseas presence, will continue to be the future force's fundamental concept. Power projection for a land-based force means having the equipment in place where needed or strategically pre-positioned at sea to access any geographic area. Working toward the Objective Force outlined in the posture statement requires the Army to place a combat-capable brigade anywhere in the world within 96 hours. Airlift will play a key role. The next step—to have a division in place within 120 hours—includes pre-positioned ships filled with battle gear steaming to meet airlifted troops close to the mission point. Finally, having five divisions in theater in 30 days goes beyond pre-positioning to surge sealift and sustainment. The "steel bridge" concept from the Gulf War had, at the height of deployment, one ship every 50 miles across the seas between the United States and the Persian Gulf to meet warfighters' needs.

As a modern fighting force's needs change, so do the space requirements for pre-positioning its gear. An interim change projects three ships for a heavy brigade of one mechanized and two armored battalions plus three ships for a heavy brigade of two mechanized and one armored battalion. Other vessels will carry port-opening and force-provider gear. The new arrangement's flexibility will mean being able to apply the right force in the right situation. The giant LMSRs, each as long as an aircraft carrier, will provide the added space needed to reconfigure equipment and also provide covered storage capacities of more than 300,000 square feet per vessel. By 2002 eight of these ships will join the Army pre-positioning fleet.

The Army is also moving away from using LASH barges to carry ammunition, as the international standard for containerization has become the guiding light for the maritime industry. "Container advantages are many, but of most importance is their intermodal capability; they easily move from one mode of transportation to another, for instance from a truck, to a train, to a barge, to a ship and then, upon arrival overseas, back to a truck, a train, or a barge."[5]

Another factor is time. Gulf War observations showed that a full onload of containerized ammunition could take anywhere from 48 hours under optimum conditions to 70 hours under worst-case conditions. A break-bulk ammunition ship onloading the same cargo could take from eight days under ideal conditions to 14 days with multiple problems. Putting five divisions on the ground in 30 days will be impossible with 14-day loading times.

In February and June 2001, MSC will receive the two long-term-charter container ships that will carry Army ammunition. Loadout and deployment will follow shortly. By 2002 Army pre-positioning will consist of 15 ships: eight LMSRs, two heavy lift ships, two sustainment (container) ships, two ammunition (container) ships and a crane ship. This mix will carry Army pre-positioning well into the 21st century.

Set Exercises

Having all available warfighting gear close to a potential trouble spot only works if the equipment and the system that deploys it work as well. Exercises test new concepts and generally improve the pre-positioning program from a systems-engineering perspective. The basic idea is to find ways to get huge quantities of combat equipment and supplies deployed, offloaded, marshaled and to warfighters as quickly and efficiently as possible. Joint doctrine states that logistics over the shore (LOTS) operations occur where there are no ports or deep water access, where ports have been destroyed or severely damaged, or where ports exist but do not have the equipment to transfer cargo. Sometimes that transfer must use LOTS, "loading and unloading ships without the benefit

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Equipment offloading from the RO/RO USNS *Seay* during a joint logistics over the shore (JLOTS) exercise off Camp Pendleton, California. Existing equipment limits operations when winds are over 16 knots and waves exceed 5 feet.

USTRANSCOM

of fixed-port facilities in either friendly or undefended territory and, in time of war, during phases of theater development."[6]

Joint logistics over the shore (JLOTS) means that two or more services conduct LOTS and effectively transfer cargo from ship to inland staging and marshaling areas. Successful interoperability is central to the success of Joint Vision 2020. JLOTS exercises allow combat units to participate in practice offloads in various conditions using Navy and Army causeway systems as floating platforms between ships and other watercraft. Exercises usually involve the Navy's beach-group units and amphibious construction battalions and the Army's 11th and 24th Transportation Battalions. JLOTS equipment carried aboard pre-positioning ships can be offloaded using onboard cranes. Warping tugs and causeway ferries carried as cargo can propel individual sections of floating causeway into position.

Existing JLOTS system equipment limits operations when weather conditions are at least sea-state 3 (winds up to 16 knots and waves up to 5 feet) or greater, reducing its effectiveness. Because war and contingency operations do not necessarily wait for good weather, the military needs equipment that will operate at the sea-state 3 level. The requirement to operate in sea-state 3 is based on conditions existing for more than 50 percent of the time in several areas critical to US interests. Various agencies and organizations are examining several concept systems to address the issue. Meanwhile, JLOTS exercises continue to test current equipment and procedures.

Each year a JLOTS exercise is held in a different geographic area of responsibility. In Fiscal Year (FY) 2000, visiting dignitaries and NATO military representatives observed a JLOTS exercise off Virginia's coast and an operational exercise off California's coast. The FY 01 JLOTS exercise will take place in the 7th Fleet area of responsibility in

During a threat to Laos by North Vietnamese and Laotian rebels in 1961, a 25th Infantry Division brigade flew to Thailand from Hawaii while ships containing the unit's equipment were moved from Okinawa to Thailand. The brigade joined the equipment at the port, marking the first successful major maritime pre-positioning.

A row of AC-1 Caribou at an airstrip near Korat, Thailand, in 1961. The 27th Infantry (Wolfhounds) were flown in from Hawaii and received pre-positioned equipment from Okinawa.

US Army

conjunction with an annual exercise of the containerized ammunition-delivery system. Units using the JLOTS system constantly request additional training and exercise opportunities, but in a resource-tight budgetary environment, these relatively high-cost exercises have been limited to one per year. Because JLOTS operations are critical to the concept of placing five combat divisions in theater within 30 days, additional exercises are needed.

Go! Surge Sealift

The first priority in a crisis is getting the initial field combatants all the gear they need for the first few days of combat. Surge sealift will keep warfighters in business for the long term. By using commercial resources from the Voluntary Intermodal Sealift Agreement Program, the Army offers monetary and business incentives to commercial operators in exchange for availability of suitable vessels for military cargo. When those resources are exhausted, MSC's eight FSS and four LMSRs, along with the 90 RRF ships that are under MSC control after activation and are the backbone of surge sealift, will provide lift capacity for both RO/RO and containerized cargo. By 2002 seven additional LMSRs (three new and four converted from pre-positioning) will join the surge sealift force, increasing its cargo capacity to almost 10 million square feet.

Each of the eight FSS has 50,000 square feet of storage and can travel up to 27 knots. These characteristics make the FSS ideally suited to transporting Army equipment—tanks, helicopters, wheeled vehicles and other heavy equipment—to support deployed troops worldwide. The FSS's cargo holds contain a series of decks connected by ramps so vehicles can be driven in and out of storage areas for rapid loading and unloading. The ships also have four cranes—twin cranes amidships, each capable of lifting 35 long tons (70 tandem) and twin cranes aft, each capable of lifting 50 long tons (100 tandem).[7] The FSS allows MSC to transport an armored division's equipment rapidly while the cranes load and offload freight in places without port facilities.

LMSRs are being added to the MSC fleet to offset the shortage of militarily useful commercial cargo ships. This is a growing concern because the military has become increasingly dependent on power projection from sea-based assets because

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of overseas base closures. With a huge, six-deck interior, each LMSR has a cargo capacity equivalent to six and one-half football fields. That is enough room for an entire armor task force, including 58 tanks, 48 other tracked vehicles and more than 900 trucks and other wheeled vehicles. Additional vehicles and containers can be carried on the weather deck.

A slewing stern ramp and a movable ramp that can service either side port facilitate both on- and offloading, making it easy to drive vehicles on and off the ship. This speeds the loading and unloading to just 48 to 72 hours total per shipload. Two sets of single-pedestal twin-boom cranes, rated at 35 long tons (70 tandem) and 56 long tons (112 tandem), make it possible to load and unload cargo where shoreside infrastructure is limited or nonexistent. Lighterage mooring fittings are installed for loading and unloading cargo while at anchor. While a little slower than the FSS, the LMSR can travel at 24 knots and has almost twice the cargo capacity.

RO/RO vessels are the primary choice for carrying Army unit equipment because of their quick on- and offload times. MSC has access to a fleet of RO/RO ships through the RRF. The US Maritime Administration, a Department of Transportation agency, maintains all but four of these ships in reduced operating status. They can be activated—fully crewed and ready to get under way to a US loading port—in four or five days. The 31 RO/RO ships in the RRF are being modified to increase their capacity. Several will receive an additional deck for more RO/RO space.

Achieving and maintaining full-spectrum dominance over the next 20 years requires people with exceptional talent, great mental agility and total dedication. The MSC prides itself on delivering innovative maritime solutions to national security objectives, such as sea-based power projection through pre-positioning. By using pre-positioning, the Army will likely continue to expand based on its changing force and its need to place a combat-ready brigade on location within 96 hours and a division within 120 hours.

Increased JLOTS exercises could be the key to future joint and combined operations. Unfortunately, JLOTS exercises are relatively expensive, hence the limit of one per year. However, as joint operations responding to real-world contingencies increase, interoperability becomes even more critical to the success of US military actions. Military leaders should give serious consideration to this budget-starved item in future budget requests.

Finally, surge sealift remains the backbone of sustaining US forces worldwide. Adding two million square feet of cargo storage in the form of new LMSRs will assure the Joint Chiefs of Staff that Army warfighters are sustained and resupplied quickly and efficiently wherever they are, whatever their need. Pre-positioning, exercises and surge sealift—ready, set, go! The US Army, its sister services and the MSC will be there where and when the need arises. ***MR***

NOTES

1. News Release 294-00, Office of Assistant Secretary of Defense, Public Affairs, Washington, DC (30 May 2000).
2. The Maritime Administration (MARAD) maintains the Naval Defense Reserve Fleet (NDRF). The Reserve Ready Force (RRF) is a quick-response subset of the NDRF. The RRF is a select group of ships within the NDRF that is relatively modern, highly militarily useful and rigorously maintained to meet Coast Guard and American Bureau of Shipping standards. They are crewed by MARAD personnel in an increased state of readiness that would permit their activation within four, five, 10 and 20 days.
3. James K. Matthews and Cora J. Holt, *So Many, So Much, So Far, So Fast: United States Transportation Command and Strategic Deployment for Operation Desert Shield/Storm* (Washington, D.C.: Joint History Office, Office of the Chairman of the Joint Chiefs of Staff and Research Center, US Transportation Command, 1996), 128.
4. Ibid., 129.
5. Ibid., 181.
6. Joint Publication 4-01.6, *Joint Tactics, Techniques, and Procedures for Joint Logistics Over the Shore* (Washington, D.C.: US Government Printing Office, 12 November 1998).
7. A long ton equals 2,240 pounds.

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Military Traffic Management Command Supports DOD

Lieutenant Colonel John R. Randt, Army National Guard, Retired

WORLDWIDE, US MILITARY units perform missions while overcoming numerous challenges. The Military Traffic Management Command (MTMC) gets US soldiers, sailors, airmen and Marines the equipment they need—from tanks to toothpaste—to accomplish their vital missions. The command moves more than one million measurement tons of cargo a month for contingency, training and humanitarian purposes.[1] The critical cargoes MTMC transporters move worldwide set the time and place for mission successes.

Kosovo. Like other unexpected conflicts, war in the former Republic of Yugoslavia erupted at the wrong time in the wrong place. The United States wanted to move fast to support NATO peacekeeping goals in Kosovo, Serbia. Shrouded by mountainous terrain, Kosovo lacked sufficient highways, railroads and nearby ports. After studying the region, MTMC's acting operations officer remarked, "This has got to be one of the hardest places to get to in the world." But when the NATO air campaign began 24 March 1999, MTMC rushed into action.[2]

The first goal was to support US forces at the airfield in Tirana, Albania. Rain turned the pastures surrounding the airfield into mud. A US Army Apache battalion was ordered to the airfield from Germany, and engineers with MTMC's Transportation Engineering Agency took the lead in preparing for the aircraft's arrival. They quickly performed port studies at maritime ports throughout the region. At once, MTMC began supporting the growing US Army presence in Tirana.

The 598th Transportation Group established a water link to the main supply route from Brindisi, Italy, to Durres, Albania. The Air Mobility Command was doing the same with an air bridge directly to the airfield—as weather and airfield constraints allowed. Meanwhile, the US Navy's Military Sealift Command leased Italian ferryboats to carry vehicles and freight across the Adriatic Sea. Most of the freight and vehicles arrived by train from Germany and were quickly directed across the water to the US base in Tirana.

As the 11-week air campaign continued, MTMC's significance increased. The largest vessel ever to visit Durres, the mine hunter USS *Osprey* came into the port on 1 May with high-priority cargo.[3] The *ZERLiPOPULLI*, Tirana's daily newspaper of the ruling socialist party, called the record-size vessel an "American *Titanic*."[4] MTMC soldiers and civilians unloaded the vessel's equipment and cargo without incident. The equipment and cargo were quickly moved up the winding roads into Albania.

A *ZERLiPOPULLI* reporter complimented a small group of unidentified US forces assisting the port operation: "The Americans are workers. Yesterday, at 2:30 p.m., six American military (including one woman) came into the port of Durres, dead tired, with dirt-covered uniforms. It seems that they were on some kind of reconnaissance mission in Durres. Looking at them, the message is very clear. You get rich by working. The Army comes with a civilian work message."[5] That reporter's comment is a credit to DOD military and civilian employees worldwide.

If a US invasion had been required, it would have been launched across the Albanian border into Kosovo. The Brindisi-to-Durres sea lane would have been the heart of the main supply route. When the NATO air campaign ended after 11 weeks, MTMC moved into high gear. For quite some time, transportation planners had their eyes on the Greek port of Thessaloniki in the northern Aegean Sea because it boasted a modern port infrastructure and was the largest port in Greece.

If the port could be used, US Army 1st Infantry Division (1ID) combat vehicles could flow out of the US Navy's large medium-speed roll-on/roll-off ships by the hundreds. From the port's huge

If a US invasion of Kosovo had been required, it would have been launched across the Albanian border. The Brindisi-to-Durres sea lane would have been the heart of the main supply route. When the NATO air campaign ended after 11 weeks, MTMC moved into high gear. For quite some time, transportation planners had their eyes on the Greek port of Thessaloniki in the northern Aegean Sea because it boasted a modern port infrastructure and was the largest port in Greece.

Pier 6, the vehicles could move up the highways of northern Greece, go through Macedonia and pour into the US peacekeeping sector in southeast Kosovo.

Meanwhile, contract airlines ferried 1ID soldiers to Skopje, Macedonia, to link up with their vehicles. Behind the scenes of a world drama, MTMC transporters from the nearby 953d Transportation Company, Piraeus, Greece, rushed to Thessaloniki. Months earlier, the 598th Transportation Group commander had contracted for modular building construction to house the Worldwide Port System computers. This automation system tracked cargo movements of combat vehicles, trucks and shipping containers that supported the task force.

In Kosovo, civil authority evaporated with the retreat of Yugoslavian army troops. NATO commander General Wesley Clark urged nations that had promised peacekeeping troops to speed up their arrival.

In Bremerhaven, Germany, the 950th Transportation Company loaded the US Navy Ship (USNS) *Bob Hope*. On its maiden voyage, the *Bob Hope* was the first of three ships carrying 1ID combat vehicles. Once the *Bob Hope* was loaded, MTMC transporters loaded the USNS *Soderman.* As Army equipment continued to arrive in Bremerhaven, *Bob Hope* sailed, moving at flank speed of 24 knots and reaching Thessaloniki in six days. MTMC's transporters were ready and attended to last-minute details. Soldiers and civilians with the 29th Support Group, Kaiserslautern, Germany, provided an organizational hub for transporters. Two days later, the *Soderman* sailed for Thessaloniki.

Midday on 29 June MTMC transporters were told to offload a high-priority Army engineer unit from the small Italian coastal vessel *Gulfo di Fiori* before the *Bob Hope* arrived at the sea buoy outside the port of Thessaloniki at 0600 the next day. While the *Gulfo di Fiori* was in port, other ships loading and unloading blocked Pier 6. Late afternoon turned into early evening, then dusk. At last the *Gulfo di Fiori* moved dockside.

Heavy construction vehicles rolled through the ship's open bow and onto the dock. Having drained the sodden cow pastures at the Tirana airport, soldiers of the 535th Engineer Company, Grafenwoehr, Germany, now arrived to meet new challenges in Kosovo. It was after midnight when the unit cleared the dock, allowing MTMC transporters only a brief rest before the *Bob Hope* arrived in six hours.

In all, MTMC delivered three shiploads of combat equipment to support the 7,000 Army peacekeeping troops in Kosovo as part of Operation *Joint Guardian*. Beginning on 30 June, MTMC directed the unloading of 274,000 square feet of cargo—1,345 pieces of Army equipment, including scores of M1A2 Abrams tanks and M2 Bradley fighting vehicles. Unloading continued until 1 July, and after a day's rest, MTMC transporters unloaded *Soderman's* 225,000 square feet of cargo.

Several weeks later, the USS *Osprey* arrived carrying Army equipment from Fort Lewis, Washington; Fort Riley, Kansas; and Fort Drum, New York. MTMC's 596th Transportation Group had loaded the ship earlier in Beaumont, Texas. The equipment was soon on the road to the 1ID in Kosovo. The work of MTMC soldiers and civilians in planning, managing, directing and preparing to move hundreds of pieces of cargo—some arriving unannounced at dockside in the final hours of loading—set the time and place for MTMC's mission success that helped synchronize process, automation and intellect to provide US forces with tactical vehicles and a steady stream of supplies.

Traffic management. Among its many missions, the MTMC directs, controls and supervises worldwide procurement and use of freight, personal property and passenger transportation services. It directly manages or influences transportation expenditures and related contracts of $2.7 billion a year. MTMC success comes largely from its many industry partners who supply trucks, trains, ships, barges and other transportation modes. MTMC commander Major General Kenneth L. Privratsky stated, "We move almost one million measurement tons of cargo a month through MTMC ports—that is impressive. Just think about that amount of cargo. The longer I am here the more I am impressed by MTMC movements."[6] If these measurement tons were placed

A major MTMC initiative is the Global Privately Owned Vehicle Contract, which makes a single contractor responsible for moving 75,000 vehicles worldwide each year. . . . Formerly, as many as four or five private contractors were directly involved in moving a single vehicle. Now, if damage occurs during shipment, responsibility is simplified. In fact, for minor claims, military personnel may receive compensation on the spot.

adjacent to each other, they would stretch from the Naval Weapons Station at Key West, Florida, to Seattle, Washington, and back—and still extend 20 miles into the ocean.

The US Transportation Command's Army component, MTMC is one of the smallest of the Army's 15 major commands. Its authorized strength of 2,700 military and civilian employees maintains a presence at 24 terminals worldwide. MTMC manages and directs through three subordinate headquarters: the Deployment Support Command, Fort Eustis, Virginia; the 598th Transportation Group, Rotterdam, the Netherlands; and the 599th Transportation Group, Wheeler Army Air Field, Hawaii.

The command has water ports in such geographically diverse locations as Okinawa, Japan; Beaumont, Texas; Bremerhaven, Germany; and Izmir, Turkey. Each port has a deployment support team that can move to any port in the world for contingency operations. MTMC has an additional subordinate command, the Transportation Engineering Agency (TEA), Newport News, Virginia, whose civil engineers and operations analysts provide analysis, modeling and simulation support. Recent MTMC actions have increased the TEA's profile, and the agency is now more involved in planning than in the past. It is the command's lead for movement issues involved in the current Army transition.

MTMC continually performs a wide range of worldwide missions. When disorder broke out in Dili, East Timor, in 1999, MTMC supported peacekeeping troops by carrying equipment from Thailand and Jordan. In related missions, MTMC directed movement of the US Army 11th Signal Brigade's equipment from Fort Huachuca, Arizona, to Darwin, Australia. More recently, for the 12th time in two years, military and civilian transporters with MTMC's 839th Transportation Battalion, Livorno, Italy, moved equipment to US peacekeeping forces in the Balkans.

The Royal Saudi Naval Forces ship *Abha* offloaded hundreds of pieces of cargo belonging to the 49th Armored Division, Texas Army National Guard, and the 3d Armored Cavalry Regiment, Fort Carson, Colorado. The move made history as the first time a National Guard division took charge of a Bosnian peacekeeping mission. The 1,200 Guard soldiers who performed the mission comprised the largest Reserve Component force deployed there to date—another record. Such operations validate DOD doctrine and processes and MTMC's readiness to move Army ground units worldwide.

Quality-of-life initiatives. As the largest personal property mover in the United States, MTMC is responsible for many quality-of-life initiatives that affect US military personnel. Annually it moves the personal property of 546,000 military personnel to new assignments around the world. To improve this process, MTMC is in its second year of a reengineering personal property pilot program that is testing new ways to move military personnel at installations in North Carolina, South Carolina and Florida. The MTMC pilot includes such enhancements as in-transit visibility of shipments via a toll-free phone number, full-replacement value for damage or loss, and streamlined administration. About 80 percent of those who have used the pilot say they would use the same mover again. To capitalize on lessons learned, the Office of the Assistant Deputy Secretary of Defense for Transportation Policy is currently developing a full-service moving project.

A second major MTMC initiative is the Global Privately Owned Vehicle Contract, which makes a single contractor responsible for moving 75,000 vehicles worldwide each year. Results are impressive; 99 percent of military personnel and civilians give it excellent ratings. Formerly, as many as four or five private contractors were directly involved in moving a single vehicle. Now, if damage occurs during shipment, responsibility is simplified. In fact, for minor claims, military personnel may receive compensation on the spot.

Defense Travel System. MTMC provides contractual and administrative support for the Defense Travel System. The Arlington, Virgina-based task force is changing the way DOD travels. Soon all military personnel and DOD civilians will have an automated system to handle their temporary duty (TDY) travel. Computers can quickly handle the currently slow, paperwork-intensive steps of travel authorization, reservations and travel claims. Users will use a computer template created in the initial

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A 1st Infantry Division M109A6 howitzer is maneuvered onto a French army heavy-equipment transporter at Thessaloniki, Greece, 1 July 1999.

step of travel authorization through all steps of the TDY process.

Third-party logistics. MTMC is implementing a third-party logistics pilot in Alabama, Florida and Georgia to increase efficiency of domestic freight shipments among DOD installations and the Defense Logistics Agency. Under the pilot, a third-party logistics contractor will handle freight shipments formerly handled by the Installation Transportation Office in the three-state region. A third-party logistics company could begin moving shipments soon.

Management Reform Memorandum 15. MTMC is changing the way it conducts business with customers and vendors. Commercial forms and streamlined automation will replace government documents. Management Reform Memorandum (MRM) 15, Reengineering Defense Transportation Documentation and Financial Processes, is focusing on this process.[7]

Signed on 7 July 1997 by Under Secretary of Defense John J. Hamre, MRM 15 began a revolution in business practices for DOD transportation services. A major initiative under MRM 15 eliminates government documentation such as bills of lading and military manifests for commercial sealift movement. The US Transportation Command, the designated functional manager for MRM 15, opened a program management office, collocated with MTMC, to spearhead the initiative. Working in

Implementing the PowerTrack service, an online payment and transaction tracking system for freight shipments, is projected to reduce the payment cycle to carriers from an average of 60 days to three days. The service will be used to pay for commercial transportation of freight within the United States, worldwide express movements and sealift intermodal container service. PowerTrack's single-source information center eliminates reconciliation of freight bills and invoices, and guarantees timely payments.

conjunction with the commercial transportation industry, MTMC has made great strides to adopt transportation industry commercial practices and business processes.

PowerTrack. Another MRM 15 initiative is using the US Bank's PowerTrack service to pay for freight shipments. Implementing the PowerTrack service, an online payment and transaction tracking system, is projected to reduce the payment cycle to carriers from an average of 60 days to three days. The service will be used to pay for commercial transportation of freight within the United States, worldwide express movements and sealift inter-modal container service. PowerTrack's single-source information center provides instant access to shipment data for both carriers and shippers, eliminates reconciliation of freight bills and invoices, and guarantees timely payments.

The PowerTrack solution and MRM 15 are expected to give the Defense Transportation System information superiority. It will provide a fantastic analytical tool to accelerate the move into true distribution management for the entire Defense Transportation System.

Reshaping. MTMC, with the Logistics Management Institute, McLean, Virginia, is reshaping to more closely resemble private enterprise transportation organizations. The future organization will be smaller, faster and more efficient in its work. Automation and organizational structuring will create savings that will reduce freight rates for MTMC's DOD customers. The reshaping includes centralized work processes at headquarters and standardized staffs at the command's 24 worldwide port units. Some work processes will shift to the Deployment Support Command—MTMC's operations element. A plan is underway to centralize MTMC's resource management, personnel and logistics functions, currently at MTMC's subordinate headquarters and ports, within the headquarters element.

Other changes are taking place at MTMC's two major overseas commands—the 598th and the 599th Transportation Groups. After years of unsynchronized, incremental changes, the two organizations are distinctly different in staffing and organization, but in the future they will resemble each other. A team of four MTMC battalion commanders reviewed the staffing of MTMC's battalions. The strength disparity among the units ranges from 18 in Bahrain to 100 in Korea. The goal is to develop a common structure for battalions, adapted to meet the needs of each battalion's area of responsibility and mission. The future shape of MTMC is still taking form, but it will be smaller in size and its operating functions will resemble commercial transportation firms. These modifications will be implemented during Fiscal Year 2001, but MTMC's mission, energy and enthusiasm will continue unchanged. ***MR***

NOTES

1. A single measurement ton is equivalent to a loaded pallet.
2. From a MTMC meeting planning logistics movement to Kosovo held in the spring of 1999.
3. The USS *Osprey* has a waterline length of 188 feet and a waterline beam of 38 feet.
4. The *ZERLiPOPULLI* is an Albanian newspaper, and this excerpt was taken from the May 1999 issue. The MTMC commander obtained it during an inspection visit.
5. Ibid.
6. Speech by Major General Kenneth L. Privratsky at an employee town hall meeting (spring 2000).
7. Department of Defense, Management Reform Memorandum, "Reengineering Defense Transportation Documentation and Financial Processes" (Washington, DC: Office of the Under Secretary of Defense, 7 July 1997).

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Transportation Strategy

Lieutenant Colonel Dwain A. Meyer, US Marine Corps, Retired

THE US TRANSPORTATION Command's (USTRANSCOM's) mission is to provide air, land and sea transportation for the Department of Defense (DOD) in peace and war. Its customer base extends to the Federal Bureau of Investigation, Federal Emergency Management Agency, United Nations, US State Department, Army and Air Force Exchange Service, Defense Commissary Agency, Red Cross and US Department of Transportation. In the past, USTRANSCOM has focused on the strategic leg of the end-to-end transportation requirement. Today's vision is to provide timely, customer-focused global mobility in peace and war through efficient, effective and integrated transportation from origin to destination.

The Joint Strategic Capabilities Plan (JSCP) directs end-to-end, time-phased force deployment data (TPFDD) development, but planning processes and tools fail to support the requirement. The TPFDD analysis strategy must begin by assessing these processes' strengths and weaknesses, supporting doctrine and analysis tools. The military must review and implement necessary changes in planning processes to capitalize on strengths and identify areas in which to improve. Developing a sound strategy requires:

- Sound joint doctrine and training that recognize improvements in collaborative and distributive planning, command and control, in-transit visibility, modeling and simulation.
- A process and an integrated set of tools to support execution planning, TPFDD development and analysis from origin to tactical assembly area, including a link to war-gaming models that would provide tactical and operational warfighting analysis. Nowhere is this need more evident than in crisis action planning (CAP).
- Programmed analysis and war-gaming tools that will help develop and field the force structure needed to accomplish USTRANSCOM's mission as envisioned in Joint Vision 2010.
- Up-to-date, accurate databases that authentic sources provide.
- Flexibility.
- Being easy to implement.

An OPLAN or CONPLAN is considered transportation-feasible when the capability to move forces, equipment and supplies exists from origin to destination. This transportation-feasibility determination requires concurrent analysis and assessment of available strategic and theater lift assets, transportation infrastructure, and competing demands and restrictions.

USTRANSCOM's strategy depends on specific actions, performed at the precise time, relative to the deliberate planning cycle. Databases and models that rapidly analyze the TPFDD with a high degree of flexibility, fidelity and accuracy must support these actions. Additional tools will help compress the processes to develop an executable TPFDD within 72 hours. Increasing US support to smaller-scale contingencies and changing force structure and accelerated response times mandate optimizing this process.

USTRANSCOM's strategy is to develop a process for end-to-end transportation planning and analysis that becomes embedded in joint doctrine; results in rapid course-of-action (COA) development with TPFDD; and is supported by fast, accurate and easy-to-use automation tools. It is designed to support the Joint Vision 2020 power-projection concept by making TPFDD development an integral part of the joint force commander's decision-making process.

Doctrine

The JSCP tasks regional commanders in chief (CINCs) to prepare operation plans (OPLANs), contingency plans (CONPLANs) and functional plans.

No single model provides a seamless information flow from end to end at the desired level of detail. This is particularly evident during deliberate planning and CAP. USTRANSCOM must develop a set of flexible tools that can account for each segment of force projection. Developing "stovepiped" models that support a single purpose is not adequate.

All JSCP-tasked OPLANs and some CONPLANs are accompanied by a TPFDD, which is the Joint Operation Planning and Execution System (JOPES) database portion of the plan containing time-phased force data, unrelated unit cargo and personnel data, and movement plan data.

For OPLANs and CONPLANs with TPFDD, the JSCP states that the supported CINC will declare the plan end-to-end executable. An OPLAN or CONPLAN is considered transportation-feasible when the capability to move forces, equipment and supplies exists from origin to destination. This transportation-feasibility determination requires concurrent analysis and assessment of available strategic and theater lift assets, transportation infrastructure, and competing demands and restrictions.

To achieve this requirement, both supported and supporting CINCs are tasked to assess specific segments of the end-to-end transportation requirement. The supported CINC will analyze deployment; joint reception, staging, onward movement and integration (JRSOI); and theater distribution of forces, equipment and supplies to the final destination. As a supporting command, USTRANSCOM will assess the TPFDD's strategic leg for transportation feasibility. This assures the Chairman, Joint Chiefs of Staff, (CJCS) and the supported CINC that movements departing the port of embarkation (POE) and arriving at the port of debarkation (POD) are

Analysis Tools

Analysis of Mobility Platform (AMP)

AMP is used primarily to support programmatic analysis and exercises. USTRANSCOM J5 uses it to support the Future Analysis Cell during activation. Currently the only modeling and simulation system that allows end-to-end modeling is USTRANSCOM's AMP. AMP is a modeling shell that provides communication among three major mobility models—Model for Intertheater Deployment by Air and Sea (MIDAS), Enhanced Logistics Intratheater Support Tool (ELIST) and Continental United States (CONUS) ELIST. Using these three models, end-to-end modeling from origin to final destination can be accomplished. AMP also models prepositioned (afloat and ashore) and in-place assets and has an internal dynamic sustainment generator for all classes of supply and ammunition. AMP is a unique platform with which to analyze the strategic mode, determine ports and change events during a simulation run. The MIDAS model provides an end-to-end capability that moves cargo from origin to destination.

To obtain an enhanced answer to the end-to-end problem, MIDAS is linked, using flat data files, to CONUS ELIST and ELIST. CONUS ELIST and ELIST use the same database that provides a network of roads, railroads, bridges, assembly areas and other features that allow cargo and passengers to move through the Defense Transportation System (DTS) land transportation segment in CONUS and in theater. This model is limited because it does not use vehicles to move cargo. To simulate movement, a flow-capacity model is used for trucks, aircraft, helicopters, buses and other transport vehicles.

While AMP can measure end-to-end closure, initial scenario setup is time-consuming and does not provide interactive feedback from one model to the other. The AMP models do not interact at execution; they run sequentially. AMP has satisfactorily supported the nearly completed Mobility Requirements Study 05 study and the Focused Logistics War Game. It is currently being modified to support the Quadrennial Defense Review's Dynamic Commitment War Game.

Joint Flow and Analysis System for Transportation (JFAST)

JFAST is a software tool specifically designed to help planners rapidly assess the transportation feasibility of a course of action (COA). It supports the mobility analysis and refinement of OPLANs and CONPLANs with time-phased force and deployment data (TPFDD) as part of the deliberate planning process. It has proven valuable as a crisis-planning analysis tool. The currently fielded version of JFAST's scope is limited and includes modeling movement from origin to POD. However, for several years JFAST has been able to pass a flat file to ELIST. This JFAST output file projects scheduled arrivals at the POD as the input for ELIST analysis of intratheater movements. To provide a theater piece to JFAST, there are currently two thoughts. One

consistent with the supported CINC's assessment of JRSOI and theater distribution.

End-to-End Transportation Analysis

End-to-end modeling supports programmatic analysis, war games and exercises, planning, and execution analysis. Current modeling capabilities for the Defense Transportation System (DTS) simulate passenger and cargo flow beginning at the origin, through a POE, to a POD, then to a final destination in the theater. The capabilities of programs such as Analysis of Mobility Platform (AMP), Joint Flow and Analysis System for Transportation (JFAST), Enhanced Logistics Intratheater Support Tool (ELIST) and Joint Warfare System provide the tools needed to support these analyses.

A fully integrated model that is flexible, easy to use and compatible with other modeling systems is not yet available. While existing models can support one or more DTS segments effectively, no single model provides a seamless information flow from end to end at the desired level of detail. This is particularly evident during deliberate planning and

In the past, USTRANSCOM has focused on the strategic leg of the end-to-end transportation requirement. Today's vision is to provide timely, customer-focused global mobility in peace and war through efficient, effective and integrated transportation from origin to destination.

CAP. USTRANSCOM must develop a set of flexible tools that can account for each segment of force projection. Developing "stovepiped" models that support a single purpose is not adequate. Developing a single model that supports all analysis requirements may or may not be successful and would require developing individual models to support planning, programmatics and war gaming.

The plan-development process follows a path as prescribed in the *User's Guide for JOPES (Joint Operation Planning and Execution System)* and Joint Manual 3122.02, *Time-Phased Force and Deployment Data (TPFDD) Development and*

is integrating JFAST and ELIST; the second is using the existing proven air, land and sea models in JFAST to model the complete end-to-end transportation requirement.

JFAST Version 8 extends this limited scope significantly. The first extension involves data-level integration of JFAST with the Mobilization and Deployment Capability Assurance Project (MADCAP) Integrated Management Initiative (MIMI) (also known as the Joint Partnership to Improve the Deployment Process). MIMI is a suite of tools the US Army Forces Command (FORSCOM) developed to analyze mobilization activities and compete for facilities at Army mobilization sites. Analysis results provide evaluated ready-to-load dates (the date each unit is ready to deploy) based on the reported readiness status and the mobilization requirements of every Active, Reserve and Guard unit.

The second extension involves adding a map-based planning interface to JFAST to allow the theater planner to define the intratheater movement requirements and concept of operations for intratheater transportation. The JOPES TPFDD is inadequate since it is limited to only five nodes per movement requirement (origin, POE, POD, destination and one intermediate location). In most cases, JOPES location reference files do not support detailed intratheater movement planning that may require identifying the positions of staging areas, marshaling areas, intermediate support bases and tactical assembly areas (TAAs) for each unit. JFAST Version 8 will provide a user-friendly interface to allow the supported commander in chief's planners to define intratheater movement requirements and use the existing proven air, land and sealift models in JFAST to assess the entire plan's end-to-end transportation feasibility (mobilization site to TAA). The planned initial operational capability for this JFAST Version 8 capability is June 2001.

Joint Warfare System (JWARS)

JWARS is currently being developed and may ultimately provide an end-to-end system that has all of AMP's capability and may be dynamically linked with a new war game model that will replace TACWAR. JWARS will have approximately 80 percent of AMP's functionality at initial operating capability and will have the remaining functionality approximately six months later. New functionality will be added to surpass AMP's capability and will be ready by the end of Fiscal Year 2001. Unique among current and future models will be the ability of the mobility model inside JWARS to receive feedback from the fight. JWARS will introduce events, such as port or canal closings, to dynamically alter cargo and passenger flow into the theater. This functionality will allow the user to modify the scenario and determine the effect on force projection. Once fully operational, JWARS will provide a true end-to-end analysis capability that will test COAs in war game environments and provide for the first time a mobility requirement during the fight. ■

Deployment Execution.* The deliberate planning section shows there are five formal phases: initiation, concept development, plan development, plan review and supporting plans.

Within the framework of plan development, TPFDD development and analysis and transportation feasibility estimates (TFE) occur, usually during three two-week TPFDD refinement conferences that the Joint Staff sponsors and USTRANSCOM hosts. Forces are selected and time-phased at the forces conference, support requirements are determined and time-phased at the logistics conference, and the strategic flow is analyzed through computer simulation using JFAST at the transportation conference.

The 911 team is a group of planners from USTRANSCOM, deployed on short notice to assist in regional CINC contingency planning efforts. These planners represent USTRANSCOM's planning and operations divisions. At the appropriate time, they deploy to provide transportation expertise to the supported CINC as early as the COA-development phase.

Integral to receiving plan approval, the TPFDD must undergo end-to-end analysis for transportation feasibility analysis. Since JSCP 98, the supported CINC has been responsible for declaring end-to-end feasibility. The phase ends when the CJCS receives the fully documented plan, including the TPFDD, for final review and approval.

Deliberate planning and CAP use JFAST to support transportation-feasibility analysis. JFAST models force and equipment movement from origin to POD only. While ELIST models force projection from POD to final destination, it has not been integrated into deliberate planning or CAP.

Deliberate planning uses the steps outlined in JOPES so TPFDD analysis occurs only when the supported CINC provides the TPFDD to USTRANSCOM for JFAST analysis. Throughout the three refinement conferences, gross transportation feasibility is achieved through a continual process of adjustments and analysis. This process occurs until the plan is error free and does not exceed JSCP apportionment by more than 5 percent on any given day. The inability to model JRSOI functions is a concern because the supported CINC must declare a plan end-to-end transportation-feasible without the essential tools to perform the final force movement segment—POD to destination.

This is not necessarily the case during CAP. There is an increasing demand for transportation feasibility estimates during the early stages of plan development. This support is requested as early as phase III, which includes COA development, and well before TPFDD development. The supported CINC needs models such as JFAST to generate time-phased, notional forces that support a given COA. This is a problem because there is a minimum threshold for required information below which no meaningful JFAST analysis can occur. At a macro level, JFAST contains substantial notional force packages a planner can use to estimate major forces' movement requirements. A planner who knows service doctrine should tailor force packages to fit the proposed COA. This tailoring accounts for the combat forces and the critical, often-overlooked, combat support and combat service support forces.

Supported CINCs can help this effort by identifying as many units as possible using the unit type code. This will allow JFAST analysts to more closely estimate the size and lift requirements for the forces the COA identified. However, realistic force time-phasing, which is essential for meaningful analysis, is still missing. The supported CINC must recognize these limitations and collaborate with USTRANSCOM to clarify the requirements and provide guidance on time-phasing.

The increasing need to support CAP requires supported CINCs to articulate their requirements clearly; supporting CINCs must clearly explain their ability to provide that support. Two initiatives that could assist in developing an effective process are the USTRANSCOM "911" teams and a JFAST letter of instruction (LOI) on CAP.

While the name may be a bit misleading, the 911 team is a group of planners from USTRANSCOM, deployed on short notice to assist in regional CINC contingency planning efforts. These planners represent USTRANSCOM's planning and operations divisions. At the appropriate time, they deploy to provide transportation expertise to the supported CINC as early as the COA-development phase. This direct support is short-term and should only be used when it will provide the greatest benefit to the supported CINC. Forward-deployed planners use JFAST to support the planning effort, yet this would

*Joint Publication, *User's Guide for JOPES (Joint Operation Planning and Execution System)* (Washington, D.C.: US Government Printing Office [GPO], 1 May 1995); Joint Manual 3122.02, *TPFDD Development and Deployment Execution* (Washington, D.C.: GPO, 9 December 1994).

CXS Transportation

M1 tanks painted for desert duty move to a US seaport.

Exercise staffs fail to assess the impact on force closure, port throughput, JRSOI and the CINC's strategic concept. This creates scenarios in which forces deploy without necessary support, troops deploy by strategic air much sooner or later than their equipment arrives by sealift, and CINC priorities are violated. Although changes will occur beginning at execution, staffs must exercise all of the steps involved in making those changes to appreciate the task's complexity and impact, and the time involved in reacting to those changes.

not preclude direct USTRANSCOM assistance. The recent introduction of the capability to post JFAST scenarios and plan sets to a remote server enables the supported CINC and the 911 team to reach back to USTRANSCOM for JFAST support.

In addition to the obvious need to provide planner-level support, recent events demonstrate the need to develop a JFAST LOI that would clearly outline JFAST's capabilities with the supported CINC's progress in plan development. The LOI will state the minimum information threshold for performing meaningful transportation analysis and the level of detail the supported CINC could expect. Planners cannot create the notional TPFDD required for COA gross transportation-feasibility assessment without substantial input from CINC or joint task force staff planners identifying specific above- and below-the-line force requirements, time-phasing and associated node locations.

Training and the Dynamic TPFDD

Training is fundamental to understanding the processes involved in TPFDD development and analysis. Exercises and war games must include requirements for staffs to build and manage TPFDDs

that support exercise training objectives. Attempts to implement a dynamic TPFDD during recent exercises suggest there is much staff training to do. Dynamic exercise play has been hampered by a lack of staff participation to assess the impact of changes to the TPFDD, failure to perform the validation process and unrealistic expectations that USTRANSCOM-managed DTS can immediately react to changing transportation requirements.

Database responsibility becomes increasingly important. The model's quality is directly related to the quality of the databases that support the model. Although the data associated with strategic lift has been successfully captured, maintenance of other databases is lacking, which degrades the model's quality and overestimates its ability to project forces.

Exercise staffs fail to assess the impact on force closure, port throughput, JRSOI and the CINC's strategic concept. This creates scenarios in which forces deploy without necessary support, troops deploy by strategic air much sooner or later than their equipment arrives by sealift, and CINC priorities are violated. Although changes will occur beginning at execution, staffs must exercise all of the steps involved in making those changes to appreciate the task's complexity and impact, and the time involved in reacting to those changes.

Challenges

Regardless of the type of planning, end-to-end TPFDD analysis is even more difficult because of variables that may significantly affect modeling results. Until recently, several important issues have been marginalized or completely overlooked during planning and the subsequent end-to-end TPFDD analysis. Planning factor databases include the Continental United States (CONUS), en route and theater.

As the models used to conduct end-to-end TPFDD analysis continue to improve, database responsibility becomes increasingly important. The model's quality is directly related to the quality of the databases that support the model. Although the data associated with strategic lift has been successfully captured, maintenance of other databases is lacking, which degrades the model's quality and overestimates its ability to project forces. Port throughputs, en route infrastructure and theater infrastructure are three examples of databases that suffer because a coordinated database-management process is lacking, which would identify executive agent responsibilities. This problem is compounded when database evaluation, validation and distribution are not synchronized with the TPFDD refinement time line.

The supported CINC determines theater POD throughput. While this is clearly understood, the information sources available to make these assessments and assign the limits on throughput are not coordinated. Available information sources include the Air Mobility Command (AMC); the Joint Intelligence Center, USTRANSCOM; the Military Traffic Management Command (MTMC) Transportation Engineering Agency; and the Defense Intelligence Agency. A coordinated process for fusing this diverse pool of information is lacking, resulting in a database that will not support the TPFDD refinement process.

Port throughput is not simply a function of the port's physical characteristics. Several other factors play critical roles in determining the throughput of a given port:

- Port handling and inland transportation assets.
- The time-phasing and capabilities of the organic AMC/MTMC units functioning as port managers.
- The degree of host nation or other nation contingency contracting, the logistics civil augmentation program and support available to the port manager.
- Road and rail networks.
- Marshaling areas.
- Combat support and combat service support units.
- Port support activities.
- Cargo transfer companies and other enablers.

Without an effective plan to conduct JRSOI, ports and marshaling areas will become congested and throughput will halt. This reinforces the need to model JRSOI and recognizes its contribution to end-to-end transportation feasibility.

These planning factors are not limited solely to capabilities of CONUS, en route and theater infrastructure. The most current data and doctrine for strategic air- and sealift must be used to move troops in support of JSCP taskings. The age of the strategic airlift fleet and its decreasing numbers and increasing changes to the Civil Reserve Air Fleet Pro-

USTRANSCOM's iron mountain of materiel near Dhahran, 1991.

US Army

The age of the strategic airlift fleet and its decreasing numbers and increasing changes to the Civil Reserve Air Fleet Program warrant annual review and update. Annually monitoring sealift capabilities is also necessary. Assessing USTRANSCOM's ability to move forces and their sustainment from origin to final destination is another necessity. Optimal force projection depends on the availability of rail cars, containers, commercial carriers, support personnel, and outload capabilities at depots and ports.

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POE-POD Selection

Crucial in developing effective, efficient, feasible transportation plans is allocating scarce transportation assets. Current deliberate planning processes rely on the supported CINC to determine the strategic transportation mode from POE to POD and to determine the POEs and PODs at the unit-line-number (ULN) level. Existing OPLANs, which have been through exhaustive staffing and analysis, are not affected. However, rapidly developed deployment plans lack such review. Having a model with mode- and port-determination algorithms available could greatly streamline planning and expedite analysis. Although such a model will not produce the final mode and port combinations for all requirements, it will provide an initial flow that is transportation-feasible and that CINC staffs can refine to meet their objectives.

This approach was designed in the Analysis of Mobility Platform-Model for Intertheater Deployment by Air and Sea (AMP-MIDAS) and should be used cautiously with execution planning. Although it is an end-to-end model, the CONUS and theater pieces are elementary and use a table of distances between PODs and destinations and between

US Army

Units that are apportioned to both major theaters of war (MTWs) are currently participating in Balkan operations. At execution it is possible that these units will not be at home station and available to deploy in accordance with the TPFDD. As a result, other forces must fill these requirements to allow the original unit to redeploy to home station, reconstitute/regenerate and deploy again to support the MTW TPFDD.

origins and POEs. These distances simulate road and rail movement to the POE and final destinations. Cargo and passengers do not actually move over a CONUS or theater network and cannot be constrained, which tends to provide an optimistic projection. A more accurate result comes from linking the MIDAS model with the ELIST models inside of AMP that provide road and rail networks with mobility resources. This link will provide a more robust answer. Using AMP-MIDAS for mode and port selection requires another caution: unit integrity is down to the ULN level, and in executing an OPLAN inside the model, ULNs from the same unit may be scheduled by a different mode. Careful model setup can reduce this problem. The future end-to-end model must link the theater piece with a CONUS piece through a scheduler at run time to determine mode and port selections. This capability currently does not exist in any of the mobility tools.

Readiness Ratings

Readiness ratings indicate a unit's preparedness to deploy and accomplish its mission. A lower readiness posture results in a longer period before a unit is fully manned, equipped and trained. This affects the ready-to-load date for that unit and will most likely result in the unit failing to meet the planned latest arrival date. In addition to the serious threat this may place on meeting the CINC's required dates, it affects the DTS as follows:

- MTMC's decisions on port openings.
- MTMC scheduling CONUS unit moves from origin to POE.
- AMC's strategic airlift scheduling.
- Military Sealift Command's decisions on sealift activation and ship scheduling.

Units that are apportioned to both major theaters of war (MTWs) are currently participating in Balkan operations. At execution it is possible that these units will not be at home station and available to deploy in accordance with the TPFDD. As a result, other forces must fill these requirements to allow the original unit to redeploy to home station, reconstitute/regenerate and deploy again to support the MTW TPFDD. These substitutions create changes in unit sequencing and introduce the need to include redeploying forces in the strategic flow of aircraft and ships to the supported theater. Once established as the "TPFDDs of record," TPFDDs that support all major OPLANs/CONPLANs do not account for changing forces.

Although the joint logistics over the shore (JLOTS) operation was modeled inside of AMP at the Focused Logistics War Game, no existing models account for JLOTS in sufficient detail. Nonprogrammatic TPFDDs also fail to account for assets aboard pre-positioned ships. These shortfalls significantly affect associated JRSOI requirements. While these operations may not directly compete for port throughput, they do compete for manpower,

materiel- and cargo-handling equipment, transportation, supply, infrastructure and control assets that support JRSOI. These assets must be reflected in the TPFDD to ensure that accurate equipment densities are used in determining gross sustainment lift requirements during deliberate planning. Although these areas are covered today in supporting programmatic analysis, they are not accounted for in the execution planning process.

Ease of Use

The systems used to support TPFDD analysis strategy must be user-friendly. Systems are becoming more capable but also more complex. ELIST is working to make its model more user-friendly so it can operate without extensive contractor support. Staffs also have difficulty training sufficient personnel to use these systems. For example, hundreds of students each year train in JOPES, yet there is a shortage in the field. One possible solution is increasing civil service and contractor personnel at all levels of command. Another is to develop and assign personnel a military occupational specialty.

Planning and execution processes must adapt to business in the future. Doctrine and many of the system tools needed to perform end-to-end analysis have matured but require decisions about the next step to reduce the number of modeling and simulation systems. Realizing this vision requires refining planning and execution enablers to analyze force-projection requirements from end to end. These enablers must:

- Support deliberate planning and CAP.
- Support operations ranging from humanitarian assistance to the force-projection requirements of two nearly simultaneous MTWs.
- Provide real-time support to decision making at execution.
- Enhance the quality and value of joint and service exercises and training.
- Support modeling and simulation requirements for studies and analyses.

Doctrine and many of the system tools needed to perform end-to-end analysis have matured but require decisions about the next step to reduce the number of modeling and simulation systems. Realizing this vision requires refining planning and execution enablers to analyze force-projection requirements from end to end.

- Focus on interoperability, flexibility, speed and accuracy.
- Reduce numbers while emulating the capabilities of the "best of show."

Effectively designed and applied, these tools will provide a seamless system that will facilitate force projection from origin to destination and provide a comprehensive end-to-end modeling capability. Concurrently, we must look for ways to optimize the process of projecting forces and sustainment with the goal of becoming "better, faster, cheaper."

We must assess the processes used to perform planning and execution requirements. Today, the supported CINC's needs are not satisfied by using the currently accepted methodology. We must conduct distributive and collaborative planning and analysis within and between headquarters. The USTRANSCOM 911 team concept is one example of how to leverage current capabilities. Doctrine must be constantly reviewed and modified to reflect new capabilities.

End-to-end TPFDD analysis can be a reality by applying the same vision that has provided the tools used today. The United States no longer has the forces, equipment and sustainment to perform an Operation *Desert Shield/Storm*-scale mission without exercising economy of force. Coupled with the high tempo of contingency support, we must use the most sensible combinations of forces and assets in an environment that requires speed and flexibility during planning and execution. ***MR***

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JROTC

Recent Trends and Developments

Colonel John W. Corbett, US Army, and
Colonel Arthur T. Coumbe, US Army Reserve

Some people think that the Army is no longer hiring, or that if it is, its real missions are long gone. Those attitudes flow from the growing disconnect between the military and the rest of society. A 30-second spot during the Super Bowl may tell part of the soldiers' story, but reconnecting the military with society means people with military experience meeting people without it. The expanding Junior ROTC program turns soldiers into teachers and provides training and adventure for high school youth, while opening their eyes to the exciting opportunities beyond.

THE JUNIOR RESERVE OFFICERS' Training Corps (JROTC) is flourishing. Enjoying strong support at both the national and local levels, it boasts a larger enrollment and encompasses more high schools than ever in its 85-year history. In fact, the Army cannot accommodate all of the institutional applicants for the program. Midway through 2000, more than 300 secondary schools were on the waiting list for new units, and that list was growing weekly. Geographically, JROTC stretches around the world. It is now offered in all 50 states, the District of Columbia, Puerto Rico, American Samoa, Guam and overseas in Department of Defense (DOD)-operated schools for military dependents.[1]

Post-Cold War Growth

Between 1992 and 2000 enrollment nearly doubled while unit strength rose by 60 percent due to an expansion President George H. Bush announced on 24 August 1992. Bush described JROTC as "a great program that boosts high school completion rates, reduces drug use, raises self-esteem and gets these kids firmly on the right track."[2] The Fiscal Year 1993 National Defense Authorization Act raised the maximum allowable number of JROTC units DOD-wide from 1600 to 3500.[3]

Bush's expansion plan called for the Army to boost its institutional base from 875 to 1682 units between 1992 and 1997. Operation *Young Citizen*, the US Army Cadet Command named the plan, proceeded as scheduled until March 1995 when the expansion stalled at its existing level of approximately 1370 schools. Fiscal shortfalls stopped program growth 305 schools short of the original expansion goal.

A special effort was made to bring in institutions that, according to DOD criteria, qualified as educationally or economically disadvantaged schools. Institutions in these categories, many of which were rural and

inner-city schools, could receive up to five years of special financial assistance if they agreed to host a JROTC unit. Overall, about 35 percent of the institutions added to the program between 1992 and 1995 benefited from such aid.

Operation *Young Citizen* also had ambitious geographic distribution objectives and emphasized establishing units across the northern states (particularly New England) where JROTC was underrepresented. By 1995 institutional representation across this northern belt had risen by more than 100 percent. Another *Young Citizen* goal was to have a JROTC program in every state. It met this goal in September 1995 by establishing a unit in White Mountains High School, Whitefield, Vermont.[4]

Today, JROTC is on the verge of another round of growth. In July 1999 Secretary of the Army Louis Caldera announced the start of a second post-Cold War expansion with the goal of adding 275 units by 2005. The current plan is to add 50 high schools in school year 2000-01 and approximately 45 more each year for the next five years.

With the collapse of the Soviet Union and Warsaw Pact, the need for a huge US Army receded. At the same time, pressures built to use the military in ways that would help meet some of the United States' domestic needs. . . . Senator Sam Nunn of Georgia urged that the "military's spectrum of capabilities" be reinvigorated to address urgent social problems such as the lack of role models for young people.

JROTC Support

With the collapse of the Soviet Union and Warsaw Pact, the need for a huge US Army receded. At the same time, pressures built to use the military in ways that would help meet some of the United States' domestic needs. One of the most articulate and influential voices advocating a wider societal role for the US Armed Forces was Senator Sam Nunn of Georgia. Nunn urged that the "military's spectrum of capabilities" be reinvigorated to address urgent social problems such as the lack of role models for young people. In his opinion, the "hard-working, disciplined" men and women of the Armed Forces could "serve as a very powerful force among our young people—especially where family structures are weakened by poverty, drugs and crime." He viewed JROTC as one instrument through which the services could interact with the inner-city youth.[5]

While leaders like Nunn helped create a supportive environment for JROTC growth, it was Chairman of the Joint Chiefs of Staff General Colin Powell who focused DOD's attention and resources on the expansion. Powell characterized JROTC as the "best opportunity for the Department of Defense to make a positive impact on the Nation's youth." He felt that junior programs would be particularly valuable in the inner cities, especially after the Los Angeles riots in April 1992. He visited the site of the disturbances and came away convinced that JROTC, with its emphasis on responsible citizenship and respect for authority, would help dissuade young people from destructive behavior and guide them along more productive paths.[6]

National-level support for expansion was bound up with the difficult recruiting environment of the late 1990s. A booming economy with its abundance of entry-level jobs, coupled with an increased percentage of high school students continuing on to college, has cut deeply into the Army's traditional recruiting market of noncollege-bound high school graduates. Although JROTC is not intended as a recruiting program, surveys indicate that approximately 42 percent of every JROTC graduating class expects to establish some connection with one of the military services. Surveys also indicate that JROTC cadets are five times more likely than their contemporaries to join the military.

Some of this recruiting success among JROTC graduates can be attributed to enhanced cooperation between JROTC instructors and re-

cruiters. Cadet Command now works more closely with the US Army Recruiting Command (USAREC) than it did in the past, facilitating USAREC's work by outlining career options to students, emphasizing that military service is an honorable calling and providing incentives that reinforce JROTC instructors' efforts. DOD allows a student who has completed two years of JROTC to enlist as an E-2; a three-year program participant can enlist as an E-3.[7]


New ROTC lieutenants taking the officer's commissioning oath.

US Army

However, the formal, overt efforts are not primarily responsible for the high accession rates. Many cadets join JROTC because they want to enlist in the military. This propensity is nurtured through their interaction with instructors in the classroom and in a variety of informal settings. For many of these cadets, JROTC instructors are the most important adult role models in their lives—they project an image more powerful than any advertising campaign or recruiting pitch.

Transcending and fueling both rounds of expansion were concerns senior defense officials and prominent academicians shared about the Army's shrinking "footprint" in society. The post-Cold War drawdown, with its personnel reductions, base closings and college ROTC unit closings, had lowered the Army's visibility. It seemed to some that the Army was shrinking to the point of social irrelevance. As channels of interaction and involvement between the services and the public disappeared, public support for and understanding of the military appeared to erode. These conditions made outreach a critical function. Sociologist Charles Moskos advised the Army to "maximize the number of young people . . . who pass through a military experience."[8] JROTC, centered in the Nation's secondary school system, offers one of the few avenues through which the services can directly interact with an important segment of the larger society.[9]

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Parents and school officials at host sites provide the most decisive support for program expansion, thus creating a demand for new programs. This support is attributable largely to the program's salutary effects on students and host institutions. Principals indicate that having a JROTC program reduces disciplinary problems in their schools. Key performance measures indicate that cadets attend class more frequently, are less likely to drop out of school and are more likely to graduate than their peers. According to Moskos, JROTC cadets have a 10- to 15-percent higher graduation rate than their peers in the same high school. Cadets also demonstrate slightly better academic performance than their contemporaries in the general school population (GPA 2.8 versus 2.6, SAT 823 versus 821 and ACT 20.5 versus 19).[10]

US Army

The Program of Instruction

From the Army's standpoint, the program's effectiveness is evaluated against the objectives that support the mission, which is "to motivate young people to be better citizens." Supporting objectives include:

- Promoting citizenship.
- Developing leadership.
- Enhancing communication skills.
- Strengthening self-esteem.
- Providing the incentive to live drug free.
- Learning to appreciate the military services and their accomplishments.
- Improving physical fitness.
- Promoting high school graduation.
- Learning to work as a team member.

The program of instruction includes citizenship, leadership, communications, military history, drug awareness and physical fitness. Teamwork, improved self-esteem and high school graduation derive from the total program and JROTC instructors' active mentorship and guidance. Compounding variables prevent precise measurement; yet it is undeniable that JROTC, fielded as a dollar-sharing partnership between the federal and local levels, produces positive results.[11]

Since 1992 the US Army Cadet Command has taken various steps to improve program administration and instruction—steps that its senior leaders believe have strengthened the program's local popularity. Former ROTC Commander Major General Wallace Arnold spearheaded the first expansion because he recognized the need to bolster JROTC's organizational infrastructure to accommodate the growth in unit strength. Arnold fortified the Director of Army Instruction's (DAI's) position to manage the program at the school district level. He also introduced a training and orientation program for JROTC instructors to ensure that all instructors understood program goals. In the mid-1990s the US Army Cadet Command streamlined, centralized and standardized program administration by cutting JROTC staff at the three ROTC region headquarters

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and enlarging the staff at the national headquarters.[12]

The US Army Cadet Command is also upgrading its instructional technology. Parts of the instructors' orientation course are currently being converted to a web-based format. In addition, a number of interactive, multimedia instructional modules are being prepared for cadets' use. These web-based modules will supplement, not replace, participatory instruction. Revising the curriculum to bring it in line with current needs and educational trends has been another priority.

Some claim that JROTC is an instrument for militarizing the Nation's youth, little more than a thinly veiled recruiting device. Critics also say it promotes guns and violence as means to resolve conflicts and has an inappropriate curriculum that indoctrinates impressionable high school students with nationalistic and martial ideals rather than teaching them to think critically.

Over the past several years, a special effort has been made to align the program with three national educational strategies—the National Education Goals, the Secretary of Labor's Commission on Achieving Necessary Skills and the President's Summit. The latest leadership education and training materials have added staff rides and blocks of instruction on etiquette, nutrition, conflict resolution, multicultural diversity, geography, the environment and service learning opportunities. Embedded in instructional modules are programs on learning styles, skills mapping, authentic assessments and portfolios. Self-paced texts have recently been adopted to resolve scheduling conflicts and facilitate home schooling.

In conjunction with its counterparts in the US Air Force and Navy, the US Army Cadet Command has also developed interservice, cross-indexed drill and marksmanship manuals. An interservice manual on orienteering is currently being compiled. These efforts are significant because of the impact on training and the improved interservice cooperation they represent.[13]

JROTC Opponents

The program does have opponents. Some claim that JROTC is an instrument for militarizing the Nation's youth, little more than a thinly veiled recruiting device. Critics also say it promotes guns and violence as means to resolve conflicts and has an inappropriate curriculum that indoctrinates impressionable high school students with nationalistic and martial ideals rather than teaching them to think critically. Others contend that the program does not positively affect college enrollments or employment potential. In fact, some argue that it actually hurts disadvantaged youth. According to them, by obligating a host institution to share costs, JROTC diverts resources away from programs that might help deprived young people qualify for higher education or employment. Some even question the Army's claims of success, attributing the impressive statistics more to carefully screening applicants than to anything inherent in the program.[14]

These contentions misrepresent the program's focus. The US Army Cadet Command does not regard or represent JROTC as a vehicle to morally and educationally uplift hard-core delinquents. Rather, the program is designed for youth seeking direction and a sense of belonging. Many of them are not high academic achievers and do not plan to attend college. In the main, they are students who could go either way—they could go on to become productive and responsible citizens or join the ranks of the alienated and disaffected. The command is convinced that which way they eventually go depends on their high school role models and experiences.

Other critics believe that the military should play little or no role in civilian affairs. To them, subsidizing a program like JROTC only diverts time, attention and resources from more pressing priorities. The

Active-duty officers and noncommissioned officers train cadets in tactical skills ranging from marksmanship to land navigation.

US Army

money spent on providing military role models and mentors for high-risk youth, in their opinion, could be better used on improving readiness or modernizing America's aging arsenal.[15]

Still others see a misplaced emphasis on tradition, display and the military's external trappings. One retired Army general asserted that the "backbone" of JROTC was "training right out of 1895: rifles, trinket-laden uniforms, drill and ceremonies, plus a modicum of physical fitness." Like many others, he wanted the Army to "raise cadet sights above winning drill competitions to computer-aided skill acquisition."[16]

Although the Army JROTC has recently begun to move in the direction the general suggested, most students do not participate in the program to enhance their academic skills or future marketability. They want the sense of belonging and purpose it gives them. This sense of belonging results from working on community-service projects, supporting school events, participating in drill competitions or engaging in various other unit activities. Often done in uniform under military supervision, these team-building activities obviate feelings of alienation that afflict so many adolescents. While drilling, wearing uniforms and adhering to military customs and courtesies might seem irrelevant or counterproductive to some observers, experience shows that they help to create a sense of identity many cadet contemporaries either lack or get from nonproductive groups such as gangs.

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Prospects

If history is any guide, JROTC's bright future could quickly change. Many uniformed resource managers looking at a program's fiscal bottom line rather than its long-term but unquantifiable effects on civil-military relations and the moral development of the Nation's youth will undoubtedly continue to view JROTC as an expensive luxury. And officers who feel the Army should avoid involvement in civilian projects will continue to regard it as a diversion from the Army's principal mission. Congressional backing for JROTC, while solid at present, is extremely susceptible to changing budget priorities.

Support for the program has been most intense and most enduring at the local level. It was a grassroots movement that fueled program growth in the mid-1990s, and it is a grassroots movement that is propelling the

expansion today, as evidenced by the ever-growing list of school principals and superintendents asking for new units. If JROTC maintains the gains it has made in the post-Cold-War era, it will undoubtedly be this local support base that is largely responsible. ***MR***

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A Causal Model of Warfare

Commander Alan D. Zimm, US Navy, Retired

Regardless of whether its mechanism is attrition or maneuver warfare, military victory often depends on intangibles such as morale and the will to fight. Zimm crafts a model to explain how maneuver warfare targets those intangibles and triggers psychological results that are more decisive than the physical ones.

CURRENT US MARINE Corps doctrine dating from the 1989 issue of Fleet Marine Force Manual 1, *Warfighting*, espouses "maneuver warfare."[1] Maneuver shatters "the cohesion of the enemy system," achieving victory by paralyzing an "enemy who has lost the ability to resist."[2] This concept identifies maneuver as a weapon.

The US Army concept of maneuver is less ambitious. Maneuver is "movement relative to the enemy to put him at a disadvantage," wherein "friendly forces gain the ability to destroy the enemy or hinder his movement through the direct or indirect application of lethal power or threat thereof."[3] Victory is achieved through applying overwhelming combat power.

These two contrasting concepts have been labeled as "maneuver" versus "attrition" or "firepower" schools; the merits of each have been extensively debated.[4] Supporters cite historical examples in which their system of warfare resulted in victory. However, "similarity of outcome does not imply a similarity of process."[5] Military theorists struggle with a "chicken and egg" conundrum: destruction can cause panic and paralysis, and panic and paralysis facilitate destruction. Which is the primary path to victory?

On Victory

History suggests that there are indeed two mechanisms—physical and moral—of victory: destroying or incapacitating the opponent physically and destroying his will.

In the physical mechanism of victory, the defeated side is annihilated. Cannae, Thermopylae, the Fetterman massacre, Little Big Horn, Iwo Jima and Isandhlwana are examples. But in the vast reach of history, examples of annihilation are mercifully few. Such battles are the stuff of epics, and like epics, they are rare.

Soldiers rarely fight to the last man. Characteristically, they surrender, retreat or run in panic well before extermination. At Waterloo, the French Army collapsed after the Imperial Guard failed to break the British line. Destruction had been widespread; the French had already suffered about 15,000 casualties. But defeat came when the remaining 60,000 no longer had the will to stand.

Some have noted that destruction and death are primary mechanisms to undermine morale and have concluded that firepower is sufficient for victory. But physical destruction is not the only way to influence morale. While there are examples of

There have been marvelous advances in sciences since Clausewitz's time. Probability and statistics, sociology, psychology and organizational science all help us understand combat processes. Chaos and Complexity theories offer new methodologies to understand what appears at first to be random, turbulent, disorganized and chaotic. We have a considerably larger arsenal with which to attack the problem.

resolving battles by annihilating the enemy physically, there are more examples of battles being resolved purely by destroying the enemy's morale and will to fight.

During English King Henry V's campaign in France, "[w]hen the fall of Rouen became known, the rest of Normandy quickly submitted. Often it was sufficient for Henry's captains to appear in front of a town or a castle for it to surrender."[6] During the War of Spanish Succession, many fortresses and fortified towns surrendered without a fight after the Duke of Marlborough's spectacular victory at Ramillies.[7] At sea it was common for warships to surrender to a more powerful opponent without exchanging a shot; confrontations were resolved with only the threat of destruction.

Perhaps the most curious example of the purely moral mechanism of victory is the case of capitulating a full field army. At the onset of the War of 1812, "Brigadier General William Hull . . . withdrew to the village of Detroit on 11 August. Five days later, Major General Isaac Brock, the British commander in Upper Canada, moved on Detroit with a much smaller force of regulars, militia and Indians. In a colossal bluff, he urged Hull to surrender, explaining that, once fighting commenced, he would be unable to control his Indians and a massacre might result. His nerve gone, Hull surrendered his entire army without a fight."[8]

This phenomenon is not restricted to the remote past. During the Gulf War, the Iraqis soon learned to associate spotter unmanned aerial vehicles (UAVs) with the devastating fire from battleships' 16-inch guns. In at least one instance Iraqi troops streamed out of their emplacements, waving white flags and raising their hands into the air, surrendering to the UAV before shots were fired.

Clausewitz and the Moral Element of War

Carl von Clausewitz is often cited—unfairly—as espousing the attritionist school. In fact, Clausewitz had important observations on what he called *moral* and *moralische Kraft*, terms variously translated as "morale" and "moral force."

According to author Bernard Brodie, "Clausewitz's work stands out among those very few older books that have presented profound and original insights that have not been adequately absorbed in later literature."[9] It is instructive to consult Clausewitz's largely ignored ideas on the place of war's moral factors: "[T]he moral elements are among the most important in war. They constitute the spirit that permeates war as a whole, and at an early stage they establish a close affinity with the will that moves and leads the whole mass of force, practically merging with it, since the will is itself a moral quantity. . . . The spirit and other moral qualities of an army, a general or a government, the temper of the population of the theater of war, the moral effects of victory or defeat—all these vary greatly. They can moreover influence our objective and situation in very different ways. Consequently, though next to nothing can be said about these things in books, they can no more be omitted from the theory of the art of war than can any of the other components of war. To repeat, it is paltry philosophy if in the old-fashioned way one lays down rules and principles in total disregard of moral values."[10] Clausewitz further simplifies things: "One might say that the physical [factors] seem little more than the wooden hilt, while the moral factors are the precious metal, the real weapon, the finely honed blade."[11]

If Clausewitz considered moral forces to be so important, why did he not give additional attention to them? In *On War* he states that "[w]e might list the most important moral phenomena in war and, like a diligent professor, try to evaluate them one by one. This method, however, all too easily leads to platitudes, while the genuine spirit of inquiry soon evaporates, and unwittingly we find ourselves proclaiming what everybody already knows."[12]

The use of computers has caused us to lose touch with warfare's human element. What once was "what everybody already knows" is now lost behind the mathematical sterility of lethal areas, probabilities of kill and force loss-exchange ratios. We must take the part of the diligent professor and recapture the moral phenomenon in war.

Clausewitz, a creature of the industrial and scientific revolutions, drew his tools and metaphors from physics and mechanics, as witnessed by his concepts of friction and geometrical factors. In his time the complexities of human behavior were still beyond comprehension, which prompted him to conclude that the moral elements "cannot be classified or counted. They have to be seen or felt."[13]

There have been marvelous advances in sciences since Clausewitz's time. Probability and statistics,

WARFARE MODEL

sociology, psychology and organizational science all help us understand combat processes. Chaos and Complexity theories offer new methodologies to understand what appears at first to be random, turbulent, disorganized and chaotic. We have a considerably larger arsenal with which to attack the problem.

Re-examining combat theory. Ideally, a useful theory of combat follows a set of interrelated theoretical propositions (if . . . then statements) and describes a causal relationship (directional influence) between combat actions (antecedent variables) and battle outcomes (consequent variables). Theory must address the "chicken or the egg" problem. A causal model of warfare establishes cause-and-effect relationships between combat actions and battle outcomes.

Developing a causal model of warfare. Figure 1 illustrates the form of a warfare-causality model. Beginning at the upper left, combat begins with an attack on an attribute. An attribute is some characteristic of the opponent—his physical, mental, moral or organizational state. That change causes an output—an intermediate result state. In some cases, a trigger is required before the intermediate result is generated. The summation of immediate outputs leads to the ultimate result.

This type of model is typical of everyday thought. For example, a car driver's foot attacks the accelerator by pushing it down. This change causes the amount of gas going to the engine to increase, for an output of more engine power. This leads to the result—the car goes faster. Models need not be mysterious; they just establish a causal relationship between action and result, sometimes through intermediate steps.

Annihilation can be an artifact of victory. . . . Because Plains Indians killed wounded opponents and troopers feared being captured and tortured, both sides contributed to the lack of prisoners from Custer's battalion. Similar conditions at Isandhlwana (British versus Zulu) and Kabul (British versus Afghans) resulted in annihilation.

The attributes column lists the opponent's characteristics that are targeted by attacks. These characteristics are all elements on the moral/psychological plane of warfare. They are singled out as targets because the human element dominates warfare. History emphasizes that victory is achieved primarily against an opponent's will to continue the fight—a moral rather than physical mechanism.

Thus, attacks are actions or states directed toward changing an opponent's morale and unit cohesion, cooperation, fighting spirit or command processes. An attack is a means of achieving an effect on the enemy. The physical destruction that results is likewise a means, not an end in itself. An attack can use a variety of means to change an attribute: physical blows to achieve destruction and suppression or psychological tools to achieve moral effect. An attack can also be an activity or state.

Morale, cooperation and fighting spirit are inadequate labels to describe the constituents of *moral*

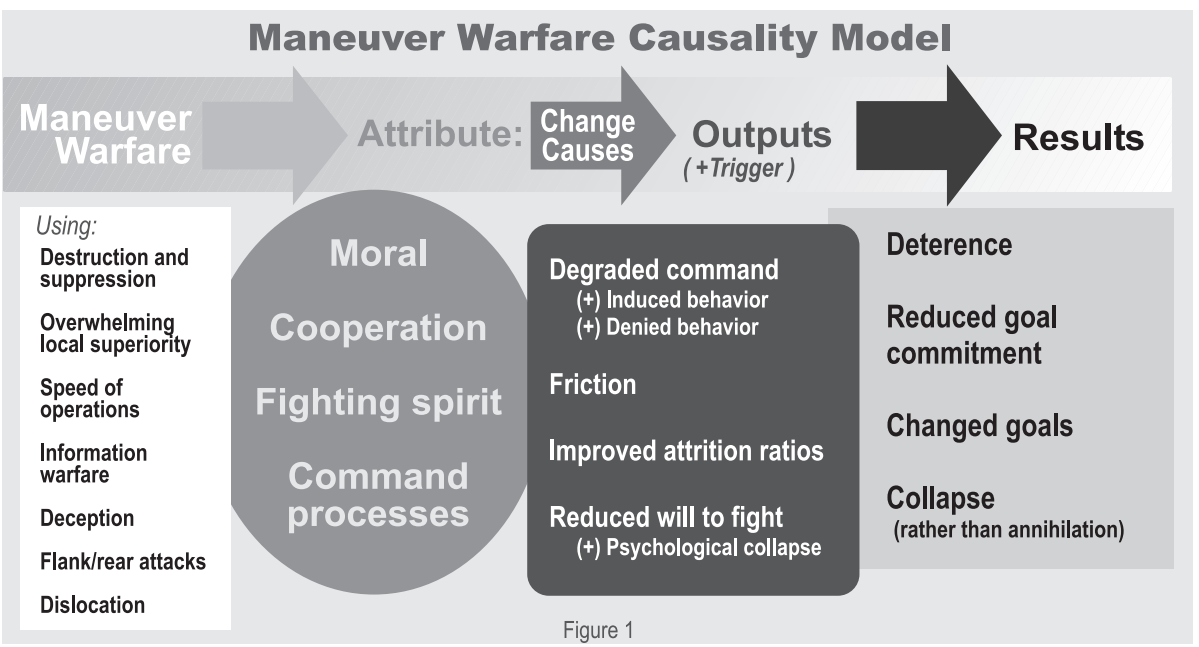

Figure 1

A destroyed T-72 in northern Kuwait, February 1991. (*Opposite*) Iraqi prisoners of war being ferried to the rear aboard a CH-47 Chinook.

***Desert Storm* was notable for the overwhelming Coalition superiority in military power . . .**

US Army

An attack is a means of achieving an effect on the enemy. The physical destruction that results is likewise a means, not an end in itself. . . . For many decades the prevalent paradigm has been that we achieve victory by destroying the enemy's ability to make war. The causal model of warfare recognizes that a capacity to make war is irrelevant if the will to employ it is absent.

and *moralische Kraft.* The term "morale" also includes the idea of unit cohesion—soldiers' ability to become a team. The term "cooperation" also encompasses interunit cohesion—units that work together.

This shift in thinking is the fundamental requirement for examining warfare within a causal framework. For many decades the prevalent paradigm has been that we achieve victory by destroying the enemy's ability to make war. The causal model of warfare recognizes that a capacity to make war is irrelevant if the will to employ it is absent.

Attacks are not restricted to physical blows. Many things affect the enemy's morale, cooperation, fighting spirit and command processes—and thus have the nature of an attack. They can be actions, situations (states) or behaviors. Propaganda broadcasts are psychological actions that can attack the enemy's morale. Overwhelming superiority in a combat zone can influence the enemy's morale and thus is a state that looks like an attack. Aggressively patrolling borders, enforcing no-fly zones or exercising freedom of the seas close to an opponent's shores are behaviors that influence an opponent.

Note that most of the attacks in Figure 1 do not involve destruction. This model establishes a causal chain among these nondestructive actions that affect the opponent's command processes that, in turn, cause enemy reactions that result in deterrence. For example, highly capable forward-deployed forces available for immediate intervention can deter aggression. The causal model of warfare establishes that connection on the moral level of international conflict.

Destruction Dominates in Some Situations

The causal model of warfare implies that the moral level of warfare is the most decisive. Yet, there are examples of completely destroying one side in which other factors work. This is not uncommon, even in science. Scientists know that Isaac Newton's rules of physics work with inelastic collisions, but in situations with elastic collisions, the rules are slightly different. Those applying the causal model of warfare must consider where the rules are slightly different.

Cases in which cultural factors dominate. Annihilation can be an artifact of victory. For instance, it appears that a primary reason for General George Armstrong Custer's defeat at Little Big Horn was disintegration and a loss of tactical stability symptomatic of failing morale and cohesion.[14] The Indian warrior Red Horse recalled that "some soldiers tried to surrender and were promptly killed."[15] Because

US Army

. . . and particularly as it affected the Iraqis' will to fight.

Plains Indians killed wounded opponents and troopers feared being captured and tortured, both sides contributed to the lack of prisoners from Custer's battalion. Similar conditions at Isandhlwana (British versus Zulu) and Kabul (British versus Afghans) resulted in annihilation.

In the Fetterman massacre near Fort Phil Kearny, Wyoming, 65 soldiers were found in a space 35 feet in diameter, within which "there were no indications of a severe struggle . . . no empty cartridge shells were about."[16] This indicated that the soldiers had surrendered and were butchered. In World War II Pacific campaigns, Japanese soldiers often refused to surrender even when their morale and fighting spirit were broken. Soldiers huddled in caves and would not come out, forcing US Marines to seal the caves with explosives. When the moral mechanism to victory decides a battle, it can open the door to annihilating the defeated force.

Cases in which weapon lethality is high compared with target numbers or vulnerability. Either a high-lethality or an especially vulnerable target can yield a high "lethality-versus-vulnerability" ratio. A firefight could be won with one shot. The numbers engaged in the battle are low, the vulnerability of each gunfighter is high relative to the weapon's lethality, and the time frame is short. Complete annihilation can occur before morale becomes a factor.

At the other end of the spectrum are nuclear weapons with extremely high lethality, even against large numbers of targets. The short duration of an attack and relative weapon lethality compared with the enemy's numbers and vulnerability again allow complete annihilation to resolve the engagement. In situations of high physical vulnerability or high physical lethality, coupled with short duration, the physical mechanism becomes primary.

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Cases of low moral vulnerability. There are situations in which one side simply refuses to surrender. Spartan King Leonidas refused to surrender to the Persians at Thermopylae, and the Spartan were annihilated. The Alamo's Texan defenders and the French Foreign Legion at Camerone exhibited similar resolve. The only survivors were either wounded or unable to further resist.

What would result from a confrontation between two forces with low moral vulnerability? Suppose two highly trained maneuver warfare forces employed asymmetric, nonlinear, high-tempo operations that, by their nature, include the ability to

Terrorists often use their own deaths to inflict losses on their enemies; are impervious to or unaware of setbacks to other groups or their causes; and are generally impervious to moral persuasion. The moral mechanism to victory—convincing terrorists to give up—may not exist. Physically destroying or incapacitating terrorists is often the only option.

resist enemy asymmetric, nonlinear, high-tempo operations. The two forces then maneuver to intimidate each other—neither being vulnerable. Firepower and attrition would have to resolve such a conflict. In situations of low moral vulnerability, the physical mechanism becomes primary.

Counterterrorist operations generally fall into this category. Terrorists often use their own deaths to inflict losses on their enemies; often operate alone or in small groups; are impervious to or unaware of setbacks to other groups or their causes (indeed, setbacks sometimes fuel their fanaticism); and are generally impervious to moral persuasion. The moral mechanism to victory—convincing terrorists to give up—may not exist. Physically destroying or incapacitating terrorists is often the only option.

Modeling Morale, Cooperation and Fighting Spirit

Human behavior is inherently complex, chaotic, stochastic and nonlinear. Factors such as significant events develop, modify and change behavior characteristics. What little research is available suffers from confusion in basic assumptions, terminology and paradigms. This is certainly a fruitful field for additional research.

Figure 2 lists factors that strain a unit's morale. The factors are divided into three levels of importance: primary, secondary and tertiary. Factors that contribute to improving morale are indicated with a + and those destructive to morale are indicated by a -. Some factors can be both. For example, "disproportionate odds" can be either positive or negative, depending on which side the odds favor. Many factors strongly depend on time; some factors have nonlinear relationships. Degraded morale impairs cooperation, fighting spirit and command processes and can cause:

- Reduced unit effectiveness.
- Friction.
- Induced behavior such as forcing the enemy to retreat from a defensive position.
- Denied behavior. The force cannot complete tasks, for example.
- Goal displacement; that is, individual goals such as survival become more important than unit objectives.
- Catastrophic collapse; for example, soldiers desert or refuse to use weapons, units lose tactical stability, and unit organizations fail.

Cooperation, fighting spirit and command processes have similar cause-and-effect relationships.

Combat Shock

Probably the single most significant element of human factors a commander can use to affect an enemy's performance is combat shock, which

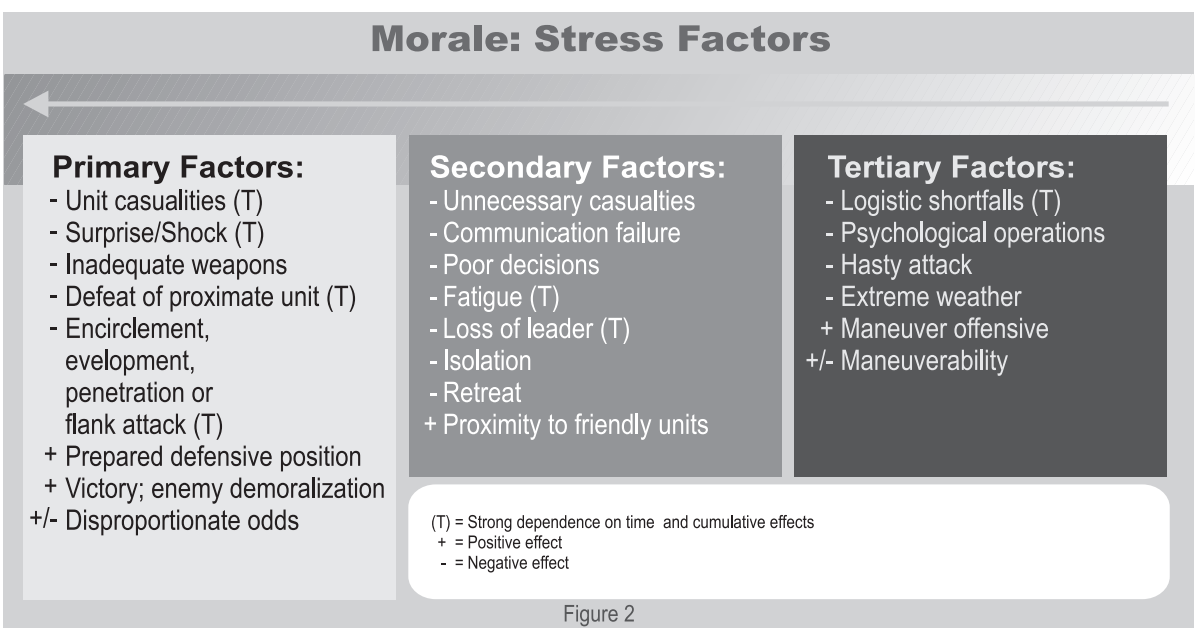

Figure 2

comes from a massive or distinct change in the environment coupled with a severe threat to life. Combat shock effects have been observed as units endure massive indirect fire (bombardment) or direct fire from automatic weapons. Distinctive sounds coupled with a threat to life, such as the screeching noisemakers on World War II Stuka dive-bombers, can produce shock, as can variations from expectations such as doctrinal failures or operational surprise. Close-range engagements with the enemy, casualties and gruesome losses are other shock-producers.

Combat shock generally results in temporarily losing combat effectiveness because of panic or incapacitation. Two of the most prevalent behavioral manifestations are immobility or crowding together when under fire. Command processes can also freeze. For example, after the massive Operation *Cobra* air bombardment that presaged General George S. Patton's breakout from Normandy, experienced German officers were observed wandering through their units in a daze, incapable of exercising command.

Another example is the observed response of units to casualties. A unit can generally continue to operate if it loses 1-percent casualties each day over 10 days; however, apply 10-percent casualties in a few minutes, and the unit can be combat-ineffective for a day or more. Add surprise, despair, hopelessness, fear, fatigue and other factors, and the unit could be combat-ineffective for longer. While such a unit is reorganizing and recovering from the sudden shock of casualties, victory was achieved over 10 percent of the unit by the physical mechanism to victory, while 90 percent succumbed—albeit only temporarily—to the moral mechanism. Taking advantage of that fleeting opportunity is a large part of successful generalship.

A unit can generally continue to operate if it loses 1-percent casualties each day over 10 days; however, apply 10-percent casualties in a few minutes, and the unit can be combat-ineffective for a day or more. Victory was achieved over 10 percent of the unit by the physical mechanism to victory, while 90 percent succumbed—albeit only temporarily—to the moral mechanism.

The causal model of warfare does not espouse a bloodless form of combat. Instead, blood and destruction are placed in their appropriate perspectives as a means to an end, not an end in itself. The model applies new sciences to an old problem; its postulates are not new. Military strategists Sun Tzu, Ardant du Picq, General George C. Marshall and Clausewitz would all approve of the model because it draws on themes they all explicitly espoused or inherently assumed. Its strength is in its connections that more explicitly model victory.

Even if the model's basic framework is solid, details are yet to come. How much combat stress causes debilitation, and what does it take to fully recover? We do not fully understand human variability under combat conditions. Most significantly, few observations have been quantified. The model clarifies the issues, and with clarity comes the ability to examine, criticize, test and argue. As thoughtful people analyze victory using the causal model's framework, tactical, operational and strategic improvements will be inevitable. ***MR***

NOTES

1. US Marine Corps Fleet Marine Force Manual 1, *Warfighting* (Washington, D.C.: US Government Printing Office [GPO], 20 June 1997), 74.
2. Ibid.
3. US Army Field Manual 100-5, *Operations* (Washington, D.C.: GPO, 14 June 1993), 2-13, 2-9.
4. Richard D. Hooker Jr., *Maneuver Warfare: An Anthology* (Novato, CA: Presidio Press, 1993). While mainly espousing maneuver warfare, this book includes chapters containing counter arguments.
5. Edward De Bono, *Water Logic* (New York: Penguin Putnam Books, 1993), 22.
6. Desmond Seward, *Henry V: The Scourge of God* (Novato, CA: Viking Penguin, 1988), 121.
7. J.R. Jones, *Marlborough* (New York: Cambridge University Press, 1987), 96-97.
8. D. Greaves, *The Battle of Lundy's Lane: On the Niagara in 1814* (Baltimore, MD: The Nautical & Aviation Publishing Company of America, 1993), 9.
9. Bernard Brodie, quoted in H.G. Summers, *On Strategy: A Critical Analysis of the Vietnam War* (Novato, CA: Presidio Press, 1982), 6.
10. Clausewitz is referring to "system-builders" such as Henri de Jomini who were attempting to reduce military science to a set of rules or axioms. However, this caution could be equally appropriate to modern equation-builders who attempt to calculate the outcomes of battles and the resulting attrition without reference to the moral and psychological factors of war. See also Peter Paret, "The Genesis of *On War*" in Carl von Clausewitz, *On War* (Princeton, NJ: Princeton University Press, 1976), 12.
11. Ibid., 184-5
12. Ibid., 185.
13. Ibid., 85.
14. R. Fox Jr., *Archaeology, History and Custer's Last Battle* (Norman, OK: University of Oklahoma Press, 1993), 15.
15. Bryan Perrett, *Last Stand! Famous Battles Against the Odds* (New York: Sterling Publishing, Arms and Armour Press, 1991), 61.
16. "Investigating Committee Report," quoted in Fox, 48.

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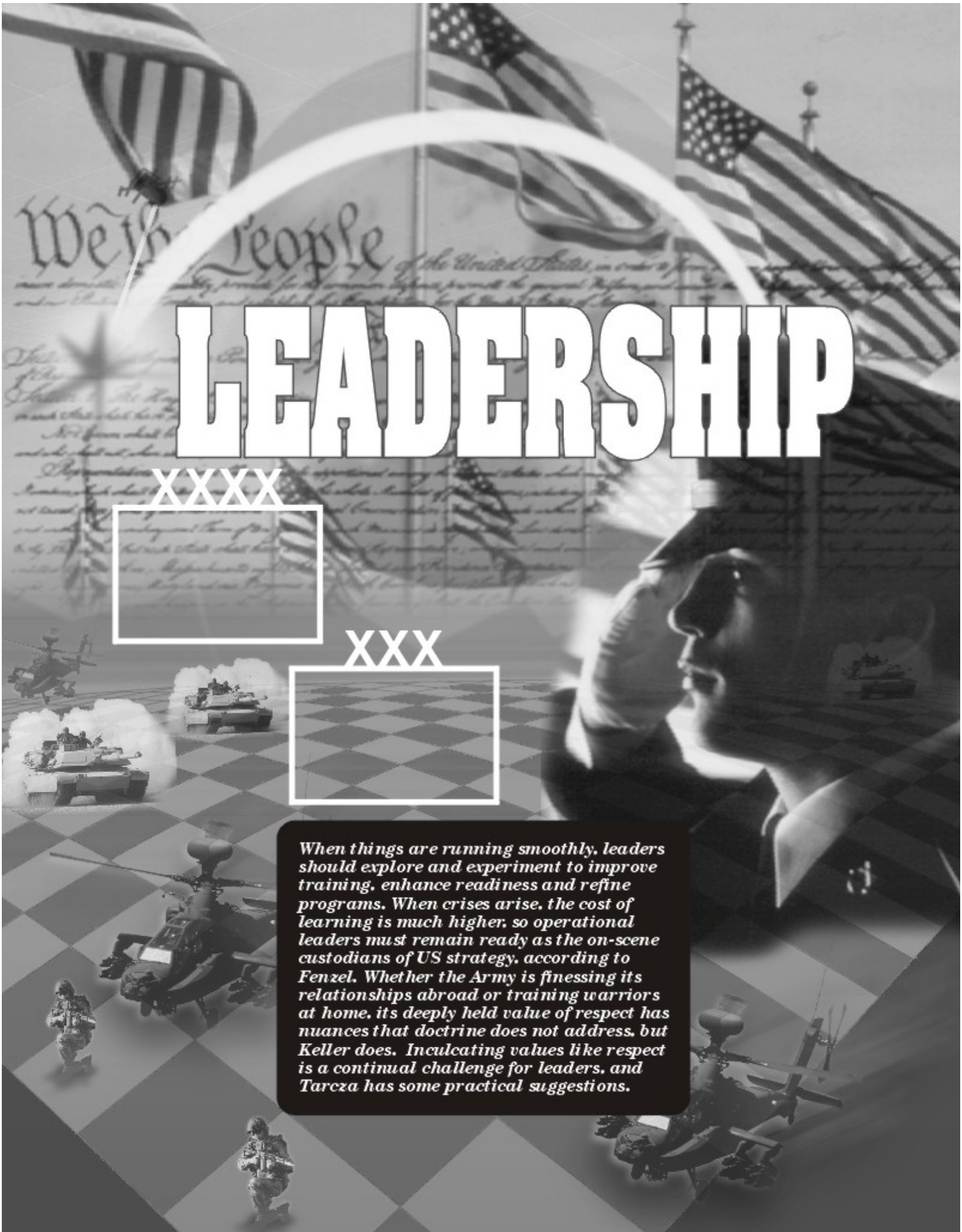

When things are running smoothly. leaders should explore and experiment to improve training. enhance readiness and refine programs. When crises arise. the cost of learning is much higher. so operational leaders must remain ready as the on-scene custodians of US strategy. according to Fenzel. Whether the Army is finessing its relationships abroad or training warriors at home. its deeply held value of respect has nuances that doctrine does not address. but Keller does. Inculcating values like respect is a continual challenge for leaders. and Tarcza has some practical suggestions.

Operational Leadership
On War's Precipice

Major John Fenzel, US Army

UNTIL RECENTLY, wars were decided largely by applying overwhelming force and maneuver. Today, the ways, means and ends of winning wars are more complex, politically charged, volatile and often unconventional. Limited interventions such as those in Haiti, Somalia, Rwanda, Bosnia and Kosovo were once regarded as anomalies but have increased in frequency since the Cold War and have blurred the distinction between what is war and what is not. The zero-sum environment that has traditionally defined conventional warfare has given way to new, "variable-sum" problems for which there are no easily discernible solutions. Perhaps by default, operational leaders in these crises have become indispensable on-scene stewards of US foreign policy and military strategy. In a crisis, operational commanders link strategic goals to intervention activities. Their perception of the situation and insightful leadership are decisive in resolving or escalating a crisis.

What are the most difficult challenges operational commanders face in crises? What determines good or bad crisis strategy? Even in retrospect, answers to these questions are elusive and subtle. Recent US interventions in Bosnia and Kosovo show that each crisis is unique and resists templated solutions. Operational commanders who identify crisis transitions early can link strategic policies with tactical means and apply resources where they are most needed. Their vision will enable them to prevent escalation and resolve crises. Commanders who do not clearly understand where they are on the crisis continuum will often muddle through with no firm direction.

Perhaps the most dramatic strategic change has been a shift from national leaders' "grand strategy" to a shared responsibility with operational commanders. . . . Clearly, the challenge of operational leadership has widened in scope and complexity, and the operational leader, because of his presence and authority in the crisis area, often becomes the real executor of national policy and strategy.

The Crisis-Management Cycle

An operational commander managing a crisis negotiates and controls operational transitions from crisis to conflict, to crisis termination and to crisis resolution. Controlling these transitions requires the ability to influence the duration, scope, intensity and stability. Successful intervention ultimately depends on national policy and flexible forces.

The commander identifies decision points during each phase of intervention. During the crisis phase, strategic operational and leaders observe, orient themselves to the situation, decide on a course of action, then prepare to intervene or negotiate. Ideally, this process will allow a preliminary theory of victory to develop. Because all interventions involve a physical presence in the crisis area, the Crisis-Management Model in Figure 1 shows how crises escalate until military, political and humanitarian components intervene.

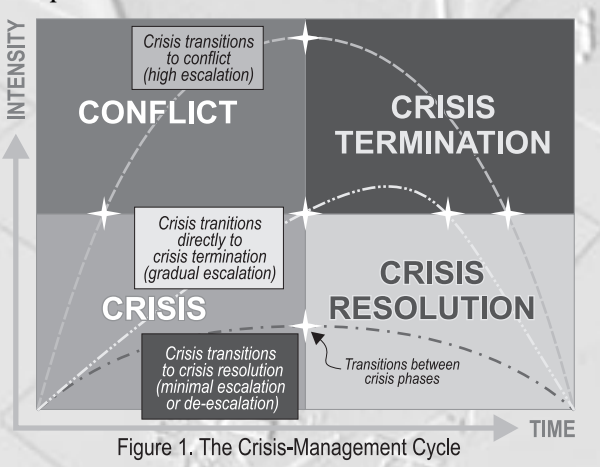

Figure 1. The Crisis-Management Cycle

Operational leaders may be involved in political negotiations leading to crisis resolution. The model presumes that crises are not simply events but processes with distinct phases that leadership and strategy can influence, and it graphically postulates that the more complex and volatile a crisis is, the more transitions occur between phases leading to resolution. This framework shows a crisis as a phased continuum to be negotiated and influenced by leaders at all levels—particularly by the operational commander on the scene.

Operational commanders must synchronize military efforts with diplomatic and humanitarian initiatives and "maneuver" to a position of advantage. In a crisis this often translates to securing a position of relevance, which parallels taking and holding key terrain.

Perhaps the most dramatic strategic change has been a shift from national leaders' "grand strategy" to a shared responsibility with operational commanders. "Military strategy," says Professor Thomas Schelling, "has become the diplomacy of violence."[1] Clearly, the challenge of operational leadership has widened in scope and complexity, and the operational leader, because of his presence and authority in the crisis area, often becomes the real executor of national policy and strategy. Canadian Major General John A. MacInnis, who served as the UN Protection Force Deputy Commander from 1993 to 1994, writes, "The strategic-operational-tactical levels-of-conflict model . . . is not wholly transferable to peacekeeping endeavors. Virtually every decision made and course of action undertaken by senior UN commanders is likely to have both political and tactical overtones. The trilevel model becomes blurred beyond recognition."[2]

Crisis and Preintervention Operations

Pre-existing conflicts stemming from tribalism, ethnic strife, inadequate governmental institutions and processes, religious animosities and territorial claims have supplanted the Cold War superpower struggles for hegemony, frequently providing the framework in which crises develop, intensify and fester into conflict. French General Lucien Poirier defines crisis as "an amorphous stage between peace and war . . . when armed conflicts incubate."[3] To extend Poirier's metaphor, the intensity of the crisis and the level of instability ultimately decide the duration of the incubation period and the nature of a crisis. Operational leaders will often be the first to discern these developing asymmetries, as manageable crises escalate into difficult-to-contain conflicts.

The doctrinal purpose of operational leadership in war is to gain and maintain freedom of action by "rob[bing] the enemy of his options while keeping open one's own."[4] Particularly during the preintervention phase of a crisis, there may be no discernible enemy, and the operational commander is less a combat commander than a crisis manager. The operational commander has become an intermediary whose goal is to create or expand options for defusing or resolving the crisis. Operational commanders must often consider widely disparate theories of "victory" offered by a variety of military, diplomatic and economic observers or participants, then forge a viable strategy to deliver peace, stability and national objectives.[5]

Various strategic arrays have been best employed in such situations when precisely targeted against causes rather than symptoms. These strategies can be characterized as direct or indirect, cooperative or coercive and may require the execution of nonstandard "maneuvers." In many insurgency and failed-state scenarios, national borders exist only on paper, and enemy activities extend well beyond assigned areas of responsibility and influence.[6] In such situations, maintaining freedom of action requires land, air and sea zones of exclusion, such as no-fly zones, weapon embargoes and safe areas. Often the commander seeks extended operational influence to enhance the security of friendly forces and noncombatants while denying freedom of action to antagonists.[7]

Time has a more distinct, and at times altogether different, influence in crises and smaller-scale contingencies than in general war. An operational commander's perception of when a crisis has proceeded to a more advanced (or parallel) phase of conflict is crucial to how he will proceed in the future. Therefore, operational leaders confront two temporal imperatives in crises: to define in advance what events or conditions must exist for a crisis to transition to conflict, and to determine how to gain the freedom of action necessary to contain and de-escalate the crisis. Throughout the crisis and preintervention phases, commanders conduct activities that will support (or force) the transition to the next operational phase. These tasks include:

- Rescuing, evacuating and providing medical care.
- Handling refugees, evacuees and displaced persons.
- Providing prepared food, water, essential supplies and materials.
- Providing logistic support.

COL William Gargiullo, *Allgemeine Schweizerische Militarzeitshrift*

A makeshift cemetery in Sarajevo for civilians killed in the ethnic fighting, 1997.

Because a crisis is so difficult to predict, the decision to intervene may arise as abruptly as the crisis itself. The intervention's timeliness often determines its relevance and ultimate effectiveness. In concept, intervening early is ideal, but as witnessed during the Rwanda and Bosnian crises, it is seldom achieved. By the time intervention is authorized and an operational force is mobilized, sovereignty and survival issues in these states often metastasize.

- Information-gathering and intelligence operations.
- Observation and surveillance.
- Negotiating and mediating.
- Restoring utilities.
- Exercising preventive diplomacy and preventive deployment.
- Managing a crisis.

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Intervention and Conflict Operations

US Armed Forces can be ineffective in nontraditional crisis environments. Their operational failures can be traced to a preoccupation with traditional fire-and-maneuver warfighting doctrine and an inability to adapt to a politically turbulent, complex

Too often, commanders rely solely on coercive strategies, which maximize the use of conventional force. Employed judiciously and proportionally, strategies that employ other forms of power and seek different aims may enjoy more success in dealing with substitution or protraction threats.

environment. Operational commanders must synchronize military efforts with diplomatic and humanitarian initiatives and "maneuver" to a position of advantage. In a crisis this often translates to securing a position of relevance, which parallels taking and holding key terrain.

But how does an operational commander "hold the high ground" in these postmodern environments? Stripping away the high degree of abstraction common to these crises is singularly difficult and consuming. As a baseline, at least five essential subtasks define the challenge for operational leaders in all crisis interventions:

- Developing analysis that focuses on future events and trends.
- Maintaining legitimacy.
- Sustaining "escalation dominance."
- Addressing counterstrategies.
- Collecting information.

These tasks are all critical subcomponents of effective operational strategy and present complex challenges to military and civilian leaders. Further compounding the operational commander's challenges are the additional conflict and intervention activities he oversees:

- Crisis intervention.
- Patrolling and tactical operations.
- Enforcing peace.
- Disarming belligerents.
- Enforcing human rights guarantees.
- Establishing enclaves and safe areas.
- Guaranteeing and denying movement.
- Protecting humanitarian relief.
- Unofficial exchanges.
- Supporting political operations.
- Applying coercive military measures.
- Continuous and detailed surveillance.

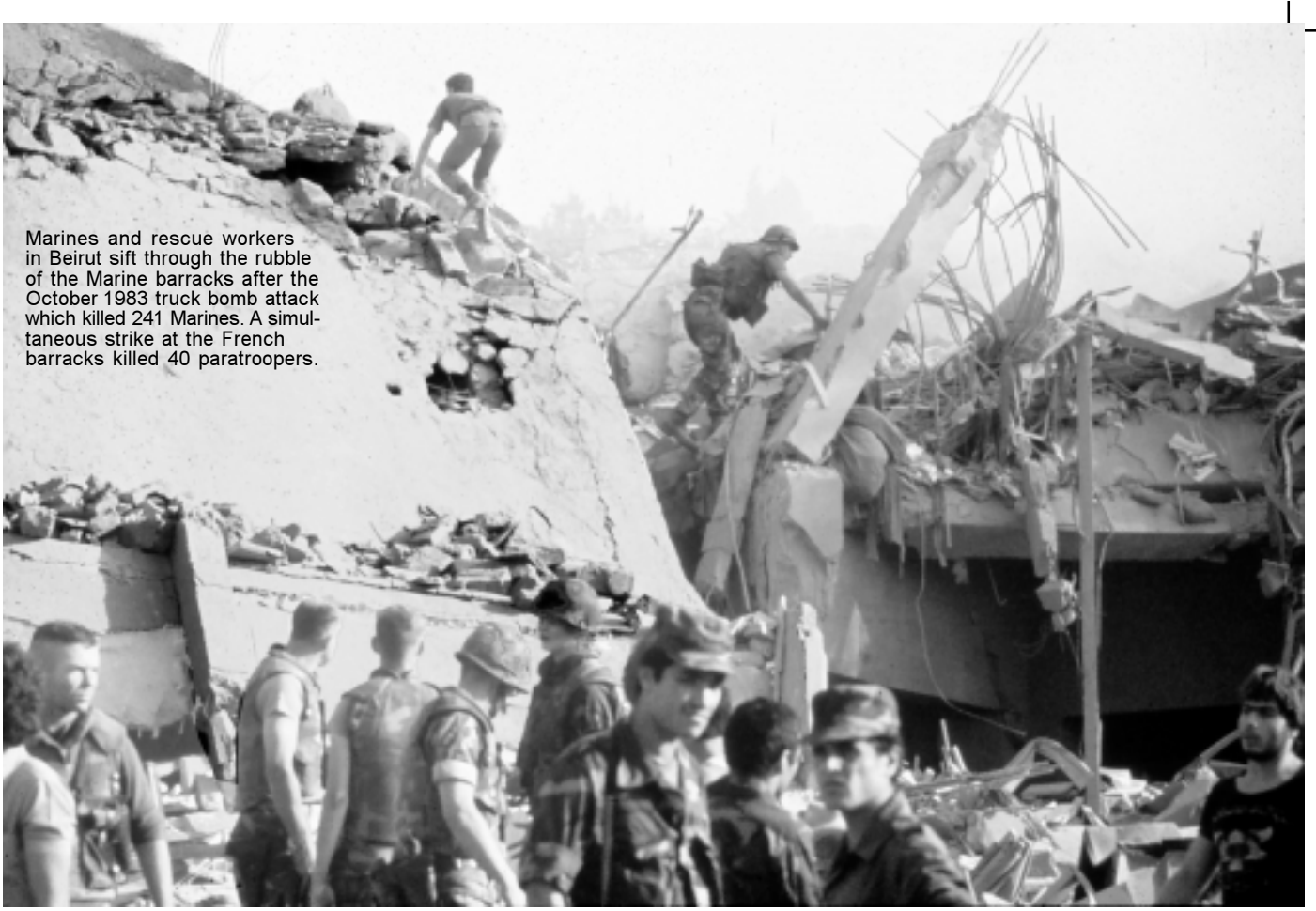
An intervention's legitimacy depends on the commander's ability to enforce proportional means and ends. By adapting strategy to a population's cultural nuances, an intervening force avoids expediencies that might exacerbate tensions in the long term.

A common misperception derived from past crisis operations is that impartiality and neutrality are synonymous. Army Field Manual (FM) 100-20, *Military Operations in Low Intensity Conflict*, states that "peacekeeping forces should be neutral in the crisis for which the force is created. . . . To preserve neutrality, the peacekeeping force must maintain an atmosphere and an attitude of impartiality."[9] However, an operational commander's efforts to be neutral and impartial with antagonists could render him ineffective in the long term. By attempting to remain neutral, an outside commander only acknowledges a conflict's existence. Conversely, a commander's effort to remain impartial ensures that intervening forces recognize a conflict's legitimate elements and understand its root causes.[10] An intervening force requires such perspective to be effective in the long term.[11]

An intervention's early stages involve escalation for each of the major players. Tensions increase for the intervening power as it risks prestige and potentially peacekeepers' lives and as crisis protagonists surrender sovereignty for a solution. Even in permissive environments, achieving these concessions is never a sure thing. The 1981 Lebanese and 1993 Somalian crises starkly show that once a military force intervenes, permissive environments can quickly become quagmires. The need for escalation dominance—the "capability to escalate a conflict to a level where an adversary cannot respond"—is the common prescription to control such transitions.[12]

In a 1992 letter to *The New York Times*, General Colin Powell explains, "Decisive means and results are always to be preferred, even if they are not always possible. So you bet I get nervous when so-called experts suggest that all we need is a little surgical bombing or a limited attack. When the desired result isn't obtained, a new set of experts then comes forward with talk of a little escalation. History has not been kind to this approach."[13] However, escalation dominance can leave a number of threats unaddressed. While the intervening force focuses exclusively on limiting escalation, subtle—but dangerous—hazards may emerge. Mission planning frequently fails to allow for changes in mission because of internal decisions—mission creep—or from events that occur "despite the actions of the intervening country"—mission swing.[14]

Two of the most serious counterstrategies operational commanders could confront are protraction and substitution. While each is as formidable as the threat of escalation, both are far less conspicuous. Protraction involves prolonging a crisis and is commonly accomplished when an adversary avoids set-piece confrontations, refuses to admit defeat and adopts a sustained, indirect strategy. Substitution involves changing the nature of the crisis by devaluing existing operational objectives or



US Army

Marines and rescue workers in Beirut sift through the rubble of the Marine barracks after the October 1983 truck bomb attack which killed 241 Marines. A simultaneous strike at the French barracks killed 40 paratroopers.

The 1981 Lebanese and 1993 Somalian crises starkly show that once a military force intervenes, permissive environments can quickly become quagmires. The need for escalation dominance—the "capability to escalate a conflict to a level where an adversary cannot respond"—is the common prescription to control such transitions.

altering the environmental landscape.[15]

An enduring lesson of the Somalian debacle is that substitution and protraction are not susceptible to broad counterstrategies founded on dominance. This fact might be precisely what makes successful crisis management so elusive and difficult, as theories of information and escalation dominance eclipse operational leadership. Indeed, addressing these threats is the essence of operational art. MacInnis' prescription for conflict strategies is equally relevant to crises: "The first and greatest challenge is to produce a strategy that recognizes warning signs; takes preventive measures; engages in conflict resolution activities or, at the very least, activities that moderate the effects of conflict; and follows up with a post conflict agenda to reduce the risk of relapse. This process must be recognized as a continuum of effort, demanding coherence, consistency, perseverance and endurance."[16] To take hold, these processes require time "for the parties to the dispute to sort out their problems."[17]

Too often, commanders rely solely on coercive strategies, which maximize the use of conventional force. Employed judiciously and proportionally, strategies that employ other forms of power and seek different aims may enjoy more success in dealing with substitution or protraction threats. Andre Beaufre suggests paralyzing the enemy with deterrent checks "as the Lilliputians tied up Gulliver."[18]

Informational power is crucial to a theater commander. Retired British General Sir Frank Kitson's practiced analysis of informational power is particularly cogent: "Often the best use which a commander can make of his troops is to have them positioned in such a way that they can see what is going on and pass the information back. . . . It would therefore seem reasonable to assume that a peacekeeping force should have a first-class intelligence service."[19] FM 100-20 reinforces the requirement to maintain a viable intelligence source, warning that poor intelligence operations can "destroy the trust which the parties should have in the peacekeeping force."[20]

US Army Special Forces Joint Commission Observer (JCO) teams in Bosnia and liaison teams in Kosovo proved the value of a language-proficient information capability. At the outset of both crises, these organizations were communications conduits,

reporting instantaneously to division and theater commanders on threats and minimizing their impact. Kitson, a former operational commander in Northern Ireland, confirms the value of this capability: "A commander who is trying to achieve his aim in negotiation plus the use of his men, will rely to a great extent on communications. Good communications are an essential part of knowing what is going on and being in a position to influence events."[21]

It is common to assume that after a crisis has been "terminated," it has also been resolved. To disengage at the crisis-termination phase is often synonymous with reopening the floodgates while the flood plain is still saturated. While others are dealing with past events and present realities, and while pressure invariably mounts to extricate forces from the crisis area, operational leaders must visualize the road to self-sustaining peace and stability.

Employing Predictive Analysis and Informational Power in Bosnia

Shaping or pre-empting escalation of an impending crisis requires skill and experience. However, success ultimately also depends on "predictive analysis" —examining information, trends, cultural realities, precedents and personalities to determine issues, the likely course of events and appropriate actions for a military unit to take.

In April 1998 the Special Operations Command and Control Element (SOCCE) for the Multinational Division-North (MND-N) at Camp Eagle, Bosnia-Herzegovina, learned that the Catholic (Croat) Archbishop of Sarajevo was planning to visit the (Serb) town of Derventa in north central Bosnia. Although the visit appeared to be innocuous, closer analysis revealed that before the war, Derventa had been a majority Bosnian-Croat town that the Serb army had captured and subsequently occupied. In accordance with the land distribution plan of the Dayton Peace Accords, Derventa lay within the Republika Srpska, just inside the MND-N boundary with the British-led MND-Southwest. The day of the planned visit was also the anniversary of the town's Serbian occupation.

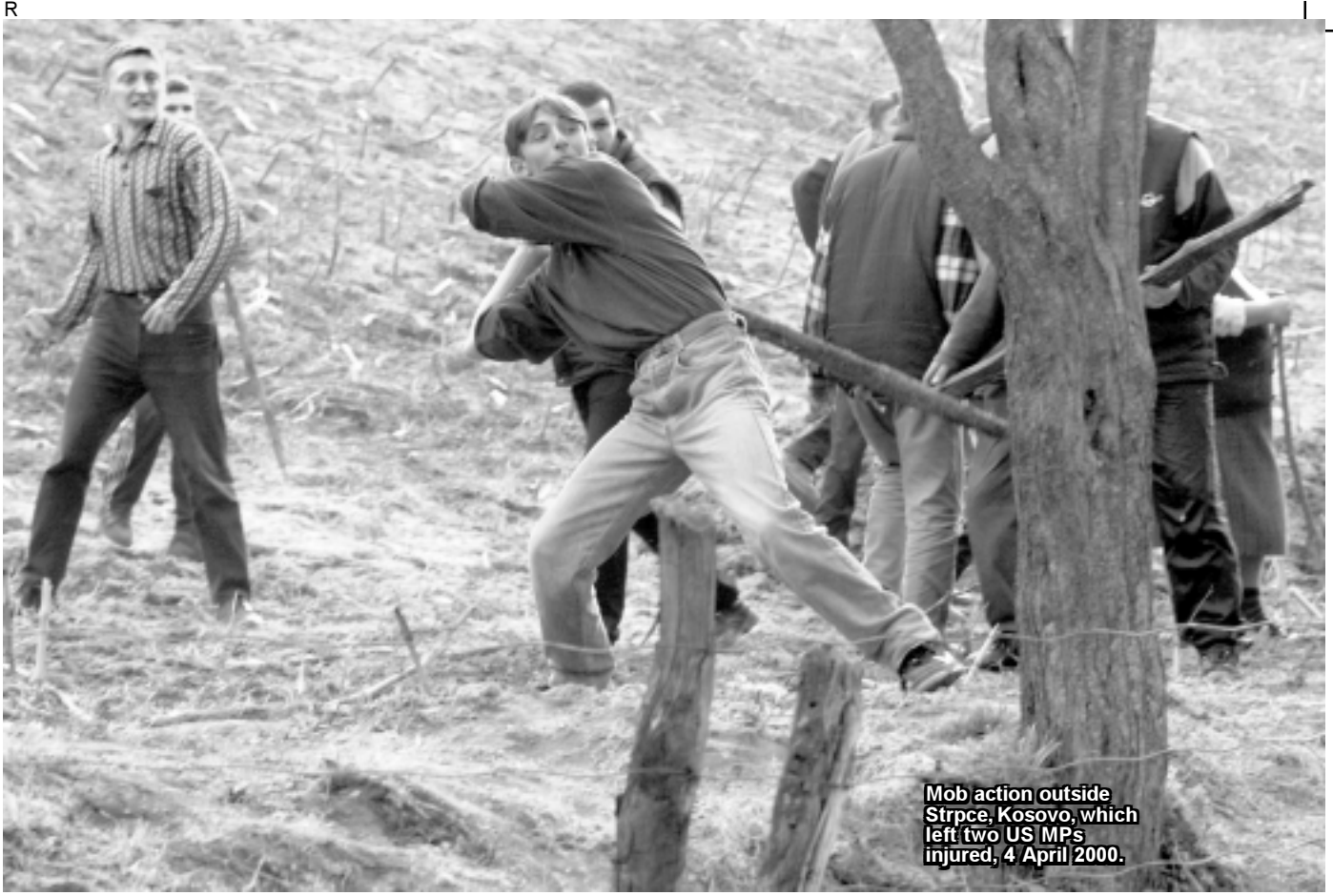
Discussions between the SOCCE's JCO team in Doboj and members of the Office of Security and Cooperation in Europe (OSCE) confirmed that several hundred former residents of Derventa were being bused in for a Catholic mass in the now-ruined Catholic church in the town square. The town square was the site of an alleged wartime execution of 10 Bosnian Serb men.

SOCCE members observed the Bosnian Serb Special Police commander's being hurriedly recalled to Banja Luka the day before the event. SOCCE's analysis of trends in indigenous activity and rhetoric revealed that there was a high probability of violence during the proposed visit. The SOCCE commander reported the findings to the MND staff. As a precaution, the MND agreed to stage armored buses at the Norwegian-Polish brigade headquarters one hour south of Derventa. The SOCCE commander concentrated his patrols in the area of the visit before daylight on the day of the visit. Just after dawn, JCO teams observed men in suits with chain saws felling trees across roads leading into Derventa.

Soon a large Serb crowd gathered. Men in suits, carrying hand-held radios and apparently responding to central direction, regulated the crowd's fury. The crowd parted when the Croats arrived and entered the church. The crowd closed around the church as the Serb organizers whipped the crowd into a frenzy. Rioters threw rocks, Molotov cocktails and a grenade that did not detonate at the church and its frightened Croat occupants. The unrest lasted more than 10 hours.

The SOCCE commander provided a detailed report to the forward operational base (FOB) in Sarajevo. The FOB provided real-time reports to the Stabilization Force commander and maneuvered a second JCO team from the British sector to work its way into Derventa from the west for 360-degree riot coverage. The JCOs remained unmolested on the mob's periphery, distracted crowd members when necessary and delivered detailed reports to the MND-N commander. Within hours, Norwegian-Polish Rapid Reaction Force elements arrived with armored buses and evacuated the Croats trapped in the church.

A week later, Derventa's former Croat citizens, displaced during the war to southwestern Bosnia, retaliated by conducting violent riots in the city of Titov Drvar against Bosnian Serb returnees. The US Army Special Forces JCO established an ingenious direct radio link to operational commanders that was instrumental in containing both incidents. During the Derventa and Drvar riots, the crowds appeared to recognize and respect JCOs and communicated freely with them. This relationship provided senior commanders situational understanding and a viable means for defusing the riots.



US Army

Mob action outside Strpce, Kosovo, which left two US MPs injured, 4 April 2000.

Though easily defined, crisis termination is difficult to achieve. As antagonists struggle to negotiate from positions of strength and advance their own agendas through unconventional and often violent means, the crisis termination phase may be the most dangerous, volatile and politically charged. Emotions intensify and animosities dissolve only over time.

Crisis Termination Operations

Crisis termination is the process of settling a crisis or conflict and serves as the foundation for mutually acceptable terms for long-term stability and peace. Though easily defined, crisis termination is difficult to achieve. As antagonists struggle to negotiate from positions of strength and advance their own agendas through unconventional and often violent means, the crisis termination phase may be the most dangerous, volatile and politically charged. Emotions intensify and animosities dissolve only over time. Combatants' risks and sacrifices during crisis-termination are immense and have compelling force-protection implications for the intervening force. Strategist Gerard Chaliand explains why the intervening force is at risk: "In most cases, the internationalization of regional disputes and the interested interference of the great powers resolve the crisis in ways, with means, and through a compromise that hardly satisfy the parties directly engaged on the ground."[22]

It is too facile simply to advocate an exit strategy or to stress visualizing the intended end state, although both elements are linked to a successful crisis "theory of victory." The compelling lesson for operational leaders is that formulating and refining a coherent and realistic exit *plan* is crucial during all crisis phases, regardless of exit *strategy*. Joint Publication 3-07, *Joint Doctrine for Military Operations Other Than War*, reinforces this premise further by asserting that "the manner in which US Forces terminate their involvement may influence the perception of the legitimacy of the entire operation."[23] B.H. Liddell Hart's advice to strategic commanders is equally cogent for operational commanders: if commanders "concentrate exclusively on victory, with no thought for the after effect, [they] may be too exhausted to profit by the peace, while it is almost certain that the peace will be a bad one, containing the germs of another war."[24] Illuminating Liddell Hart's assessment, Marshal Ferdinand Foch, commander of Allied forces at the close of World War I, presciently critiqued the Versailles Treaty: "This is not peace. This is an armistice for twenty years."[25]

During the transition to a civil authority, commanders must prepare their forces to operate in a tense, at times violent environment while allowing the core issues that underlie the crisis to be addressed in diplomatic venues. A commander's ability to work

effectively with nongovernment and independent government organizations and synchronize their efforts has emerged as one of the operational imperatives for the crisis-termination phase. However, in many ways, terminating today's crises is more complex and resource-intensive than the familiar war-termination activities of past conventional conflicts:

Operational leadership in crises now requires monitoring and enforcing cease-fire agreements, verifying security agreements, ensuring the delivery of humanitarian aid and often nationbuilding. Whereas success in war is measured by victory, operational commanders measure success in the crisis-resolution phase by stability and peace . . . . [which] are achieved over time.

- Cease-fire.
- Exchanging prisoners of war.
- Separating forces, arms control, demilitarizing and demobilizing.
- Investigating complaints and allegations.
- Official exchanges and dialogue.
- Peacekeeping.
- Demining.
- Confidence-building measures.
- Reframing conflicts.
- Enforcing law and order.
- Repatriating displaced persons and refugees.
- Conducting border area operations and clearing the area of insurgent units.
- Performing recovery and disposing of the dead.
- Performing populace and resource control measures.
- Enforcing no-fly zones and weapons exclusion zones.

A common error in formulating crisis strategy is regarding it as a "goal-achievement system" or an event to solve.[26] Graham Allison writes that "from the basic conception of happenings as choices to be explained by reference to objectives . . . we must move to a conception of happenings as events whose determinants are to be investigated according to the canons that have been developed by modern science."[27] Allison's argument runs counter to the premise that if strategic or operational leadership is as an art, crises are processes that can be influenced rather than simply resolved.

This flawed concept of crisis termination is often depicted in division- and corps-level graphics as a house model, with its roof sustained by pillars. The end state is typically articulated as a "peaceful and secure environment," while goals are portrayed as pillars to construct sequentially, such as demining, arbitrating disputed territories, elections and disarmament. On paper, this is an appealing concept; in practice, however, dynamic crisis environments reveal this approach to be precarious, if not fatally flawed. Real crises are never so effectively managed with such simplistic methods. Thoughtful crisis-termination strategies develop over time, with a deliberate eye to an intricate mosaic of economic realities, cultural nuances, political will, military potential and public reactions. Synchronizing these elements to form a systematic approach to crisis management has become the essence of operational art in military operations other than war.

It is common to assume that after a crisis has been "terminated," it has also been resolved. To disengage at the crisis-termination phase is often synonymous with reopening the floodgates while the flood plain is still saturated. While others are dealing with past events and present realities and while pressure invariably mounts to extricate forces from the crisis area, operational leaders must visualize the road to self-sustaining peace and stability.

Crisis Resolution: The Road to Peace and Stability

Ideal crisis resolution actuates the original, desired end state in all four operational venues—air, ground, sea and space. The core challenge for operational leaders is attaining the proportion and stability necessary to secure and sustain peace. Managing the asymmetries that erupt between the expectations of a populace and the existing power structures, including the intervening force, may lead to further issues of impartiality and justice. Indeed, misperceptions that commonly develop during an intervention produce many of these issues. How an

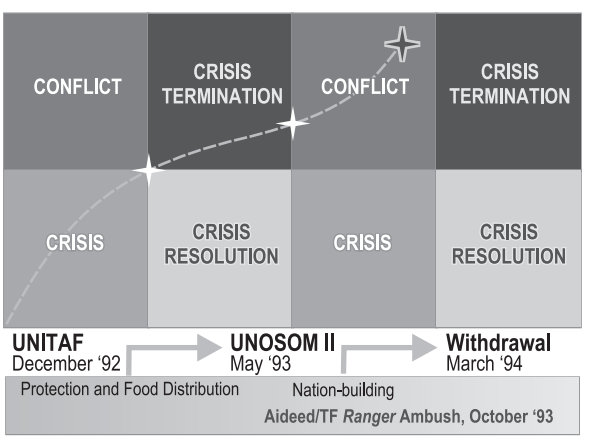


Figure 2. The Somalian Crisis

operational commander addresses these perceptions ultimately determines the nature of the peace—just as it determines the nature of the crisis.[28] Achieving equilibrium among politics, military power and popular sentiment requires steady command emphasis throughout all phases of the intervention.

Postmodern crisis resolution differs dramatically from traditional war termination in that operational commanders were once exclusively concerned with warfighting but now assume the difficult task of diplomacy as well. Operational leadership in crises now requires monitoring and enforcing ceasefire agreements, verifying security agreements, ensuring the delivery of humanitarian aid and often nationbuilding. Whereas success in war is measured by victory, operational commanders measure success in the crisis-resolution phase by stability and peace. Stability and peace in crises are achieved over time, through methodical and well-planned crisis-resolution and peacebuilding activities, including:

- Disengaging.
- Humanitarian and civic action.
- Deterring violent acts.
- Protecting vital installations and critical facilities.
- Peacebuilding.
- Ensuring peacekeepers' impartiality.
- Informing the political council of peacekeeping requirements.
- Reconstructing and rehabilitating.
- Elections.
- Introducing new institutions and projects.
- Collecting and providing information to the political council.
- Withdrawing.

Saint Augustine of Hippo said, "Peace, in its final sense, is the calm that comes of order."[29] Creating order and maintaining peace are perhaps the most difficult challenges of operational leadership in crises because they involve reconciling political structures and traditional ethnic or religious identities with the terms of a political settlement or compromise. Despite the intervening force's desires to disengage, draw down and ultimately withdraw, it cannot truly resolve a crisis until ethnic hatreds, religious animosities or political tensions are managed in other ways. The crisis-resolution phase requires its own strategy and end state, closely synchronized with the plans of the international community and independent and nongovernment organizations.

Applying these principles in a crisis is never as easy as it appears because every crisis is unique and because applying conceptual doctrine to actual events and environments is inherently difficult. The Crisis-Management Model can help structure the often-inexorable series of events that comprises a crisis. Understanding events and crisis phases is essential to the success of crisis strategy and operational leadership. The Somalian crisis offers valuable insight into the interactive dynamics of strategy and leadership, particularly at the operational level.

US Army

Soldiers of the 16th Bavarian Reserve Infantry during World War I. Corporal Adolf Hitler (*right*) was later wounded during fighting on the Western Front.

Liddell Hart warned that if commanders "concentrate exclusively on victory, with no thought for the after effect, [they] may be too exhausted to profit by the peace, while it is almost certain that the peace will be a bad one, containing the germs of another war." Illuminating his assessment, Marshal Ferdinand Foch, commander of Allied forces at the close of World War I, presciently critiqued the Versailles Treaty: "This is not peace. This is an armistice for twenty years."

Failed Strategy in Somalia

Following Dictator Mohamed Siad Barre's removal from power in January 1991, Somalia began to implode under the strain of an enormous power vacuum. Intraclan power struggles had become a bloody tribal civil war that swept the country. Each faction's currency of power included weapons, water, food and relief supplies. As the civil war progressed, food shortages and an inadequate relief-distribution system created a widespread humanitarian crisis. The extensive media coverage of preventable, politically induced famine heavily influenced the decision to

intervene. In response, US Central Command initiated Operation *Provide Relief* in August 1992 to provide humanitarian aid to Somalia and northeastern Kenya. Despite this effort, the crisis worsened as it became clear that goods were being diverted from starving Somalis to warlords and criminal gangs in Mogadishu.

Reports of 1,000 Somalis starving to death each day led the United States to dispatch the Unified Task Force (UNITAF). Consisting of two divisions, UNITAF was to augment and provide security for those feeding and delivering humanitarian aid to the endangered Somalis. By spring 1993 UNITAF had created a series of humanitarian relief sectors throughout southern and central Somalia. Once the sectors were established, UNITAF's mission passed to the United Nations (UN) as the dramatically downsized United Nations Operation in Somalia (UNOSOM) II.

The lack of a coherent national strategy had in turn precluded a viable operational strategy from properly developing and taking hold in Somalia. The absence of a well-synchronized operational plan led to ill-coordinated tactical operations to arrest clan members in Mogadishu, eclipsing the original goal of ending starvation throughout the country.

The transition between organizations imperceptibly expanded (or, it can be argued, substituted) the UNITAF mission from relieving starvation to rebuilding Somali government institutions. To address the disaster's root cause, nationbuilding seemed a logical next step. As UNOSOM II forces began to disarm the rival clans in Mogadishu, the capital's security situation quickly deteriorated. On 5 June 1993 Somali militiamen loyal to General Mohamed Farah Aideed ambushed a Pakistani unit, killing 24 soldiers. Following a similar ambush on Nigerians, US Special Operations Task Force *Ranger* set out to find and arrest Aideed.[30]

Tribal criminal elements had effectively taken over the country. Of all the warlords, Aideed was the most visible and powerful. Senior authorities in Washington, DC, approved the search for Aideed. Given the pervasive culture of clan violence in Mogadishu, it was widely argued that only a forceful response could forestall the escalating attacks against UN forces. But at this late stage in the intervention, finding a warlord did not align well with the original goal of relieving starvation. During the summer and fall of 1993, a vast asymmetry developed between US strategy and UN policy in Somalia, producing US mission swing and confused UN policy.

On 3 October 1993 US intervention in Somalia reached a crescendo during a planned daylight raid to capture Aideed and his lieutenants. During the operation, hordes of Somali gangs confronted US forces and forced a street-to-street gun battle that left 18 US soldiers and hundreds of Somalis dead. As a result of this incident, US President William J. Clinton directed US forces to withdraw from Somalia by 31 March 1994, effectively ending the UNOSOM II mission. A closer look at the transitions between operational phases illuminates an important lesson of the Somalian Crisis.

When contrasted with the UNOSOM II effort, the initial UNITAF mission is often cited as a clean, successful model for intervention. However, both operations suffered from a series of national policy constraints that prevented a coherent, long-term strategy at the outset. The lack of a coherent national strategy had in turn precluded a viable operational strategy from properly developing and taking hold in Somalia. The absence of a well-synchronized operational plan led to ill-coordinated tactical operations to arrest clan members in Mogadishu, eclipsing the original goal of ending starvation throughout the country.

US strategy failed to recognize that successful humanitarian-relief interventions require the intervening force to restore law and order impartially and proactively.[31] Richard Betts postulates that the US failure to take charge at the outset and impose a settlement on the warring factions caused the crisis to escalate and become a renewed conflict.[32] During the initial intervention in Somalia, attempts to capture Aideed easily could have been interpreted as an inflammatory US effort to alter the Somali balance of power in favor of rival Mogadishu clan leader Ali Mahdi. As organizations changed and rules of engagement evolved, the intensity of the crisis escalated and local perception of UN impartiality diminished.

Crisis Variables

Crisis Phases	*Operational Venues*	*Instruments of National Power*
Crisis	Sea	Diplomatic
Conflict	Air	Information
Crisis Termination	Land	Military
Crisis Resolution	Space	Economic

Figure3

The US experience in Somalia is a valuable study in how the legitimacy of an intervention and the nature of a crisis can be dramatically altered without well-articulated strategic objectives and thoughtful operational strategy. In their comprehensive analysis of the Somalian intervention, Walter Clarke and Jeffrey Herbst conclude that "no massive intervention in a failed state—even one for humanitarian purposes—can be assuredly short by plan, politically neutral in execution, or widely parsimonious in providing 'nationbuilding' development aid."[33]

Forecasting the future is never a precise exercise. However, one prediction seems certain: other crises loom—more lethal and more difficult to control. The disastrous interventions in Lebanon in 1983 and 10 years later in Somalia shattered national perceptions of crises simply as events to be quickly resolved. While US experience with crisis operations has increased, understanding of their causal dynamics and effective military responses has lagged. Critics may argue that because every crisis will be different, the situation will not improve. But as lessons emerge from past interventions, common themes provide reason for optimism. Careful analysis of past interventions reveals that crises are not simply chaotic events; they have definite phases that can be shaped toward a desired outcome. Failed interventions result from flawed strategy and often a miscarriage of operational leadership. By contrast, operational commanders lead successful interventions through thoughtful, integrated crisis strategy.

Carl von Clausewitz warned battlefield commanders "not to take the first step without considering the last" because he saw war as a continuum of events.[34] Likewise, a commander's ability to resolve a crisis is determined by his ability to transition effectively between crisis phases by applying vision across all operational venues, using the four instruments of national power to support a comprehensive, synchronized strategy. The equation for success will vary with every crisis, but the basic list of variables to consider remains constant. ***MR***

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7. Robert A. Pape, *Bombing to Win: Air Power and Coercion in War* (Ithaca: Cornell University Press, 1996), 185.
8. James G. Roche and George E. Pickett Jr. "Organizing the Government to Provide the Tools for Intervention," *US Intervention Policy for the Post-Cold War World: New Challenges and New Responses*, eds. Arnold Kanter and Linton F. Brooks (New York: W.W. Norton & Co., 1994), 204. The activities listed in the bullet listings are drawn from various sources, including David Carment and Patrick James, *Peace in the Midst of Wars: Preventing and Managing International Ethnic Conflicts* (Columbia: University of South Carolina Press, 1998) and US Army Field Manual (FM) 100-20, *Military Operations in Low Intensity Conflict* (Washington, D.C.: US Government Printing Office (GPO), 5 December 1990), chapter 4.
9. FM 100-20, chapter 4. FM 100-20 states later that "to be effective, and maintain their security, the peacekeeping force and its support units must remain impartial entities. . . . The peacekeeper should always remember that there are two or more sides involved, and that it is his duty to listen to all sides before making a decision."
10. MacInnis, 36. Impartiality and neutrality can be misunderstood concepts. MacInnis says that "there should be no question of peacekeepers being entirely neutral. They must, however, remain visibly impartial. . . . The key difference between peacekeepers and peace enforcers . . . is their relationship with the parties of the conflict." There is an important distinction. Walter Clarke and Robert Gosende, "The Political Component: The Missing Vital Element in US Intervention Planning," *Parameters*, Autumn 1996, 6, state, "We are not *neutral* about civil rights abuses by any groups. We should not be *neutral* in the face of repression, oppression, or acts of violence. Least of all can we be *neutral* about forces or individuals that actively oppose the implementation of the international mandates or take hostile action against our forces."
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13. Colin L. Powell, "Why Generals Get Nervous," *The New York Times* (8 October 1992), A35. This letter to the editor outlined "The Powell Doctrine."
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An Exploration of Respect in Army Leadership

Harrison Keller

RESPECT HAS BEEN a distinctive US Army value since 1778 when Frederick William Baron von Steuben noted that a US officer's first objective should be to treat his men "with every possible kindness and humanity."[1] So it was not surprising when the US Army identified respect as one of its seven values. In 1998 respect language gave the Army a powerful way to organize ongoing discussions about discrimination and harassment.[2] The previous year's headlines had been filled with allegations of appalling violations of respect. The inclusion of respect as a value along with loyalty, duty, selfless service, honor, integrity and personal courage sent a strong message that respect for others should be an integral part of US Army leadership.

The US Army Training and Doctrine Command's (TRADOC's) initial definition of respect, "treat people as they should be treated," provided little guidance for defining the characteristics of this core component of Army leadership.

Respect in FM 22-100

As the capstone leadership manual for the Army, US Army Field Manual (FM) 22-100, *Army Leadership*, gives a concrete definition of respect in Army leadership.[3] It emphasizes character, principles of Army leadership and Army values and provides a clear, understandable doctrine to guide soldiers as they strive to become and develop as "leaders of character and competence."

Despite its stated mission, FM 22-100 fails to explain how respect is unique to Army leadership and what it looks like in practice. In fact, these issues are never addressed. Its brief discussion of respect is framed in language borrowed from philosophy and management theory without considering whether that language is adequate for Army leaders. Applying respect to leaders' interpersonal skills and practical judgment—what leaders "know and do"—is never specifically explored.

Should we conclude that respect in the Army is no different from popular versions of respect? Most professional soldiers are acutely aware of a discontinuity between the Army's organizational culture and popular US culture. Official documents often refer to this disjunction as a reason for teaching Army Values, especially to new recruits.[4]

The fact that FM 22-100 leaves its readers wondering whether respect in Army leadership is the same as popular respect highlights a potentially serious operational problem. Without a clear, solid definition of respect, Army leaders cannot be expected to understand the sort of respect they are meant to exemplify.

Some sound explanations are found in FM 22-100, such as the notion that tough training does not demean subordinates. Building their capabilities and showing faith in them is "the essence of respect." Respect is "an essential component for the development of disciplined, cohesive and effective warfighting teams" that is based on trust and regard for fellow soldiers.[5] The manual also notes that team identity and the bond between leaders and subordinates spring from mutual respect as well as discipline. Nevertheless, it is difficult to know how to interpret these passages because so much of the discussion of respect in FM 22-100 is hidden in popular language about tolerance, civility and individual autonomy. So while Army Values such as selfless service and personal courage come with fairly sophisticated explanations and examples, respect is left behind.

A New Model of Respect

In most philosophical accounts, respect is framed in terms of the duty not to infringe on personal autonomy and individual rights. In popular discourse, respect usually comes in one of two flavors. The first involves admiration or deference toward another person because of some distinctive quality, charac-

teristic or role. This is the sort of respect people usually talk about earning or losing. The second turns on the idea that every person automatically has a certain status because everyone is equal in virtue of shared humanity. This sort of respect is usually spelled out in terms of negative duties—not to abuse, not to impose on or not to interfere with other people—designed to keep a respectful distance between individuals.

Since the Army identified respect as a core value amid ongoing comprehensive investigations concerning violations of respect, soldiers' discussions of respect might be framed in terms of negative duties, particularly duties not to demean or harass others. The account of respect FM 22-100 details largely fulfills that expectation by focusing on tolerance and sensitivity to diversity. Major General Morris Boyd succinctly captures the central difference between this conception of respect and popular versions: "In the Army, respect doesn't mean 'leave people alone.' True respect [between soldiers] is a willingness to commit to improve each other's abilities, with great commitment to each other and a willingness to share."[6]

Respect that includes a responsibility to improve others' abilities requires a much greater depth of knowledge about other people than versions of respect that are simply about admiration, tolerance or noninterference. This way of thinking about respect also suggests that Army leaders not only have a license but also a responsibility to reshape the practical reasoning of others. This responsibility is not to be taken lightly; it is important enough to warrant taking great personal risks in its pursuit.[7]

There is a basic tension between the sort of respect Boyd advocates and respect as it is usually presented in philosophical and popular discourse. While most popular and philosophical models equate respect with distance, Boyd's model of respect requires being close enough to be vested in one another's successes. After all, basic features of military life automatically preclude respect that is focused on individual liberty. Soldiers participate in a hierarchical institution that requires them to issue and carry out orders, and executing these orders can sometimes require great violence. From the professional soldier's viewpoint, refusals to reshape others' practical decision making through rigorous training, issuing or following orders and, in certain circumstances, carrying out violence can constitute violations of respect.[8]

Two major premises primarily shape respect in the Army. First, Army leaders have a basic responsibility to define a common project—the mission. Second, subordinates have a basic responsibility to carry out orders, work within the parameters of their commanders' intent and take responsibility for fellow soldiers in pursuit of this common project. Boyd further observes, "To understand respect in the Army, you have to focus on the asymmetry between the leader and the led. The leader has the responsibility and the authority to create a shared sense of a common project, to build a team, with empathy and intelligence. The led depend upon their leader to define this shared sense. That a leader says so matters to the people he leads. This responsibility puts you in a situation where violations of respect from the leader can be especially devastating to the trust and confidence of his soldiers."[9]

Respect that includes a responsibility to improve others' abilities requires a much greater depth of knowledge about other people than versions of respect that are simply about admiration, tolerance or noninterference. This way of thinking about respect also suggests that Army leaders not only have a license but also a responsibility to reshape the practical reasoning of others.

From the perspective of a professional soldier like Boyd, the authority associated with rank and position of leadership does not preclude respect; it makes a deeper sort of respect possible. Military discipline requires elementary respect for rank and position, which amounts to recognizing authority within a military institution. Soldiers may earn and lose this sort of respect relatively easily because it is attached to various roles more than it is bestowed on an individual. This ancient form of respect creates a deeper respect that assumes responsibility for improving others and establishes an institutional framework for training and leadership. It gives Army leaders the authority they need to define a common project and build a team toward its fulfillment. Respect for authority makes deeper respect possible but can also open the door to gross violations of respect. The asymmetry between the leader and the led raises the stakes considerably, and consequences of violations of respect in this context are more significant.[10]

Respect in Army Leadership

Soldiers have their own definition of respect that reveals a sophisticated, albeit largely unexplored model, already at work. The figure synthesizes

soldiers' reflections for a new model of respect and illustrates its constitutive themes of value and attention. This model attempts to capture only one aspect of respect in the Army; it represents

Imagine a commander who speaks eloquently about respect for soldiers as human beings and professionals with whom he is engaged in a common mission. In practice, however, this same commander only expects, and usually gets, expressions of confidence and enthusiasm. Someone so focused on achieving his own objectives will not seek others' input and will usually discard advice. Despite what he says, this commander's commitment to respect is suspect.

the components of deep respect from the Army leader's perspective.

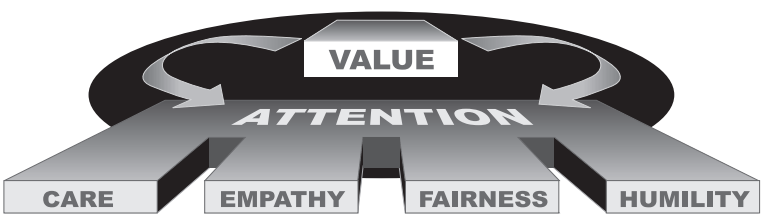
Value. Retired Lieutenant General H.G. (Pete) Taylor tells an especially moving story about one of the early lessons he learned about respect in Army leadership. Long before he commanded III Corps, his commander in Vietnam gave him a unique responsibility. When one of their soldiers was killed in action, either Taylor or his commander would unzip the body bag and look into the face of their fallen comrade. In his words, "It was a powerful reminder to see every one of your troops as individuals. At that moment, some family halfway around the globe having dinner or watching television had no idea about the hurt that was coming their way. It taught me that there are no acceptable losses in combat. And there are absolutely no acceptable losses or 'accidents' in training. That doesn't mean you're too cautious and don't put your troops in danger, but you don't accept those losses. That's completely different from the doctrine of World War I or even Hamburger Hill in Vietnam. You minimize your casualties while still accomplishing your mission."[11]

Taylor's reference to Vietnam is especially striking in this context. Whereas many senior military and political leaders concluded early in the war that the United States could prevail over North Vietnam with ual soldiers.[12] Taylor implemented these lessons ual a strategy of attrition, Taylor and many other young officers of his generation learned to appreciate the value of individ- soldiers.[12] Taylor implemented therse lessons throughout a distinguished career.

Taylor's understanding of respect in Army leadership also reaches beyond respect for human life to include a deep responsibility for improving others for the sake of the mission: "Respect and discipline are closely tied together; a military organization works on discipline. You can't just say that soldiers are grown men and women and should be able to do what they want. I once had a first sergeant tell me that he wasn't going to harass soldiers by visiting barracks on weekends. That kind of thinking focuses too much on rights and not enough on discipline and taking care of soldiers. When you talk about respect in the military, authoritarian respect has to be there first. And that's something you can demand. It's not the most important aspect, though. The most important kind of respect you get is the kind you earn through taking care of your soldiers. Ultimately, respect has to go both ways. You have to respect your subordinates, which means total acceptance of responsibility for those you lead. You have to make sure that they are fed, trained (this is most important) and not overworked. You have to balance training off with the particular needs of your soldiers."[13]

These observations highlight the essential connection with military discipline that distinguishes respect in Army leadership from other versions of respect. It is also important to note that they make no pretense of equality. Each identifies a particular quality or disposition that makes a leader more or less worthy of respect. In doing so, they pull against the FM 22-100 notion that "[not] all of your subordinates will succeed equally, but they all deserve respect."[14] Instead, Taylor suggests that everyone does not deserve the same respect. Everyone deserves basic respect as a human being, but leaders who are disciplined, authoritative and properly attentive rightfully earn a sort of respect others do not merit.[15]

Since respect is always directed at a valuable object, we should ascertain which objects are worthy of respect. This process is relatively simple when considering rank and position. The deeper sort of respect that includes a responsibility to improve others is more complicated. Taylor mentions three concepts correspond to the ways Army leaders value concepts that could potentially define this sort of respect: mission, humanity and military discipline. These



When one of their soldiers was killed in action, either Taylor or his commander would unzip the body bag and look into the face of their fallen comrade. In his words, "It was a powerful reminder to see every one of your troops as individuals. At that moment, some family halfway around the globe having dinner or watching television had no idea about the hurt that was coming their way. . . . That doesn't mean you're too cautious and don't put your troops in danger, but you don't accept those losses.

concepts correspond to the ways Army leaders value and respect their soldiers as participants in a common project (the mission), as human beings with particular needs and vulnerabilities and as professional soldiers.[16]

Taylor implies that respecting soldiers as participants in a common project and as human beings is mostly a matter of caring for them, not subjecting them to unnecessary risk and making sure they are adequately fed and trained. In 1879 Major General John Schofield pointed out that leaders who demonstrate respect are more likely to earn it from those they lead: "He who feels the respect which is due to others cannot fail to inspire in them regard for himself, while he who feels, and hence manifests, disrespect toward others, especially his inferiors, cannot fail to inspire hatred against himself."[17]

Since respect is a response to an object we value, earning subordinates' respect cannot simply be a matter of manifesting professionalism, integrity and respect. People ultimately make their own determinations about what sorts of things are valuable and which things are worthy of respect. Not everyone recognizes that human life has dignity. Many people do not value professional soldiers' qualities and skills, and many leaders do not pay adequate attention to subordinates' needs. After all, military discipline and good leadership are not natural states. Because performance evaluations depend on perceptions and judgments, they can be shaped. This idea raises the possibility that respect for soldiers as professionals can require more from a leader than a positive response to soldiers who demonstrate professional qualities and skills. Respect for soldiers as professionals can also involve establishing a climate in which the right behaviors and qualities are valued—and people who manifest these behaviors and qualities are respected.

Attention. Even when people agree that certain types of persons, behaviors or qualities are valuable and worthy of respect, they do not always agree on the same particular objects as instances or tokens of those types. To translate abstract values like respect for soldiers—as participants in a common project, as human beings with particular needs and vulnerabilities and as professionals—into practice, Army leaders must learn to focus their own and others' attention on the right features. For example, imagine a commander who speaks eloquently about respect for soldiers as human beings and professionals with whom he is engaged in a common mission. In practice, however, this same commander only expects, and usually gets, expressions of confidence and enthusiasm. Someone so focused on achieving his own objectives will not seek others' input and will usually discard advice. Despite what he says, this commander's commitment to respect is suspect—he only seems to value and care for his soldiers as mere instruments of his will.

The central idea underlying the CO2 program is that increased communication and understanding among soldiers will foster trust and unit cohesion. Soldiers engaged in ongoing, proactive dialogue will be more invested in the organization success than in old paradigms. Leaders will be more attentive to soldiers' needs and ideas. The objective is a climate in which leaders and subordinates regard and treat one another with more respect because they are appropriately attentive to each other.

Soldiers are not expendable automatons. In today's Army, individual autonomy is a professional soldier's most valuable capability. Individual M1A2 tank commanders may have as much information as their senior officers. The crew of a single Apache Longbow may be responsible for identifying hundreds of targets over a large sector of the battlefield. Although commanders issue orders and statements of intent to their soldiers, all Army leaders, whether officers or noncommissioned officers, have the authority and the responsibility to issue their own orders, carry out the units' missions and care for their soldiers. So, while soldiers are still expected to follow orders and operate within their commander's intent, the Army relies more than ever on individual soldiers to make good decisions. As a consequence, recognizing and cultivating soldiers' autonomous decision-making capabilities is essential for respect and warfighting.

Autonomous soldiers are valuable and difficult to care for because of their individual perceptions, judgments and capacity to make decisions. Army leaders must be attentive beyond simply listening to what other people say. Unfortunately, however, people often do not volunteer or cannot fully articulate what they think and feel. Respectful attention actually requires Army leaders to develop a highly sophisticated awareness of others' feelings, needs and ideas, including sensitivity to the impact of their behaviors on others. While serving as the US Military Academy (USMA) Commandant, Lieutenant General Robert F. Foley designed and implemented the Consideration of Others (CO2) Program to address this complex problem.

The program began as a forum to discuss date rape, but it quickly broadened to include a wide range of topics pertaining to respect, including equal opportunity, drug and alcohol abuse, health awareness, gender roles and chain of command responsibilities. The impact on the culture of the USMA was immediate and dramatic. The program brought many issues to the forefront for the first time, and many cadets indicated a positive impact on their own characters. With the enthusiastic support of cadet leaders and faculty, CO2 was soon established as part of the formal education program. The program included three elements: a dynamic education component centering on small-group discussions; strict enforcement to ensure that violations would not be tolerated; and an advisory committee of representatives from every unit and level of command. The advisory committee identified issues to incorporate into the program and promoted a sense of ownership among participants. Foley brought the CO2 idea with him when he assumed command of the Military District of Washington, and the program was successfully instituted throughout the district in 1997, customized by each command and staff to address its own particular needs. It has become the model for the entire Army.

CO2 may seem like an odd mechanism compared with top-down models of military instruction. The program brings small groups of 15 to 25 people from different ranks and assignments together with trained facilitators to discuss a wide range of local organizational issues. Everyone has a chance to express personal views about issues concerning harassment, insensitivity and any offensive or thoughtless behavior. These discussions focus primarily on helping group members understand each other through

US Army

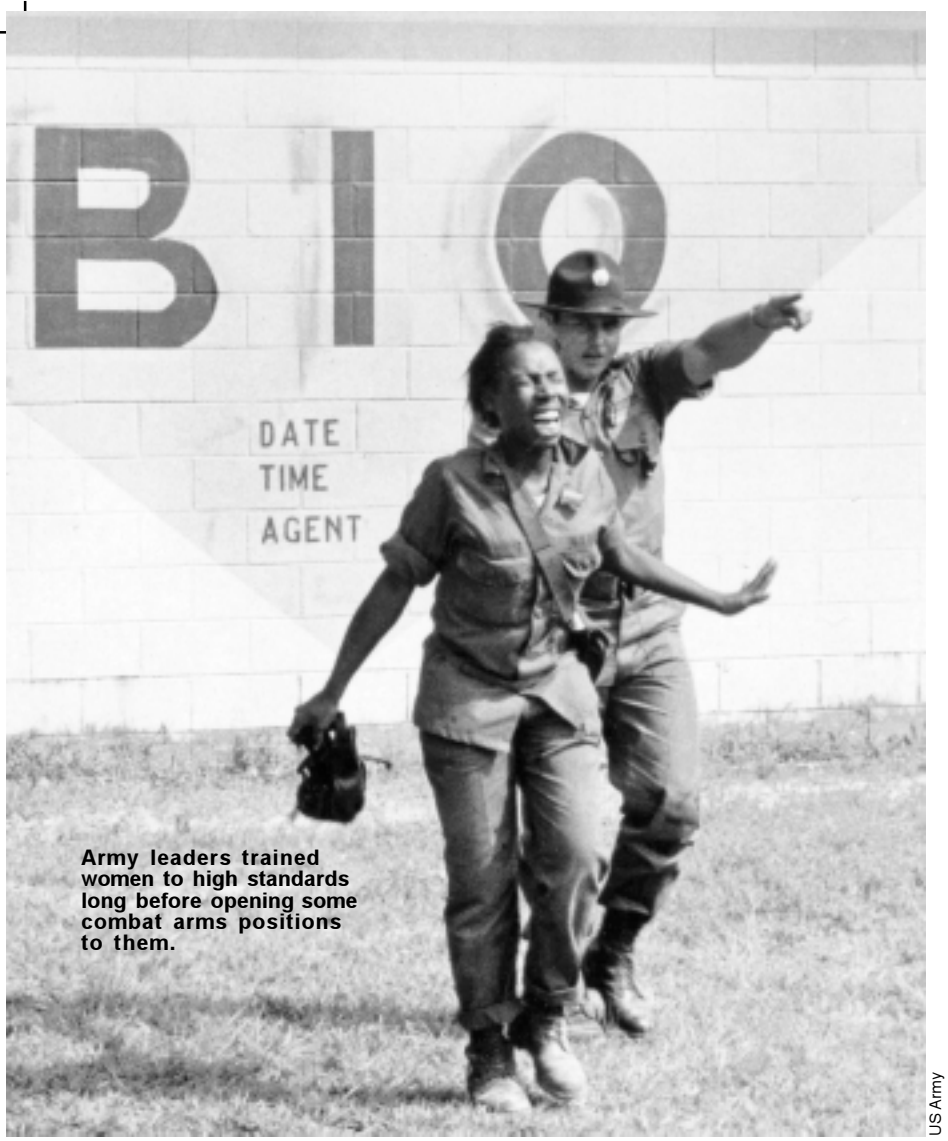
LTG Franks marches in Washington, D.C., with VII Corps after Operation *Desert Storm*.

Commanders have a basic responsibility to ensure that soldiers cultivate and develop an appreciation for the qualities and skills that enable them to be successful. . . . Leaders who are lax about military discipline and casual about training actually do not care enough to help their soldiers cultivate the professional qualities and skills that enable them to accomplish the mission, survive and earn the respect of other professional soldiers.

candid communication. The group also informally conducts after-action reviews to identify problem areas to address in the future. Critics might dismiss CO2 as feel-good window dressing, but Foley feels that "Soldiers in combat are motivated to accomplish the mission on the battlefield through an intense regard for their fellow soldiers. They will risk their own lives, if necessary, to prevent their comrades from getting killed or wounded. There is no limit to developing the full potential of trust and cohesion necessary in an effective fighting force if we can instill in our soldiers a high degree of consideration of others."[18]

The central idea underlying the CO2 program is that increased communication and understanding among soldiers will foster trust and unit cohesion. Soldiers engaged in ongoing, proactive dialogue will be more invested in the organization's success than in old paradigms. Leaders will be more attentive to soldiers' needs and ideas. The objective is a climate in which leaders and subordinates regard and treat one another with more respect because they are appropriately attentive to each other. But what sort of attention conveys respect for soldiers, particularly the deep sort of respect that entails taking responsibility for improving others? Soldiers identify four modes of attention with potential to define this sort of respect: care, empathy, fairness and humility.

Care. When we value something, we have an obligation to nurture and preserve it. Army leaders have historically spoken in terms of love for their soldiers. This love is, of course, different from familial love because commanders' roles are fundamentally different from parents' roles. Commanders have to be distanced enough from their soldiers to send their troops on dangerous missions.[19] Like parents, however, commanders have a basic responsibility to ensure that soldiers cultivate and develop an appreciation for the qualities and skills that enable them to be successful. This is why military discipline and thorough training are not violations of respect. Army leaders who are lax about military discipline and casual about training actually do not care enough to help their soldiers cultivate the professional qualities and skills that enable them to accomplish the mission, survive and earn the respect of other professional soldiers.



Army leaders trained women to high standards long before opening some combat arms positions to them.

US Army

A commander might deny vehemently that he has ever failed to respect the women under his command because he treats them no differently from the way he treats his own daughters or "any other woman." Such a commander probably means well, but what he fails to appreciate is that the most important question is not whether he treats female soldiers the same way he treats women in general but whether he is open to respecting them as professional soldiers.

General Thomas A. Schwartz has spent his career arguing that the scope of commanders' care should be broad: A soldier "is a member of a family, a church, club or a private organization. In order to achieve balance in his or her life, the soldier must dedicate energy to each of these teams. If we think we have exclusive rights over a soldier's time in this day and age, we are flat wrong. We must never forget that our soldiers need balance: the right balance of quality of life, training, doctrine, equipment and leadership."[20]

The idea that soldiers require balance in their lives is not what most people would expect from a corps commander. But it is worth reflecting further on the three areas Schwartz identifies as arenas in which Army leaders should manifest care for their soldiers: quality of life, training and doctrine, and leadership.

Quality of life is a broad issue, extending well beyond the concerns of most civilian managers. Most civilian managers restrict their attention to what employees do at work. So it is not surprising that a great deal more management literature has been generated recently about protecting privacy than about taking care of employees. In contrast, Schwartz argues that commanders have a broad responsibility to look after soldiers' physical and psychological well-being, especially by talking with them, making their lives predictable, being sensitive to their needs and keeping them informed. The success of a soldier's family affects not only that soldier but also the success of the Army as a whole.

Schwartz offers a unique perspective on how Army leaders can promote soldiers' autonomy while maintaining an emphasis on respect for commanders' authority: "To build appreciation for respect for persons and respect for commanders' authority, we need to build soldiers' autonomy around their trust and confidence in themselves, each other and their leaders. First of all, this requires commanders to be competent. Soldiers need to be able to respect their commanders' authority. It requires communication—our soldiers need to talk and listen more. And we need to teach delegation of authority—giving our soldiers the tools they need to be successful. I believe in 'power down' leadership. It helps commanders respect soldiers, and it helps soldiers react faster and better for themselves. We're teaching people to be team members, building their pride and confidence in the organization. Teams that fall apart lack this interdependence and trust."[21]

Notice that Schwartz begins talking about autonomy and ends talking about interdependence. A different model of autonomy is clearly at work from

the ones we typically find in philosophical and popular discussions of respect. His autonomous soldiers do not make decisions in isolation from each other; they are interdependent team members. Their training is not only about individual tactical and technical competence; it is also about developing unit cohesion by building soldiers' trust and confidence in each other. His emphasis on power-down leadership is particularly important in this context because it suggests that leaders should not think of themselves as standing outside and above their soldiers' teams looking down on them. Leaders should be integral members of their soldiers' teams, and if they care for their soldiers properly, they will not deprive them of opportunities for leadership.[22]

Empathy. The best Army leaders have a keen awareness of what is going on in their subordinates' lives and can predict their responses to situations. This kind of leader knows how to bring out the best in subordinates—when to push, when to push harder and when to back off. This kind of awareness requires a highly developed capacity for empathy. Philosophers and psychologists have offered different interpretations of empathy, but most accounts include a capacity to share others' experiences, feelings and ideas.[23] It is a way of identifying with others by sharing in their circumstances. Empathy can focus Army leaders' attention on the right objects, enabling them to make better decisions about how to listen, care and lead.

The empathy required for this sophisticated situational awareness is hard to achieve. As Lieutenant General Walter Ulmer points out, a leader's lack of self-knowledge is often the biggest obstacle to knowing what is going on in an organization: "Respect, trust and care involve lots of self-deception. Lots of people want them and think they have them but really don't. Many leaders fail in their relationships with others because they lose touch with the reality of their organizations. It is so easy for arrogance and self-centeredness to sneak into the equation. Leaders have to be attentive to the way the world looks to the people they lead. Whether or not they will be respected ultimately depends on how the world looks to others, the impact of their actions and decisions through the people's eyes who are developing respect or not."[24]

Ulmer reminds Army leaders that the respect they receive is not ultimately under their control; it turns on the significance of their qualities and actions in others' eyes. Army leaders must be in touch with subordinates' experiences, ideas and feelings to know whether their soldiers really respect them. If they lack this capacity for empathy, they will not only fail to grasp what subordinates think of them, they will also probably fail to establish and reinforce the right values in their units. Forced to depend on their own uninformed assumptions about what is important to their subordinates, leaders who lack empathy leave the door wide open for misinterpretation and misunderstanding.

Like Schwartz's and Foley's observations that leaders who convey the right attention receive more respect, Ulmer's comments can also be taken to imply that whether subordinates respect their leaders may depend on whether they trust that their leaders are appropriately attuned to their situations. To have respect for and from their subordinates, Army leaders cannot simply feel empathy for their troops; they have to communicate empathy. This idea supports Schofield's point that leaders who manifest disrespect will fail to earn their subordinates' respect. Soldiers who believe their leaders are out of touch will have less reason to take criticism and instruction well, share ideas and make an extra effort to accomplish the mission. A lack of communicated empathy hobbles Army leaders because it cuts them off from critical information about their soldiers and forces them to rely too heavily on their soldiers' respect for authority and respect for themselves to get the job done.[25]

Many leaders fail in their relationships with others because they lose touch with the reality of their organizations. It is so easy for arrogance and self-centeredness to sneak into the equation. Leaders have to be attentive to the way the world looks to the people they lead. Whether or not they will be respected ultimately depends on how the world looks to others.

Fairness. Subordinates must be able to trust and have confidence in their leaders. Leaders have a basic responsibility to ensure that their soldiers are properly trained and equipped. One of the underlying principles uniting these reflections is that commanders should fairly distribute training and attention.

Retired Command Sergeant Major George F. Minosky served as command sergeant major, 3d Brigade, 1st Cavalry Division. His perspective on fairness draws an important connection between caring and professionalism in Army leaders: "The best generals I knew were very involved with their soldiers. When you spoke to them, you knew they

were listening. They sincerely cared and they received more respect for that—more than the basic kind of respect for the position. There were also some brilliant tacticians who didn't really respect their soldiers. They'd expect their subordinates to do personal favors—even reprimand them for not doing favors. These leaders quickly lost the respect of their soldiers. I always tried to treat soldiers as equals if they were performing to the best of their ability, as professionals treat professionals. They always knew they could discuss any subject with me any time regardless of their rank, as long as they were doing their best as a professional."[26]

Soldiers who believe that their leaders are out of touch will have less reason to take criticism and instruction well, share ideas and make an extra effort to accomplish the mission. A lack of communicated empathy hobbles Army leaders, because it cuts them off from critical information about their soldiers and forces them to rely too heavily on their soldiers' respect for authority and respect for themselves to get the job done.

What is especially striking about Minosky's reflections is the subtle connection he draws between the kind of respect soldiers earn and lose as professionals and a broader respect for soldiers as soldiers or, we might say, as participants in a shared mission. Minosky does not just say that he respected soldiers who demonstrated professionalism. It was important to him to convey that he was always willing to treat his soldiers with more respect "as professionals treat professionals" provided only that they were performing to the best of their abilities.

Minosky's idea that all soldiers should be able to earn at least some degree of respect as professionals—simply for performing to the best of their abilities—has profound implications. First, it emphasizes that fair distribution of training and attention does not mean equal; individuals will often require different kinds of attention to perform well. Second, it implies a slightly different way of thinking about the kind of respect soldiers can earn and lose. Minosky does not limit his professional respect for soldiers by race or sex. He does not limit it to soldiers who perform better than everyone else. He only limits his professional respect to soldiers who perform to the best of their own abilities. Soldiers will not succeed equally, but all soldiers are worthy of respect as professionals striving for excellence.

By focusing on the sort of respect all soldiers do not deserve, Minosky adds an important dimension to the idea that all soldiers deserve a sort of respect. The respect that Army leaders should have for all their soldiers is not merely recognizing that all soldiers have dignity and worth as human beings and as participants in a shared mission. Army leaders' respect should also include a genuine openness to the possibility that soldiers will succeed as professionals. In other words, even though not all soldiers will succeed equally as professional soldiers, all of them deserve a fair opportunity to show that they can. Affording soldiers that opportunity is an essential part of respect.

A commander might deny vehemently that he has ever failed to respect the women under his command because he treats them no differently from the way he treats his own daughters or "any other woman." Such a commander probably means well, but fails to appreciate that the most important question is not whether he treats female soldiers the same way he treats women in general but whether he respects them as professional soldiers. As Minosky notes, all soldiers deserve at least this minimal consideration. This idea bridges the gap between respect that all soldiers deserve and respect that they can earn and lose. It also puts a slightly different spin on Boyd's observation that respect in Army leadership is about making a commitment to help each other realize his or her potential.

Humility. Attention to soldiers' input cannot shape Army leaders' practical decision making unless they are sufficiently humble to pay attention to what their soldiers can contribute. Retired General Robert Shoemaker consistently manifested this sort of humility. Most Army leaders talk about subordinates' respect for leaders. Shoemaker focused first on a leader's respect for subordinates: "When I was a corps commander, I didn't usually talk in terms of respect, but I emphasized the fact that every person in the corps knew more about something than I did. I think the secret to a good Army is for everyone to do their job and have the ability to do their job well. Respect between subordinates and commanders needs to go both ways, but successful commanders have to love their troops, and they need to know what goes on with them."[27]

A critic might suggest that there is little room for humility in Army leadership because a commander's primary responsibility is to lead, not to defer to his or her subordinates. It is true that too much humility could compromise leadership. But this criticism bypasses Shoemaker's central point.

The kind of humility that characterizes his perspective is far from meekness. It looks more like Minosky's openness to what individual soldiers can contribute. To illustrate this distinction, it may be helpful to turn to the ancient Greeks.

Philosopher and tutor to Alexander the Great, Aristotle treats pride as a virtue: "Now the man is thought to be proud who thinks himself worthy of great things, being worthy of them; for he who does so beyond his deserts is a fool, but no excellent man is foolish or silly. . . . The man who thinks himself worthy of less than he is really worthy of is unduly humble, whether his deserts be great or moderate, or his deserts be small but his claims yet smaller."[28]

Aristotle's idea is that a virtuous man both deserves and claims great things because he has an accurate sense of his worth. People who think themselves worthy of more than they deserve are vain, and people who underestimate themselves are unduly humble because they lack an accurate sense of their own capabilities. While unlike later Christian accounts of pride and humility, this idea is helpful for understanding the kind of humility that permeates Shoemaker's account of Army leadership. Shoemaker exemplified humility in awareness of his limited knowledge. Nevertheless, he was sufficiently confident to shoulder the responsibilities to lead, teach and inspire his troops.

Consider what he says in the following passage: "For soldiers to respect their commander, they have to see their commander's professional competence, and they need to have faith in their commander's moral integrity; for example, that he or she would choose what is best for the Army and the nation over what seems best for themselves. Confidence is key for a soldier: in himself, in his buddies that they will do their job, and in his leaders. And one of the most important components is that he knows he can talk to his commander and that he or she will listen. In general, people don't want to disappoint their boss, especially if the commander isn't open and doesn't communicate. The most common mistake Army leaders make is not doing their own job well, which includes teaching their subordinates to do their jobs. The tendency when things go wrong is to skip several echelons of command in addressing problems. But particularly in combat, where the fog of war is real, we need soldiers who will understand their commander's intent and make good decisions."[29]

Two of Shoemaker's central points are especially worth emphasizing. First, if they do not believe that they will be heard, most subordinates will not bother to share their ideas. Soldiers need to feel confident that their leaders will be receptive to their input, and Army leaders have a great deal of control over whether soldiers feel this way. Second, like most workers in any organization, soldiers try to please their boss. If commanders focus exclusively on their own mission perspectives, their soldiers will tend to filter information accordingly. This filtering is both unavoidable and essential, but it has the potential to cut commanders off from valuable sources of information to help them ask and answer the right questions.

A solid platform of theory is critical for the long-term success of the character-development initiative because, as the differences between popular and philosophical models of respect and the professional soldiers' model of respect illustrate, the wrong models of respect can actually undermine what the Army is trying to achieve.

These points imply that Army leaders have a responsibility to cultivate humility and to communicate their openness to others' input. Putting the passage together with Shoemaker's earlier reflection about being open to subordinates' knowledge suggests a rough outline of what genuine humility in Army leadership should look like. Although undue humility or meekness can compromise leaders' abilities to fulfill their obligations, inattentiveness to what soldiers can contribute will also compromise leaders' abilities to make good decisions. Genuinely humble Army leaders must strike the appropriate balance between arrogance and meekness by being aware of their own strengths and limitations, paying attention to the resources around them and communicating openness to others' input.

Leading With Respect

The revision of FM 22-100 was an enormous project because it synthesizes a concise and understandable leadership doctrine out of complex philosophical principles and more than 200 years of experience and tradition. Army Values have been received with widespread approval, and the Army's efforts to integrate the core values into its training and leadership-development programs are impressive. However, discussions of Army Values must be substantive enough to guide leaders' practical reasoning and widespread enough to make these initiatives more than mere mottoes. A solid platform of theory

is critical for the long-term success of the character-development initiative because, as the differences between popular and philosophical models of respect and the professional soldiers' model of respect illustrate, the wrong models of respect can actually undermine what the Army is trying to achieve. The Army has a clear understanding of traditional values like duty and courage, but consensus on the elements of respect has been elusive.

Army leaders who exemplify respect value subordinates as participants in a shared project, as human beings and as professional soldiers, not merely as instruments to get things accomplished. Each of these dimensions of respect is shaped by the fundamental premise that Army leaders have a responsibility to define a common project and to improve themselves and the soldiers they lead toward fulfilling that project—not to distance themselves from their subordinates. To translate this ideal into practice, Army leaders must look beyond authoritarian models of leadership and pay careful attention to subordinates' needs, perceptions, judgments and capacities.

The sort of attention that conveys this deep respect includes care, empathy, humility and fairness. Care involves taking personal responsibility for helping soldiers perform to the best of their abilities. Army leaders must be sufficiently empathetic to grasp what is going on with individual soldiers and in the organization as a whole. Army leaders must also be humble enough to listen to subordinates' input. Finally, to fulfill their responsibilities to improve their soldiers and ultimately the Army itself, they cannot be stingy or parochial with their attention. The scope of Army leaders' attention must be broad and fair, extending to each soldier as a human being and as an individual who can contribute as a professional to the success of the mission. Separating these values into distinct components is somewhat artificial. In practice, they are interwoven to create a complex, mutually supportive whole. It is nearly impossible to pry care apart from empathy or humility apart from fairness. Yet, it is still worth examining them individually to illustrate what respect in Army leadership requires and underline how far this sort of respect is from popular models.

Regardless of which model of respect the Army ultimately adopts, it is crucial that its account of respect, like its accounts of duty and courage, be integrated on a theoretical level with the principles of military discipline and on a practical level with leaders' experiences. Army leaders should be able to look to a practical philosophy of ethical leadership that captures the rich traditions and experiences of the Army's own heroes. ***MR***

NOTES

1. Frederick William Baron von Steuben, *Baron von Steuben's Revolutionary War Drill Manual: A Facsimile Reprint of the 1794 Edition* (New York: Dover Publications Inc., 1985), 135.
2. The Army Values were unveiled in January 1998 on the heels of a comprehensive review of US Army policies on sexual harassment. The review initiated in the wake of incidents of sexual harassment and misconduct at Aberdeen Proving Ground, Maryland, found that respect was not well institutionalized in the Army, particularly in the initial-entry training process.
3. US Army Field Manual (FM) 22-100, *Army Leadership* (Washington, DC: US Government Printing Office, February 1999, draft). I gratefully acknowledge the criticisms and suggestions of LTC Jon Smidt of the Center for Army Leadership at Fort Leavenworth, Kansas.
4. See the *Living Army Values* video produced as part of the Character Development XXI initiative. In October 1998, basic combat training was expanded from eight weeks to nine weeks so new soldiers would have 54 additional hours of Army Values instruction.
5. FM 22-100, paragraph 2-21.
6. Interviews with MG Morris J. Boyd, 6 April 1998 and 21 June 1999.
7. Boyd's points give rise to critical questions about what sorts of risks one should take to improve others; hurt feelings, bruised self-esteem and minor injury, certainly, but threats of serious injury and death are more uncertain and depend on the context.
8. Most civilians are not oblivious to this idea. For example, at a screening of *Saving Private Ryan*, several members of the audience voiced disgust at a scene in which a US soldier paralyzed by fear does not prevent a German soldier from ambushing his comrades.
9. Boyd.
10. Discussions of the Aberdeen, McKinney and Hale scandals in the press were often insensitive to this issue. Even when they took up the question of abuse of power, the media tended to focus on issues of consent and manipulation, downplaying or overlooking the depth of commanders' responsibilities for their soldiers.
11. Interviews with GEN H.G. (Pete) Taylor, 1 June 1998 and 7 April 1999.
12. Harold G. Moore, *We Were Soldiers Once—and Young: Ia Drang, the Battle that Changed the War in Vietnam* (New York: Random House, 1992), 338-39.
13. Taylor.
14. FM 22-100, paragraph 2-21.
15. For one perspective on this issue, see COL Walter R. Schumm, LTC Bobbie P. Polk, MAJ John Bryan, CPT Frank Fornataro and Captain Jennifer Curry, "Treat Prisoners Humanely," *Military Review*, January-February 1998, 83.
16. I am deriving the phrase "professional soldiers" from the idea that Army leaders can warrant more or less respect depending on the quality of their military leadership. The standards that define quality military leadership are internal to the profession of arms, hence the "as professional soldiers."
17. *Bugle Notes* (West Point, NY: USMA, 1950-1951), 206.
18. LTG Robert F. Foley and MAJ Denise A. Goudreau, "Consideration of Others," *Military Review* (January-February 1996), 25.
19. Taylor pointed out that the mission must come first. If protecting the lives of particular soldiers always came first, a commander could never send them into harm's way.
20. GEN Thomas A. Schwartz, "The Third Corps: A Team of Teams" (unpublished manuscript), 1.
21. Ibid.
22. There may be some of LTG Walter Ulmer's influence here. When he commanded III Corps—and earlier when he helped conduct leadership reviews—he was famous for emphasizing power-down leadership.
23. Nancy Sherman draws a direct connection between respect and empathy in "Empathy, Respect and Humanitarian Intervention" (unpublished manuscript).
24. Interview with LTG Walter F. Ulmer, 15 June 1998.
25. Jonathan Shay, *Achilles in Vietnam: Combat Trauma and the Undoing of Character* (New York: Maxwell Macmillan International, 1994).
26. Interviews with CSM George F. Minosky, 5 August 1998 and 8 June 1999.
27. Interview with GEN Robert Shoemaker, 21 January 1999.
28. Aristotle, *The Nichomachean Ethics, Book 4*, W.D. Ross, trans. (Oxford: Clarendon Press, 1995).
29. Shoemaker.

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The Army Values Challenge

Major Kenneth Tarcza, US Army

ISSUING AN Army Values card to every soldier is easy but leaders must ensure compliance—consistent demonstration of Army Values by all soldiers. US Army Field Manual (FM) 22-100, *Army Leadership*, clearly states that when it comes to values, internalization rather than demonstration is the goal.[1] Rote memorization of definitions is not enough. There must be a deeper understanding of the spirit behind the rules. Herein lies the Army Values challenge—how should the Army train and measure values internalization?

The historical basis for Army Values stems largely from moral questions raised by the Vietnam War and subsequent incidents that indicate a need for clearly stated values actively incorporated into training.[2] Current thinking reflects this understanding. Retired US Army Chief of Staff General Dennis J. Reimer writes, "Army values build strong cohesive organizations that, in turn, become the source of strength and solidarity for their members in difficult and turbulent times."[3] FM 22-100 states, "Army values form the very identity of America's Army, the solid rock upon which everything else stands."[4]

Ultimately, the Army established the seven Army Values outlined in FM 22-100 and printed on the Army Values card. They are well founded, having appropriate and reassuring similarities to universally accepted moral imperatives. Summarizing the work of philosopher Bernard Gert, author Rushworth M. Kidder identifies 10 universal imperatives: do not kill; do not cause pain; do not disable; do not deprive of freedom or opportunity; do not deprive of pleasure; do not deceive; keep your promises; do not cheat; obey the law; and do your duty.[5] Kidder also identifies a smaller set of basic commands that have countless applications in business and politics and that hold true in all great world religions: do not kill; do not lie; do not steal; do not practice immorality; respect parents; and love children.[6]

Although the mandate to leaders is for soldiers to internalize Army Values, there are no proven means to either train or measure their internalization. Recent findings of three independent research organizations indicate that current Army leaders hold different values from those held by the nation's youth—the next generation of soldiers. More troubling, the two sets of values are continuing to diverge.

The Challenge

There is no way to know soldiers' values when they enter the military. FM 22-100 explains, "your job as a leader would be a great deal easier if you could check the values of a new Department of the Army civilian or a soldier the way medics check teeth or run blood tests. You could figure out what values were missing. . . and administer the right combination, maybe with an injection or magic pill."[7] And, although the mandate to leaders is for soldiers to internalize Army Values, there are no proven means to either train or measure their internalization. Recent findings of three independent research organizations indicate that current Army leaders hold different values from those held by the nation's youth—the next generation of soldiers. More troubling, the two sets of values are continuing to diverge.

During surveys conducted in both 1997 and 1998, the Barna Research Group determined that 75 percent of adult Americans do not believe in absolute standards of right and wrong behavior and 65 percent do not believe in unchanging moral truths.[8] Barna also determined that the most effective form of education these days is behavioral modeling, indicating that people are most prone to recall what they have seen others do rather than memorize what has been read or said by others. Finally, the surveys

US Army

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determined that young adults from 18 to 32 years old are the least likely to believe in absolute behavioral standards or unchanging moral truths.[9]

During a 1998 study the Josephson Institute, a public-benefit, nonpartisan, nonprofit organization advocating principled reasoning and ethical decision making, determined that the majority of high school youth freely admit to lying, cheating and stealing within the past year and yet see nothing wrong with their own ethics and character.[10] The findings of this survey, one of the largest ever to focus on the ethics of young people, including more than 20,000 middle and high-school respondents revealed that almost all teenagers admit to lying. Of high-school students surveyed, 92 percent said they had lied at least once in the past year. Seventy-eight percent said they had lied two or more times.

During the Institute's 1996 survey, 85 percent said they had lied at least once and 73 percent said they had lied repeatedly.[11] More than 33 percent of high-school students said they would lie to get a good job. During the same survey, 47 percent of all respondents admitted they had stolen something from a store in the previous 12 months. More than a quarter of high-school students admitted that they had committed store theft at least twice. In 1998 the reported theft rate was 39 percent. The survey further revealed that 70 percent of high-school students admitted that they cheated on an exam at least once in the past 12 months. In 1996 the cheating rate was 64 percent. Michael Josephson, president of the Institute, said, "If we keep in mind that liars and cheaters may lie on a survey, it's clear that the reality is even worse than these numbers indicate."[12]

During July and August 1998, registered California voters were surveyed by The Claremont Institute for the Study of Statesmanship and Political Philosophy. The survey indicated that virtually all demographic groups, most by a sizable majority, believe the country is morally on the wrong track. Of those polled, 65 percent believed that the country is on the "wrong track morally"; 81 percent said adultery is never morally right; 58 percent said that homosexual conduct, such as sodomy between two men, was never morally right.[13]

What standards define good or right actions? For soldiers, the standards are Army Values. The amplification of integrity indicates that lawful and moral actions are also right. Soldiers are subject to local, state and federal statutes, presidential orders, superior officers' orders, the Uniform Code of Military Justice (UCMJ) and all provisions of the Hague and Geneva Conventions. FM 22-100 states that leaders who demonstrate integrity "show consistently good moral judgment and behavior."[14] Finally, right actions conform to the convictions of conscience. Generally speaking, an actions' legality is not difficult to grasp. Either actions are lawful or they are not. Moral issues and convictions of conscience pose far more difficult questions. What are moral actions? What is good moral judgment?

Moral actions are fairly easy to define but difficult to characterize. Moral actions and moral character conform to ideals of right human conduct.[15] The difficulty with characterizing morals—military or otherwise—begins with trying to establish proper human conduct. The definition depends as much on individual understanding as it does on external influences. Is there an absolute proper human conduct? For soldiers, there are moral absolutes, many

of which are included in FM 27-10, *The Law of Land Warfare*, otherwise known as the law of war.[16] The law of war consists of written provisions, such as the Hague and Geneva Conventions, as well as unwritten customs and common law. Explicit purposes of the law of war include "protecting both combatants and noncombatants from unnecessary suffering" and "safeguarding certain fundamental human rights of persons who fall into the hands of the enemy, particularly prisoners of war (POWs), wounded and sick, and civilians."[17]

Fundamental human rights are those to which humans are absolutely and always entitled. An example pertains to killing captured enemy soldiers. Not only is killing captured enemy soldiers morally wrong—regardless of their entitlement to POW status—it violates the law of war. German Field Marshal Erwin Rommel received Adolph Hitler's "commando order" to kill enemy soldiers encountered behind German lines but admirably chose to burn the order rather than comply with it, an act of high moral character while serving an immoral government. Though bound by a different set of laws, he responded properly to a moral imperative. Killing POW's can be considered an absolute wrong for soldiers, as well as a written truth and binding law. Unfortunately, not all situations are as clear.

An instructional scenario in the US Army's Command and General Staff Officers Course (CGSOC), Fort Leavenworth, describes a situation relevant to current military operations other than war. Soldiers deployed on a humanitarian support mission in an undeveloped nation confront drought, refugees and a regional incidence of human immunodeficiency virus estimated as high as 50 percent. Accordingly, the brigade commander orders soldiers to have only minimal contact with the local population and no contact with wounded civilians. One soldier eventually becomes so upset at seeing badly wounded orphans along the road during his daily supply distribution runs that he stops his truck and provides medical care to some of the injured children. What should happen to that soldier?

First, was the brigade commander's order lawful? Yes, for it was undoubtedly intended for force protection, not to increase human suffering. Was the soldier's action legally correct? No. It violated the brigade commander's lawful order. Were the soldier's actions morally correct? Arguably, yes and no. The soldier was doing what was necessary to prevent unnecessary suffering to a helpless child, yet he violated his sworn obligation to "obey the [lawful] orders of the President and the officers appointed over" him. So what about the soldier?[18]

Field Marshall Erwin Rommel (*center*) discusses the upcoming Allied invasion of France with Colonel General Johannes Blaskowitz, commander of Army Group G, and Field Marshall Gerd von Rundstedt.

US Army

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Fundamental Concepts

Soldiers might face many such complexities. To cope, courageous leaders at all levels have the daunting tasks of training, assessing and enforcing Army Values. The first and most critical step to meeting these demands involves recognizing that moral character development is the center of gravity of Army Values training. The values themselves are merely

decisive points, a means to an end. Joint Publication 3-0, *Doctrine for Joint Operations*, states, "Decisive points are not centers of gravity; they are the keys to attacking protected centers of gravity. Centers of gravity are the foundation of capability—what Clausewitz called 'the hub of all power and movement, on which everything depends . . . the point at which all our energies should be directed.' They are those characteristics, capabilities or locations from which a military force derives its freedom of action, physical strength or will to fight."[19]

The survey indicated that virtually all demographic groups, most by a sizable majority, believe the country is morally on the wrong track. Of those polled, 65 percent believed that the country is on the "wrong track morally"; 81 percent said adultery is never morally right; 58 percent said that homosexual conduct, such as sodomy between two men, was never morally right.

Note the similarity of this explanation to FM 22-100 and Reimer's assessment of the importance of Army Values. Army Values are foundation principles on which all else rests—they are the bedrock, the source of cohesiveness and solidarity in difficult times. When all else fails or falls around us, they must remain. This ideal has great power.

After James Bond Stockdale was shot down over North Vietnam in 1965, he was held prisoner in Hanoi for seven-and-one-half years, was tortured 15 times and spent 4 years in solitary confinement. After retiring as a vice admiral, Stockdale wrote about the extortion environment of a prison camp: "What attributes serve you well in the extortion environment? We learned there, above all else, that the best defense is to keep your conscience clean. When we did something we were ashamed of, and our captors realized we were ashamed of it, we were in trouble. A little white lie is where extortion and ultimately blackmail start. In 1965 I was crippled and alone. I realized that they had all the power. I couldn't see how I was ever going to get out with my honor and self-respect. The one thing that I came to realize was that if you don't lose your integrity you can't be had and you can't be hurt. Compromises multiply and build up when you're working against skilled extortionists or a good manipulator. You can't be had if you don't take the first shortcut, of 'meeting them halfway,' as they say, or look for that tacit deal, or make that first compromise."[20]

Clearly, Stockdale's center of gravity—his sustaining principle—was a clean conscience. Beneath that lay an unshakable sense of right and wrong behavior—sound moral character.

Continuing with the center of gravity analogy, moral turpitude is the enemy because soldiers can demonstrate some or perhaps all Army Values and still not be individuals of high moral character. If soldiers routinely exhibit Army Values only while on duty, they have fallen far short of the Army's intention. In contrast, soldiers who have high moral character on and off duty exemplify Army Values.

The root issue remains. How do leaders effectively train and measure moral character? Appendix E of FM 22-100 discusses the Army Character Development Model and provides a good starting point for training.[21] With "Be, Know and Do" as watchwords, the Army trains moral character by placing the greatest emphasis where it should be—on leader development and involvement. Ideally, leaders of high moral character themselves are best prepared to tackle values conflicts and education. Such leaders not only exemplify principles of moral living but also inspire and instill the same in others. To recognize this critical responsibility, the Army has incorporated values assessments into the officer and noncommissioned officer evaluation reports.

Character development also requires frequently exercising an individual's moral intellect to provide moral growth, just as training improves physical fitness. Passing a semiannual physical fitness test does not guarantee excellent fitness, nor does infrequent or mandatory Army Values training do much for moral maturation beyond forcing soldiers to locate and review their Army Values card.

Leaders must understand that when it comes to Army Values training, one size does not fit all. Because soldiers enter the Army at different levels of moral development, it is unrealistic to expect all soldiers to respond similarly to Army Values challenges, even after receiving standardized, initial-entry or follow-on training. Just as tactical training must address both individual and unit collective tasks, Army Values assessments and training must be tailored to reinforce specific individual and unit weaknesses.

Finally, leaders must recognize that Army Values efforts need to engage three different levels within the Army: individuals, units and perhaps most critical, the institution. Current initiatives reflect the assumed state of the Army and are directed primarily toward individuals and units. In contrast, what the Army needs is a long-term, institutional shift to address society's move away from a shared set of

US Army

Release ceremony near Tam Ky, Vietnam, January 1969. US soldiers seem unimpressed by the china-and-flowers treatment from their cpators.

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basic values. The institutional Army must anticipate growing challenges to developing soldiers and leaders of character. As it has begun by making the Army Values card standard equipment, the Army must continue to treat daily activities as ongoing opportunities for values training.

Character development must be incessant and seamlessly woven into all other pursuits. The Army Values Homepage echoes this somewhat but only to the extent of encouraging "hip pocket training events."[22] The US Air Force's *Little Blue Book* takes this approach further when discussing "The Core Values Continuum."[23] The continuum stresses values as the service's operational fabric—an inseparable aspect of all training. The Army must mirror this approach and expand a top-down, bottom-up and back-and-forth dialogue to ingrain values in every facet of Army life.

For measuring values and character development, the Army has adopted the Ethical Climate Assessment Survey (ECAS) for use within units.[24] Unfortunately, currently there is no tool to assess an individual's level of moral development nor standardized approaches for improving individual or unit moral development.

Training Approaches

Beyond understanding Army Values fundamentals, the more difficult task for leaders is conducting meaningful training that goes well beyond rote memorization and minimum standards of behavior. There must be a deeper understanding of the spirit behind the rules. So many potential moral dilemmas exist that soldiers must be fluent in applying as well as reciting Army Values. The following suggestions complement Army doctrine:

- Train/retrain the trainers in Army Values basics. At every level of command, ensure that leaders at all levels understand and can apply each Army Value. Further guidance, suggestions and materials are available on the Army Values Homepage.[25] This type of training is well suited to professional-

development sessions.

- Train soldiers to apply the four steps of the Army Ethical Reasoning Model—define the problem; know the relevant rules; develop and evaluate courses of action; choose the course of action that best represents Army Values.[26]
- Use the techniques outlined in Appendix C of FM 22-100 and include Army Values self-assessments for soldiers during periodic counseling.
- Integrate equal opportunity, sexual harassment and consideration of others into Army Values training.
- As suggested on the Army Values Homepage, routinely conduct values hip-pocket training.
- Devote prime-time training to command-directed Army Values events.
- Mandate a values mission essential task list (VMETL) at each level of command to focus character-development efforts.
- Designate aspects of values training or moral readiness as reportable during quarterly training briefings.
- Modify the standard five-paragraph operations order (OPORD) format to discuss moral considerations. Depending on the mission, issues could be addressed under commander's intent, tasks to subordinate units or coordinating instructions. Moral considerations are an item of command interest and should be handled accordingly.
- Establish focused character-development reading lists with realistic goals, such as one or two books a year, for all levels of rank and responsibility. FM 22-100 should head the list; it includes an extensive bibliography useful for choosing other books.[27]

Current initiatives reflect the assumed state of the Army and are directed primarily toward individuals and units. In contrast, what the Army needs is a long-term, institutional shift to address society's move away from a shared set of basic values. The institutional Army must anticipate growing challenges to developing soldiers and leaders of character.

Training soldiers to apply ethical reasoning also means training them to recognize moral problems. Some moral decisions involve right-versus-wrong distinctions; others are right versus right. As FM 22-100 points out, the latter types are clearly more difficult.[28] Kidder identifies four right-versus-right dilemmas so common that they are familiar models: truth versus loyalty; individual versus community; short-term versus long-term benefit; and justice versus mercy.

Perhaps a situation considered a right-versus-right dilemma is actually right versus wrong and is no dilemma at all. A situation might also be a right-versus-right dilemma and require a determination of the better choice. The situation could even be a "trilemma," a right-versus-right scenario that includes a preferable but unrecognized third course.[25] Recall the CGSOC scenario in which a soldier is torn between his commander's lawful order and his own moral conviction. This situation certainly falls into the right-versus-right category and likely even the trilemma category if the soldier considers possible alternatives such as volunteering for duty in the rear. Half of the battle is recognizing the nature of the dilemma. The less soldiers understand Army Values, the more likely they will fail to recognize the full nature of a difficult choice or to respond appropriately.

Institutional Initiatives

For Army Values to have the desired breadth and depth of impact, the institution requires initiatives beyond a card. The Army can begin by implementing a standard for assessing either an individual's moral character or how well an individual has internalized Army Values. This would measure individual understanding of Army Values definitions as well as evaluate how values are applied to realistic situations, likely under a time constraint. Results could be used to classify each soldier's moral development and serve as the basis for establishing Army Values training objectives. Such assessments could be administered at least annually or at a commander's discretion. One starting point might be Lawrence Kohlberg's cognitive developmental view of moral learning and the six associated stages of moral development.[30] Using this view as template, the post-conventional level of moral development, where individuals recognize universal ethical principles and adhere to them out of self-respect, would be the ultimate goal. Regrettably, Kohlberg presumed that this level is not reached during childhood or by most adults, which only further highlights the magnitude of the Army's training challenge. The Army Universal Task List (AUTL) should include collective values development and a moral-readiness assessment; common task testing should include demonstrations of soldier understanding of Army Values.

Sparking soldier interest in Army Values training is a helpful approach. One possibility is computerized

(web-based) "moral marksmanship" training. This approach could use various levels of qualification and increasing levels of difficulty, much as the unit conduct-of-fire trainer provides for combat-vehicle crewmembers. Large pools of randomly selected realistic and actual scenarios with associated questions at various levels of moral difficulty would comprise the qualification gates. Soldiers and units could be recognized for achieving various levels of values aptitude. Another option is to develop Army Values flashcards printed with definitions, vignettes and scenarios, much the same as vehicle- or weapon-identification cards. These could be used for hip-pocket training to hone moral reasoning skills when computers are unavailable or soldiers are deployed.

Leaders should apply an ethical assessment methodology to any significant training event to anticipate and address situations that might tempt good soldiers to make poor judgments. For instance, they could ask, "What opportunities exist for moral lapses during the upcoming equipment inventories and what can be done to promote good choices?" Including a provision for a moral-readiness assessment on monthly unit status reports shows that moral preparation is an item of command interest—an invisible but critical measure of combat readiness. Indicators include subjective intangibles such as morale as well as objective specifics such as the number and type of character-related disciplinary actions. Army Values and the core values of the world's major religions are mutually supporting. To say that soldiers are spiritually fit is virtually synonymous with saying that they are morally fit and thus "values fit."[31]

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There is an indisputable and compelling need for corporate, internalized Army Values to define moral character and establish standards of behavior. These soldier values are well-founded, universally recognizable moral imperatives. Still, despite their critical nature, Army Values are difficult to train and assess because they are largely intangible. Accordingly, beyond fundamental individual and unit-level values training, the Army requires institutional change to address soldiers' moral condition as society moves away from a traditional understanding of right and wrong. ***MR***

NOTES

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18. The consensus of at least one staff group was that the soldier should probably receive nothing more that a formal reprimand, since it is hard to argue that his actions were truly wrong, despite the standing order.
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20. James Bond Stockdale, "The World of Epictetus: Reflections on Survival and Leadership," *War, Morality, and the Military Profession* (Boulder, CO: Westview Press Inc., 1986), 20.
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22. Army Values Homepage at <www-m-w.com/cgi-bin/dictionary>.
23. US Air Force, *The Little Blue Book*, <www.usafa.af.mil/core-value/cv-mastr.html>.
24. FM 22-100, D-1 through D-5.
25. The Army Values Homepage.
26. FM 22-100, 4-8.
27. Kidder's *How Good People Make Tough Choices* fleshes out, in plain language, much of the philosophy required to understand fully the complex world of moral decision making. The US Air Force's *Little Blue Book* is also useful.
28. FM 22-100, 4-9.
29. Kidder, 18.
30. Camille B. Wortman, Elizabeth F. Loftus and Mary Marshall, *Psychology* (New York, NY: Alfred A. Knopf, 1981), 266-68.
31. Kidder, 91.

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Special Forces in Unconventional Warfare

by Colonel Michael R. Kershner, US Army

Quite possibly, unconventional warfare (UW) is the most misunderstood form of US military operations. It is not simply a variant of guerrilla warfare; guerrilla warfare, unconventional assisted recovery, information operations (IO) and information support, subversion, and sabotage play roles in unconventional warfare.

Joint doctrine defines unconventional warfare as a "broad spectrum of military and paramilitary operations, normally of long duration, predominately conducted by indigenous or surrogate forces who are organized, trained, equipped, supported and directed in varying degrees by an external source. It includes guerrilla warfare and other direct offensive, low visibility, covert or clandestine operations, as well as the indirect activities of subversion, sabotage, intelligence activities and evasion and escape."[1] This broad definition supports the entire spectrum of UW activities.

The US Army Special Forces Command (Airborne) recently conducted a series of UW seminars to encourage the Special Forces (SF) to return to its roots and be the world's most relevant special force. Unconventional warfare has always been Special Forces' primary mission; all other tasks are subsets of this overarching mission.

Because of its specialized training, Special Forces is recognized as the Army's most relevant force. As the Army grapples with structure, doctrine and operations of the Interim Force and the Objective Force, Special Forces must remain relevant throughout the 21st century.

The World as a Minefield

If today's world is any guide, tomorrow's world will be volatile, uncertain, complex and dangerous. There will be increasingly ambiguous political and military situations populated by nontraditional enemies, including well-funded narcoterrorists, criminal enterprises, militias and private armies. Racial, ethnic, economic and ideological differences will make effective government increasingly difficult. The weaker those governments are, the sooner fault lines will affect their ability to provide for their citizens' welfare or keep them in subjugation, as is often the case. Dysfunctional governments increasingly lead to porous borders, government corruption and other opportunities for exploitation. As governments fail, anarchy, tribalism and reactionary authoritarian regimes will fill power vacuums.

While tomorrow's threats are unpredictable, they almost certainly will not be peer competitors. The likelihood of any nation coupling military ascendancy with dominant economic strength is virtually nil. That does not mean the United States is more secure than in the past. Its strength and its open democratic society provide opportunities to enemies. For example, when Iranian dictator Saddam Hussein attempted to go toe-to-toe with US forces in terrain similar to that at the US National Training Center (NTC), other nations watched his inevitable defeat and learned appropriate lessons. Rarely does a nation face such an obliging enemy. The United States must not assume that the next adversary will be as cooperative.

The terms *du jour* for future threats are "asymmetric" and "asynchronous."[2] What the terms really mean is "unconventional." The United States has the world's premier UW weapon—the US Army Special Forces. The mere potential of forces trained and prepared to conduct unconventional warfare is a warning and strategic deterrent to US enemies.

Today's unsettled environment, which in the future will be even more unsettled, is the milieu in which unconventional warfare thrives, and the environment into which Special Forces will deploy. On any given day, more than 750 soldiers conduct an average of 61 missions in 39 countries.[3] This ubiquitous involvement ensures Special Forces' continued relevance and has earned its soldiers the nickname "Global Scouts."[4]

Given their broad and complex missions, SF soldiers are arguably involved daily in unconventional warfare. The Army's last conventional conflict occurred during Operation *Desert Storm*. More than 50 identifiable UW incidents have occurred during 1999 and 2000 alone, demonstrating the relevance of UW expertise.[5]

Originally, Special Forces was designed for 1950s-era unconventional warfare, taking as its model the Office of Strategic Services' Jedburgh teams that operated during World War II.[6] During the revitalization of special operations during the 1980s, the Army focused on the Soviet threat to Western Europe. To ensure its relevance during the Cold War, Army Special Forces assumed a large role in direct-action and special reconnaissance activities.

With the Soviet Union's demise, direct-action and special reconnaissance functions have been eclipsed. Military operations other than war (MOOTW) have become increasingly important. Special Forces has assumed an increasing number of foreign internal defense missions to support the Army and shape the strategic environment.[7]

Special Forces—Special Skills

As the world becomes increasingly unsettled and volatile, Special Forces must be well prepared for

unconventional warfare. By law, only US Special Operations Command (USSOCOM) forces are authorized to conduct unconventional warfare.[8] Of all USSOCOM forces, the Special Forces is the most prepared to conduct unconventional warfare in its broadest terms, including but not limited to guerrilla warfare.

Soldiers who conduct unconventional warfare are highly trained, skilled and mature. They have excellent problem-solving skills and mental agility in the most fluid situations. Their flexibility and adaptability are unparalleled. Foreign-language capability, area and cultural expertise, and excellent interpersonal skills complement base-line requirements. Special Forces soldiers understand the situation of those they train or contact, and they comprehend the relevant social, economic and political milieu. Special Forces' primary peacetime purpose in multiple overseas deployments is to ensure that the required expertise is present when crises appear.

An SF soldier's language expertise should not be confused with a linguist's. Special Forces soldiers are trained to exchange ideas and train others on complex skills in austere environments. Focusing on unconventional warfare ensures that SF soldiers are prepared for their most difficult mission. The ability to conduct special reconnaissance and direct action is embedded in the requirement to conduct unconventional warfare. While Special Forces can do these missions unilaterally, it is the only US military force that can teach direct-action and special reconnaissance skills to surrogate or indigenous forces. This unique ability sets SF soldiers apart.

Unconventional warfare skills apply in every operational environment from MOOTW to major theater war. Unconventional warfare also gives the theater commander in chief (CINC) or joint task force (JTF) commander flexible options with which to exert pressure throughout the spectrum of operations.

Special Forces is discreet; neither large troop formations nor large logistics footprints are required. Its contributions to information superiority, dominant maneuver, precision engagement and full-dimensional protection support Army Vision 2010 and 2020 and Joint Vision 2020 and occur throughout engagement, crisis response, warfighting and transition back to engagement.

While Special Forces uses various means to gather information and intelligence, human intelligence makes the greatest impact on information superiority. Through close working contacts and formal relationships, Special Forces fills many gaps in the conventional force commander's situational understanding, particularly in the more complex areas of intention and motivation. Human intelligence helps the conventional force commander make timely decisions and provides the foundation for successful psychological warfare, thus ensuring the most effective use of scarce resources.

The information superiority Special Forces provides also helps the JTF commander achieve dominant maneuver. Leveraging surrogate forces or indigenous forces that Special Forces has advised greatly enhances maneuver dominance. Such force multipliers can be extraordinarily advantageous to the maneuver-force commander, whether used in deception operations or as full-maneuver units. Special Forces, acting either unilaterally or through indigenous or surrogate forces, can also greatly enhance information superiority in urban terrain, where the effectiveness of massed fires or standoff delivery systems is greatly reduced. Special Forces units or agents can greatly limit collateral damage inherent in such firepower by employing laser target designators and other sensor-to-shooter technology to permit precise engagements. These technologies lower risk to delivery platforms and direct standoff ordnance to such elusive targets as individual tanks and specific windows. Information superiority also enables the precise targeting for psychological warfare.

Special Forces' contribution to full-dimensional protection is embedded in its ability to leverage information and intelligence gathered from indigenous contacts. Special Forces' unique ability to work in, among and through the local populace and resistance movements is indispensable. Precise infiltration techniques insert SF soldiers among the enemy they are to engage, dramatically increasing available intelligence. Direct-action operations, as well as sabotage, subversion, and offensive information operations and information support, improve the JTF commander and theater CINC's understanding of the battle space and make it increasingly difficult for the enemy to achieve an equivalent understanding. By increasing the enemy's friction and fog of war, Special Forces reduces the speed and effectiveness of the enemy's decision making while improving the friendly force commander's. In fact, the judicious and early application of Special Forces in UW roles might eliminate or greatly reduce the need to commit general-purpose forces.

Cultivating relationships and identifying key personalities—or engagement—is a continual SF mission. The combination of thorough study and boots-on-the-ground presence engages Special Forces every day in prospective UW environments. One of the most challenging aspects of unconventional warfare is that SF units are regularly involved. US Army Special Forces Command (Airborne) currently leads the effort to ensure maximum UW support to special operations commands that support theater CINCs.

Updating and Revitalizing UW Doctrine

Unconventional warfare's dynamic and versatile nature ensures Special Forces' relevance. However, the misperception that unconventional warfare is guerrilla warfare and nothing else contributes to its current neglect. Unconventional warfare doctrine is outdated, and UW training is limited.[9] Current doctrine still refers to unconventional warfare as being conducted in seven phases.[10] This concept needs to be reevaluated; it is more appropriate to describe unconventional warfare in terms of US Army doctrinal phases—engagement, crisis response, warfighting

and return to engagement.

The Army is revising and updating doctrine to reflect current requirements and capabilities. As UW flexibility and usefulness become increasingly apparent, mission guidance will become more focused, as will training. Lessons learned are not now found in training after-action reports; they come from after-action reports by forces actively involved in UW operations. This information reservoir should not be limited to US experiences; it should include Russian operations in Chechnya, Australian operations in East Timor and other UW activities throughout the world.

Unconventional warfare is being revitalized in a number of ways. The Special Forces Qualification Course is reemphasizing UW language and cultural training. Combat training centers are also integrating unconventional warfare at the National Training Center and, to a limited extent, at the JRTC at Fort Polk, Louisiana.

Tables of organization and equipment for SF groups are based on 1980s missions and must be reevaluated for current UW missions. Special Forces must be fully able to conduct its share of counterterrorism, counterproliferation of weapons of mass destruction and information operations missions.

While technology's potential contributions to unconventional warfare are important, its essential ingredient is the Special Forces soldier. From this highly trained warrior's unique capabilities flows all other UW capabilities. Unconventional warfare's diversity makes it a dynamic discipline. To extract unconventional warfare's maximum advantage, the Army must focus on the unique soldiers who achieve that advantage.

The concept of unconventional warfare as Special Forces' primary mission and source of all other core tasks might seem radical, but it is simply a conceptual framework for analyzing current mission sets. The US Army Special Operations Command mission analysis defines core tasks without greatly changing accepted definitions.[11] What is different is characterizing tasks such as direct-action, special reconnaissance and foreign internal defense as subsets of unconventional warfare. Solid UW training will ensure that US Army soldiers will remain the world's most relevant and well-prepared asymmetric warriors. ***MR***

NOTES

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6. COL Aaron Bank, *From OSS to Green Berets: The Birth of Special Forces* (Novato, CA: Presidio Press, 1986), 149-59.
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Dominant Warrior: An Objective Force at War in 2015

by Lieutenant Colonel Bo Barbour, US Army, Retired, and Lieutenant Colonel Bill Hix, US Army

It was dawn, 26 April 2016, in the mountains of Southwest Asia. The initial invasion had not been "textbook," but it was progressing satisfactorily. A decade of preparation, founded on a deliberate modernization program and careful analyses of previous failures, was now paying off. The New Independent Republic (NIR) was making a rapid strike to the north to control the headwaters that fed the life-giving rivers in this water-starved region. Lieutenant General Mohammed Fawn's corps was fighting a determined but manageable opponent as he moved to link up with special operations and airborne forces holding critical dams.

Fawn was on a tight time line; a US-led international response was almost assured. The NIR's strategic calculus estimated a time horizon of five to 10 days before he must have secured his objectives, deployed into a web defensive posture and prepared to seek stalemate. Indeed, except for a supporting corps to the southwest, NIR's remaining armed forces and the nation were mobilizing into a strategic defensive posture designed to marginalize the many US strengths. Fawn had to press on; he had a schedule to meet.

Lieutenant General Lawrence Shulman, commander of the US Army's first Objective Force corps, was watching Fawn's progress on his command display even as Shulman's headquarters and first division were closing. The US Army's mentally and physically agile forces—the end state of Army Transformation—were twice as lethal and had about half the deployment and logistic footprint of previous US armed forces. Deploying via a combination of airlift, self-deploying transport rotorcraft and high-speed sealift, these forces had conducted en route planning and rehearsals and, on closing into the theater, were ready to conduct spoiling attacks that would foil Fawn's tight time lines.

Closing the US first brigade-size force, and self-deploying lift aviation within 96 hours with the rest of the division closing in an additional 24 hours, caught Fawn by surprise.

Also, he was not aware that Shulman's second division was close behind. While not decisive in his mind—he was more concerned with the US Army's ability to close five divisions in 30 days and the probable coalition that these divisions would underpin—Fawn knew his time lines were now compressing, but he did not realize how rapidly compressed they would become.

The US Army Objective-Force division and its sister division were not just arriving as a deterrent or to wait for a buildup. Shulman swung his forces into action as soon as they closed. These forces were designed to be combat-ready off the ramp of their force-projection platforms.

Shulman's first two divisions struck deep, disrupting Fawn's lines of communications and support and follow-on echelons. Operational maneuver in depth, with shaping air interdiction and joint fires, ripped the rear out of Fawn's corps. Unprepared for the attack's timing, direction, speed and decisiveness, Fawn could not secure his initial objectives. He was no longer fighting to win; he was fighting to prevent defeat.

With the joint defending divisions' linear and conventional defense forming an anvil, Shulman's corps (minus) exploited the air dimension to create a mobile, lethal and survivable combined arms hammer that struck into Fawn's flanks and rear. Using reachback, Shulman's forces employed joint strike assets with their own combat power to simultaneously sever lines of communication, destroy rear-echelon forces and attack the NIR's rear divisions, which resulted in the early culmination of the NIR offensive.[1]

Fawn had lost his ability to influence events. The objective—taking the dams and declaring the futility of US forces bleeding to death for the sake of water—was passing. Fawn did not know what to do; his force was being overcome and dislocated by the US forces' mobility.

Army Transformation Wargame 2000

The preceding vignette illustrates the operational demands and capabilities the US Army examined during the first Army Transformation Wargame (ATWG), which is a strategic-level war game that increases national awareness about Army needs for the 21st century. Held at the Army War College, Carlisle, Pennsylvania, from 30 April to 5 May 2000, the war game provided a full range of insights into the demands that strategic and operational environments will place on the Army. Using a projected future setting, a compelling scenario and a diverse team of multiservice, interagency and multinational players, the war game presented Army capabilities in future major theater warfare.

ATWG 2000 is a key research instrument to explore future strategic and operational environments and their demands on the Objective Force. The ATWG has grown out of three years of research war-gaming experience centered on the Army After Next project. Beginning with the 2000 war game, this effort directly focused on gaining insights that form Objective-Force development as part of the Army transformation campaign plan. The war-gaming effort will be an iterative process over the next several years to help illuminate key transformation decisions in 2003.

The ATWG focused on three principal themes during the game: Why an Army? Why this Army? What are the compelling warfighting insights for the Army of 2015? The ATWG's research results provide insights for a strategically deployable land force capable of advanced full-dimensional operations when employed with other equally capable joint forces.

The ATWG examined contemporary, transformed interim and objective Army units. Deploying such a force would enable a theater commander in chief (CINC) to seize the initiative, deny the enemy an opportunity to set the pace, preserve options and ultimately set the conditions for decisive operations. Also highlighted were two revolutionary capabilities—the future combat system (FCS) and the future tactical rotorcraft (FTR). The war game also explored developing capabilities in command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR), fires and other operational aspects. The scenario and war game addressed the following focus areas:

- Strategic and operational environments.
- Strategic and operational demands.
- The strategic value of land power.
- Full-spectrum dominance.
- Strategic responsiveness.
- Objective Force organizational and operational concepts.
- Joint interdependence.
- Coalition operations.
- Active and Reserve Components integration.

The ATWG explored a series of vignettes that addressed 21st-century crisis-response challenges; decisive operations and war termination; and the implications of a responsive, deployable, agile, versatile, lethal and sustainable Army. Within the context of a major theater war, each vignette was "fought" by two panels led by two senior joint leaders: LTG William G. Carter III, USA, retired, and LTG Paul K. Van Riper, USMC, retired. Former CINCs and joint leaders, including a former Air Force vice chief, mentored the two panels. Experts from military, applicable interagency and selected industry disciplines rounded out the teams.

The war game examined the full spectrum of operational demands within a major theater war context. In the first player move, the transition from engagement to crisis-response operations challenged players to examine coalition building and provide strategically responsive forces. The subsequent shaping operations focused on:

- Surging to achieve and maintain information dominance.
- Seizing, protecting and retaining entry points.
- Denying the enemy a coherent defensive "set" in seized areas.
- Limiting and beginning to "roll back" the operational exclusion zone.

The ability to surge deployment and set favorable conditions for decisive warfighting operations was critical to success. The capability to project an Army combat brigade in 96 hours and a division in 120 hours

greatly expanded CINC options for shaping operations early.

In the second war game move, the rapid transition to decisive warfighting operations tasked players with defeating hostile forces and seizing control of disputed areas. Deploying five Army divisions in 30 days generated rapid momentum that dramatically limited the adversary's options and allowed the joint-force commander to:

- Project an integrated joint and combined force.
- Achieve air, sea and space dominance.
- Secure open terrain, fix enemy forces, degrade functional coherence and achieve operational dominance.
- Begin gaining tactical control of enemy forces.
- Rapidly transition to stability and support operations.

In the final move, players examined complex postconflict operations. As some combat operations continued, acts of sabotage became problematic, and the surge of humanitarian support tasks required thorough integration of interagency and nongovernment organizations.

Issues Raised

The war game highlighted a number of issues at strategic and operational levels. First, the conventional warfighting capability, the embodiment of national commitment and multinational commitment drawn from Army employment, remains a compelling aspect of future national power. The Army provides unique decisive capabilities to the joint team before, during and after a crisis. The ability to cement coalitions in peace and war is an increasingly important Army core competence.

Objective Force capabilities gave the National Command Authority (NCA) and warfighting CINC an expanded range of options for engagement, crisis response, warfighting and stability and support operations. In addition, the war game determined that the range of mission profiles, multidimensional threats and terrain were key underpinnings of the future landscape that compel transformation to Objective-Force capabilities in order to retain overmatch and to ensure decisive victory. National security participants validated future conditions by highlighting the following:

- Objective Force conventional warfighting capabilities are key to achieving decisive and enduring conflict resolution.
- Army forces provide unique capabilities to build and sustain coalitions.
- Congressional members will play a greater part in decisions to employ forces.
- Media coverage is increasing in the developing world.
- People and nations with nonsupportive points of view can access US public opinion.
- Nongovernment organizations have political influence.
- The technology-based global economy is sensitive to disruption.
- Collateral damage incurs legal and commercial liabilities.
- Building international legitimacy can bring international constraints on operations.

During the war game, employing land power early in crisis response deterred and stabilized the conflict by precluding the adversary from rapidly achieving operational objectives. This outcome required a joint, early application of force with the clear signal that overwhelming decisive force was rapidly building momentum. The capability to project a combat brigade in 96 hours, an Army division in 120 hours and five divisions in 30 days created an overwhelming challenge for the adversary. Such strategic responsiveness limited the aggressor's options to a brief operational offensive followed by a strategic defense. Then, his only choices were rapidly suing for peace or accepting his force's disintegration. This result illustrated the synergy of strategic responsiveness and full-spectrum dominance in the Objective Force.

At the operational level, the war game demonstrated the potential power of simultaneous buildup and execution vice sequentially applying service-specific capabilities. Simultaneously applying joint force capabilities early allowed US and coalition partners to more rapidly initiate the fight on favorable terms, seize the initiative, set the operations' pace and timing, build momentum and achieve decision.

Both panels, fighting independent Red teams, exploited this advantage early in the campaign. Carter's team employed the brigade that arrived within 96 hours with a US Marine Corps expeditionary brigade to secure key ports and options for follow-on operations. Thus, the Army and USMC team used its complementary capabilities to seize the initiative.[2]

Van Riper's team found similar utility, designing the operations described in the opening vignette. As Van Riper observed, "They were the only forces that could get engaged [so quickly.] Equipped with the FCS and FTR to transport them, the objective forces were able to combine the firepower of the heavy mechanized forces with the speed of light air assault forces."[3] Early-arriving forces also provided a unique capability to build and sustain a coalition with allied forces in theater.[4]

Even as the first joint forces rapidly altered conditions to wrest the initiative from the NIR, the rest of the joint force was promptly closing. As these forces postured to exploit joint shaping operations and initiate decisive operations, the operationally agile Army forces quickly repositioned within the theater, splitting the enemy's focus and dislocating his force.

The Vignette Continues

Schulman's corps exploited high-speed intratheater air and sealift along with his own vertical maneuver capability. This maneuver immediately created a second front that split the NIR and plugged escape routes. Shulman's objective divisions were the Army's most deployable, responsive and lethal divisions—versatile across the spectrum of conflict, survivable in combat and sustainable anywhere in the world. During the conflict's opening stages, Schulman's objective airborne corps demonstrated its revolutionary ability to deploy strategically and rapidly influence events. Now he would reinforce this lesson.

The Objective Force airborne corps struck against Fawn's corps in the initial invasion and proved it could strike anywhere on the battlefield, attacking and defeating NIR forces twice its size. Fawn asked his

chief of staff the same question he had asked for the past 10 days, "Where is the objective airborne corps?"

The future tactical rotocraft moved FCS-equipped units, effectively achieving an air-mechanized capability. While not prolific across the Army, this capability enabled the commander to transcend terrain limitations and project combined arms forces to the decisive point on the battlefield in the enemy's front, flanks and rear to attack the enemy's tactical and operational centers of gravity. Another FCS unit exploiting the future tactical rotocraft could attack the same position in a different location, keeping the enemy off balance simultaneously. Van Riper observed, "Equipped with the FCS and FTR to transport them, the objective forces were able to combine the firepower of the heavy mechanized forces with the speed of light air assault forces."[5]

Revolutionary split-based, pulse logistics supported the corps' fighting power by bringing forward only the logistics needed to enhance maneuver. FTR and enhanced intratheater airlift capabilities made this possible and feasible and enabled the commander to keep the most combat power engaged while his force was incrementally resupplied with a small combat service support battlefield footprint.

The situation presented opportunities for simultaneous attacks from the front, flanks and rear. Task Force (TF) *Euphrates*—composed of the II Turkish Corps, the XVIII Corps' dominant objective-maneuver divisions and the Allied Command Europe Rapid Reaction Corps—now poised to close on its main objective in a linear advance. Composed of the 101st and 82d Airborne Divisions, TF *Checkmate* was poised to exploit the aerial dimension to cut off the western NIR army from opening an escape corridor into eastern NIR territory.[6] Thus, TF *Checkmate* would be the hammer to the anvil of TF *Euphrates* with the Republican Guard Corps in the middle.

The Objective Force proved to be a key operational enabler, allowing the commander to employ agile, dominant land forces throughout the theater.[7] Key enablers for this operational method on the nonlinear, noncontiguous battlefield of the future were:

- Emerging concepts and capabilities for force projection and sustainment enabling new levels of strategic responsiveness.
- Dominating the full spectrum through greater responsiveness, deployability, agility, versatility, lethality, survivability and sustainability.
- Early and continuously integrating fires and maneuver at strategic and operational levels.
- Employing dominant land forces throughout the theater's depth using the Objective Force.
- Fully integrating multinational and interagency capabilities.
- Increasing situational understanding and knowledge by fully integrating C4ISR into operations.

Future Research

The war game also exposed many areas requiring further study and research, including:

- Deployment and sustainment enablers.
- Balance in deployment speed and theater opening capabilities.
- Diversity of operational demands and force design.
- Deployability and employability enhancements.
- Balance of joint interdependence and organic capabilities.
- Institutional training and leader development for the Objective Force.

Key areas for institutional study and research include:

- Strategies to maintain Army core competencies while expanding training tempo and breadth of tasks associated with increases in interdependence of joint forces, coalitions and interagency teams.
- Evolution of existing paradigms for institutional soldier and leader development to fully exploit Objective Force capabilities.

The ATWG is an important step in the broader effort to transform the Army into a more strategically responsive and full-spectrum 21st-century force. The war game provides a thoughtful description of the potential strategic and operational demands the Army faces as part of the joint team and highlights a number of issues for further study.

Continuing to use the war game will examine the Objective Force's operational qualities and provide for further development. Also, the war game's granularity will improve and move from describing strategic and operational demands to refining, then evaluating, those demands.

As the war game evolves, the strength of the effort remains the quality and experience of the participants. The strategic and operational savvy of seasoned national security experts and warfighters from across the armed services, interagency teams and allies focuses the Army's vision through insights and analyses. These collective efforts will help ensure that the Army remains the world's most respected and feared ground force. ***MR***

NOTES

1. Reachback is the ability to exploit nonorganic capabilities located within and outside the theater to expand force capabilities and its applicability across the spectrum of conflict while reducing the in-theater footprint. For example, B-42s flew round-trip from the Continental US during Operation *Desert Storm* in support of ground forces that were bombing Iraqi positions.
2. US Department of the Army, Headquarters, US Army Training and Doctrine Command, "Army Transformation War Game Report: Operational Insights" (May 2000).
3. LTC William Hix, "Army Transformation War Game Insights: Setting the Conditions for Global Engagement V," unpublished briefing, date and location not given.
4. Ibid.
5. Ibid.
6. Vertical envelopment is operational and tactical maneuver in which troops—either air-dropped or air-landed—launch attacks into a force's rear and flanks from an unexpected direction or position of advantage.
7. "Army Transformation War Game Report."

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Building a Future: World War II Quartermaster Corps

by Marcia L. Lightbody

Valuable innovations in the integration, coordination and attitude of service to the soldier were developed just before and during World War II by the Quartermaster Corps Military Planning Division under Brigadier General Georges F. Doriot. The division's task was to prepare soldiers for war in all possible climates. However, the only inventory on hand was leftover World War I clothing and equipment.

At a symposium in 1941, Doriot described the status of the Army's equipment: "Many items, which had been developed as the result of field experience in the mud and rain of northern France in 1917 and 1918, were modified in peacetime to be more suitable for the garrison life at Fort Benning, Georgia, or Fort Sam Houston, Texas. Even after the outbreak of the war, [many did not recognize] the importance of immediately improving existing equipment."[1]

Creative Planning

In 1942 Captain Russell Davis, Doriot's executive officer, stared in amazement at a tank parked in his Washington, DC, office parking lot. Only Doriot could have had a tank delivered to the parking lot. Davis recalls Doriot's words: "We have been asked to develop clothing for men who are going to be fighting in a tank. [I]f we are going to do it, we are going to have to have a tank."[2]

In planning, Doriot had an astounding grasp of detail and a passion for soldiers' well-being that pervaded his speeches and correspondence.[3] His far-reaching thoughts encompassed human engineering before ergonomics had a name.[4] Before 1942 it was unheard of to measure the width of foot space in a tank to see how much area a man's shoes might use or the size of hand controls to understand what gloves he could wear.

In 1929 Quartermaster General Lieutenant General Edmund Gregory had attended one of Doriot's Harvard Business School courses. In 1941 Gregory persuaded Doriot to come into the Army. Gregory knew that Doriot's unusual personality traits included an abiding interest in the country's welfare and a pioneer's zeal in exercise physiology.

Roadblocks to Planning

Roadblocks to early military planning efforts were major. Robert Bates, who entered the Quartermaster Corps in early 1941 as an expert in cold weather and mountaineering, reported three impediments:

- By regulation, new equipment could not be provided until old equipment was used.
- No item could be procured in quantity until the theater commander had approved it—and overseas commanders would not approve what they had not seen.
- If a new item was designed, the designer faced an extreme shortage of critical materials; metals and rubber were reserved for higher-priority planes, weapons and vehicles.[5]

Between World War I and World War II, under the National Defense Act of 1920, military planning was based on a defensive concept that visualized military operations occurring mainly near or within the borders of the Continental United States or in similar climatic areas. Because the large stocks of surplus World War I clothing had to be issued until exhausted, little pressure existed before 1941 to manufacture new items.

Therefore, it was not surprising that in early 1942 the Military Planning Division faced a series of materiel disasters. Tents fell apart in the Southwest Pacific after two or three weeks because the fire-resistant finish had no fungicide to protect it against mildew. Troops in Alaska, preparing for a possible Japanese invasion, were largely immobilized by trench foot caused by ill-fitting and inadequately constructed footwear. An entire load of food had to be dumped into the ocean because the cans had rusted.[6]

Compounding the problem was some military leaders' viewpoints that rations were already the best in existence. Early in the war a high-ranking general told Doriot that all soldiers needed in the way of supplies were coffee, beans and blankets. He ordered Doriot not to spend any money on food research or on clothing.[7] It was not until after Bataan had fallen and a statement was made at a high-level meeting that the troops could have held out longer if the food had been of superior quality that ration development was transferred to the Military Planning Division.

Organizing Planning

The Military Planning Division's efforts had two thrusts—to acquire the division's own experts and research information in a hurry and to establish a quartermaster advisory board that would include civil and military leaders. Doriot recruited staff for the division by culling War Department lists of new recruits who had attended courses at the business school. He sought experts in every field. For example, by recruiting leaders in US mountaineering and arctic exploration, he acquired expertise in equipment and clothing for outdoor survival, cold-weather travel and Arctic climatology.

His questions to those who joined the division were "what ifs" of every environmental possibility. The queries

came in terms of combat. For example, what would happen if the United States had to support the Russians pushed by Germany into the Urals? The mountaineers found themselves conducting studies that included arctic and Asiatic port conditions, sea ice, temperatures and precipitation.[8]

Other experts arrived who were authorities on jungle conditions, packaging, leather, mechanical engineering, textiles and clothing, plastics, stress physiology and Near East geology. Doriot's questions to all were "what if" or "can we." The first body armor was developed because Doriot asked, "Can we develop a bullet-proof vest?"[9]

The Military Planning Division was based on close coordination between those doing technical planning and development and those crafting operational plans and requirements for end items. The effect was that experts made immediate decisions. An item request did not go to procurement unless it was accompanied by a list of approved people to produce it, a statement of funds availability and War Production Board approval.[10]

After Doriot set up the advisory board, he made sure that members monitored the work at their own plants or institutions. He also listened to them. For example, he could ask Walter Chrysler for help with an automotive problem, and a pressing concern would get high-level attention. Industry leaders, under the stimulus of war, were eager to contribute expertise and facilities to solving design and materiel problems. The many offers of assistance required expert evaluation, coordination and facilities. In time, the causes of deteriorating textiles in the tropics would be understood because of an intense in-house division laboratory effort.[11]

A number of university laboratories also contributed to the development program. The Harvard Fatigue Laboratory researched clothing principles, the efficiency of proposed items and nutrition and exercise.[12] The University of Indiana Department of Physiology conducted laboratory testing of clothing for hot climates. The Tanners' Council laboratory at the University of Cincinnati analyzed leather problems.

The Military Planning Division's Requirements Branch was a small group of talented mathematicians who worked up the numerical requirements to clothe, feed and equip an 8-million-man army. The mathematicians worked under intense pressure, using manual adding machines. Often they were told at the last minute that war strategy had changed, and their work had to be scrapped or repeated.

Innovations and Savings

By developing substitutes, particularly new uses for plastics, the Military Planning Division achieved extraordinary savings in critical raw materials. For example, redesigning button shanks on overcoats to use plastic rather than tin saved 90 tons of tin. During 1942 using plastic in some shoes saved 4,000 tons of rubber. By mid-1942 using substitutes and eliminating metal where possible, the savings for chrome, nickel, stainless steel and aluminum was in the hundreds and thousands of tons.[14] Changing specifications because of shortages was not easy, but key factors in success were engineers, industrial specialists, field tests and laboratory opinions.[15]

Short-term and prolonged equipment tests were highly creative. Tests conducted at the Harvard Fatigue Laboratory before the war were the basis for new tests that would determine the various supply product's feasibility and suitability. In the winter of 1941-1942, subjects with attached heat sensors tested sleeping bag designs. The tests revealed the kind of comparative information that quantitative records on skin temperatures could provide, which led the Army to set up its own climatic-test chamber.[16]

When the war began, the services competed intensely for the limited supply of raw wool to use to insulate clothing. Two members of the Military Planning Division ran an informal test at the US Department of Agriculture's (USDA's) cold research center in Maryland. Fourteen subjects wore standard Army coats identical except for the linings. A specialist from the Bureau of Standards controlled the thermocouples and the readings for each garment.[17] The researchers learned that regardless of what material was used, a garment's insulation was related to its thickness, as long as its exterior was windproof. Later experience showed the informal test results were also correct for still air.[18]

By February 1942 the cold weather group had from 30 to 40 items nearly ready for testing, but there was still no realistic test facility. The group initiated the Alaskan Test Expedition and spent over a month testing clothing and equipment in moderate to extreme cold on the slopes of Mount McKinley. Each member of the group wrote an evaluation of the items and changes were incorporated into finished products.[19]

The Division also pushed the development of dehydrated foods and achieved savings in packaging, shipping bulk and pack space. The effort to improve rations was continuous, and the use of dehydrated foods eliminated weight from the soldier's pack. Chancellor of the University of California at Davis Emil M. Mrak later remarked, "Natick and its predecessor in Chicago have done more for the advancement of food science than any other agency."[20] The cooperation of the Division and the USDA in revolutionizing special Army food and packaging was heartening to government observers.[21]

In the early part of the war the Division became interested in more effective approaches to the problems of flavor and food acceptance. The studies were a beginning effort to understand a broad range of practical problems in acceptance.[22]

The idea of using field observers to study soldiers' use of new equipment began early in the war. These efforts became the first Army marketing surveys. Observers traveled into combat areas then reported to the Military Planning Division on quantities of products needed and any redesign or attention required. The independent observers' reports were critical to getting changes incorporated and problems fixed early in product use.

Selling Soldiers' Needs

Doriot was relentless in pursuing what can only be called a full-time campaign of selling soldiers' needs within the Armed Forces and industry. He later remarked, "We were able to foresee many needs before we were told about them."[23]

Doriot had two allies who played critical roles from the start—Gregory and Army Chief of Staff General George Marshall. Doriot later commended the depth of Marshall's concern for the soldier and his helpfulness in cutting procurement delays. At their first meeting Marshall informed Doriot, who had brought a bag of sample shoes, that "your shoes only last 13 days in combat. . . . Do you have anything to say?" Doriot replied, "Oh, yes, sir, a great deal. [F]or four or five months we have been trying to get staff approval for this combat boot and [we] can't get it. We know that our present shoes are not good for combat; the shoe leather isn't good; I'm surprised they even get to the combat zone." Marshall asked, "What do you want?" Doriot replied, "I want approval for that combat boot. Industry does not want to make it but we must have it. The ASF [Army Service Forces] Headquarters is completely opposed to it." Marshall thoughtfully said, "[T]his is a citizens' Army; I want them well taken care of; I want to save their lives and if you have to spoil them, do it and from now on any time you have trouble you come to me. What do you wish from me today?"[24] Doriot asked for 300,000 pair of shoes for a production test.

As to quality control, which was at first a major problem, the Division was able eventually to devise quality control statistical techniques for production line sampling that reduced manufacturing errors from 25 to 5 percent.[25] The integration of all components of the soldiers' clothing, equipment and rations into a unified whole was a goal expressed in 1943. Doriot conceptualized the design of the soldiers' items of clothing "in relation to each other," not as a large number of unrelated items.[26] Today's soldier system is its counterpart.

The effort to promote the soldiers' needs was successful in creating appreciation for new items of clothing, equipment and food among the military and for continually upgrading existing items. At Marshall's request, general officers received orientation to the Division before assuming a field command.[27] Doriot's interest was in the well being of all military personnel, not the Army alone, and he gave the same concern to everyone.

Cooperation and Client Service

Speaking in retrospect, Doriot remarked the cooperation that eventually came to the Military Planning Division: "We had the cooperation, friendship and the respect of Army and other commanders. We also had the cooperation of many people in industry, in science, the War Production Board and in the Congress. We had letters from generals . . . and others thanking us for our liaison men and observers, both on R&D [research and development] and requirements. These gentlemen and the men under their command were our clients and that was our attitude toward them."[28] How Doriot got things done within the division was an extension of this viewpoint. "You cannot order people to do things," he told a Division member, "you have to sell them on the idea and let them go as far as they can."[29]

During the war, Doriot wrote to a Division field observer in a combat zone, "I have read with very much interest all your letters. I am particularly happy that whenever you have the opportunity you pay attention to the Air forces, the Marines and the Navy. Indeed we must help everyone any time in any way. Be quite certain to tell me anything you might need and keep on advising us as to suggestions we should follow. . . . Do not hesitate to let me know whatever you want that we do not do fast enough or do not do right."[30]

At war's end, the Division's contribution in superior food, clothing and equipment was a significant factor in the lower number of US casualties in comparison to fatalities suffered by other nations. The QM Corps is truly one of the great success stories. The Military Planning Division's methods early in World War II in integration, coordination and an attitude of service are particularly relevant today.

Update

In 1954 the Natick Laboratories was dedicated to the achievement of Doriot's vision of an "Institute of Man" to continue to build on his interdisciplinary wartime research. The Army values demonstrated in World War II efforts continued. In the words of Mary Mandels, a pioneer and long-time researcher, "We did not have jobs—we had a calling."[31]

In 1967 the Army recognized Doriot's contribution as founder of the organization at Natick. The ceremonies acknowledged the 25 years of unprecedented mutual cooperation for the combat soldier between the national scientific and industrial communities and Army enterprise.[32] ***MR***

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The Fog of War: The Vietnamese View of the Ia Drang Battle ©

by Merle L. Pribbenow

For the past 35 years the US Army and the North Vietnamese have claimed victory in the October to November 1965 Ia Drang Valley Battle. While the United States' side of the battle has been extensively documented, the Vietnamese version has remained obscure.

Although heavily colored by communist hagiography and propaganda, recently published People's Army of Vietnam (PAVN) accounts provide answers to many questions and acknowledge a number of North Vietnamese Army (NVA) mistakes and command failures. When added to information from US sources, these accounts reveal how greatly the fog of war, overoptimism and blind fate influenced the battle.

The B3 Front Plan

According to PAVN, the Ia Drang Battle grew out of the B3 (Central Highlands) Front's plan to lure US and South Vietnamese forces into battle on terms favorable to the communists. The plan included besieging the remote Plei Me border outpost south of Pleiku in South Vietnam's Central Highlands and forcing US and South Vietnamese forces to come to the rescue. The goal was to annihilate five or six US companies.[1]

The NVA 320th and 33d Regiments were to launch the campaign, but one of the NVA's finest units—the 304th Division—would reinforce the B3 Front. In August 1965 the 304th received orders to move south to the Central Highlands. The 304th's lead element, the 66th Regiment, was scheduled to arrive in time for the campaign's final phase.[2]

Aware they could not match newly arrived US forces' power, NVA commanders knew their strategy was risky. During political indoctrination sessions before the campaign began, 320th Regiment troops expressed serious doubts.[3]

Stunning Blows

The troops had reason to be skeptical. The 33d Regiment, launching the Plei Me siege on 19 October 1965, was stunned by unexpectedly powerful US air strikes that inflicted heavy losses and totally disrupted communications between regimental headquarters and forward units. After the battle, B3 Front headquarters admitted that this loss of communications with front-line units severely hampered its ability to make timely and informed command decisions during this phase of the battle.[4]

The 320th Regiment's ambush of a large South Vietnamese relief column on 23 October also resulted in heavy NVA casualties.[5] On 26 October, two days after the 1st Brigade, 1st US Cavalry Division, arrived in Pleiku, the B3 Front commander decided that discretion was the better part of valor and ordered troops back to the Ia Drang base area.[6]

From 24 October to 9 November, 1st Brigade, 1st US Cavalry Division, heliborne airmobile elements fought a series of engagements against retreating communist troops in the Ia Drang Valley. The 33d Regiment bore the brunt of the US attacks. The regimental hospital was overrun on 1 November. On 4 November, US 2d Squadron, 12th US Cavalry Regiment forces engaged two 33d Regiment, 3d Battalion companies in a stiff battle. On 6 November, two 2d Squadron, 8th US Cavalry Regiment companies estimated several hundred NVA 1st and 2d Battalion, 33d Regiment forces killed. Twenty-six US soldiers were killed; 53 were wounded.[7]

The B3 Front viewed the 4 and 6 October engagements as victories and claimed that from 29 October to 9 November five US platoons had been annihilated and that 385 US troops were killed or wounded.[8] Actual 1st Brigade losses were 59 men killed and 196 wounded.[9] The NVA 33d Regiment suffered catastrophic losses, being reduced to less than half its authorized strength.[10]

Postbattle NVA analyses conclude that US helicopter leap-frog attacks into the heart of the base area had thrown the NVA back onto the defensive, disrupted command and control, and prevented the NVA from concentrating forces.[11] The US 1st Brigade withdrew, setting the stage for the arrival of the two principal participants in the Ia Drang Battle—the 1st US Cavalry Division's 3d Brigade and the NVA's 66th Regiment.

The Battle Heats Up

The NVA attacked on 12 November. Twenty-six NVA sappers, armed with four mortars and guided by local guerrillas, raided the new 3d Brigade Headquarters at the Catecka Tea Plantation, killing seven US soldiers and wounding 23.[12] Earlier, on the Ho Chi Minh Trail, the 66th Regiment had dropped its heavy equipment, lightened its packs and proceeded by forced march to the battlefield.[13] The 66th crossed into South Vietnam on 1 November and headed for assembly areas. During the approach the regiment suffered its first losses. On 3 November, the 8th Battalion was ambushed by a US reconnaissance patrol, provoking a vicious night engagement that led

the 8th Battalion to believe it had annihilated a US platoon.[14]

On 10 November, the 66th Regiment arrived at the Chu Pong Massif on the southwestern side of the Ia Drang Valley near the Cambodian border. The Chu Pong, a massive terrain feature, housed B3 Front Headquarters, its support units and supply warehouses. The regimental headquarters and the 7th Battalion occupied adjacent bivouac areas on the mountain's southeastern face. Five kilometers away, the 9th Battalion occupied the eastern face. The 8th Battalion established a base in the Ia Drang Valley itself, perhaps eight miles away. Although tired and hungry from the long forced march, the troops began building huts, digging fortifications and transporting rice and ammunition from the B3 Front's supply caches.[15]

While the 66th Regiment's battalions were at almost full strength—500 men with from 120 to 125 men per company—and well-equipped with AK-47 and SKS rifles, light and medium machineguns, RPGs, 82-millimeter mortars and recoilless rifles, Central Highlands jungles were foreign to them. Most of the men were as unfamiliar with the terrain as US troops were.

The 1st Battalion, 7th US Cavalry, arrived at landing zone (LZ) X-Ray, a clearing less than one kilometer below the 9th Battalion's positions. This fact played a significant role in the coming battle.[16]

NVA histories reveal that contrary to claims that the NVA lured US troops into a trap, the NVA were completely surprised by US troops' 14 November landing at LZ X-Ray. When the first US helicopters arrived, 66th Regiment and 9th Battalion commanders were surveying the terrain several kilometers away on the banks of the Ia Drang River. The 66th Regiment Political Officer Ngoc Chau and the 9th Battalion's deputy political officer were also away from their offices.[17]

From his new headquarters atop the Chu Pong, B3 Front Forward Commander Nguyen Huu An watched in dismay as US air strikes and artillery blasted the 9th Battalion area and as waves of US helicopters swooped out of sight behind the mountain.[18] Once on the ground, 7th US Cavalry troops advanced straight up the slopes of the Chu Pong toward 9th Battalion positions.

Under heavy bombardment, unable to see what was happening because of the thick jungle vegetation and with its forward outposts eliminated in the initial US attack, the 9th Battalion did not detect approaching US troops until they were only 100 meters away. US troops advanced in two columns, one headed for 9th Battalion's 11th Company; the other headed for the 9th Battalion Headquarters area. Just as the shooting began, the 9th Battalion almost collapsed.

Acting on his own, the 11th Company commander launched a fierce counterattack against US troops, but the 9th Battalion political officer, who in the absence of the military commander was in charge of the battalion, panicked. He bolted from the command post, leaving the battalion leaderless.[19]

A lesser unit might have broken and run, but 9th Battalion troops were among the NVA's best. A first lieutenant, the senior officer left in the command post, immediately took charge. Calling for help from the unengaged 13th Company, he ordered all headquarters personnel—cooks, runners and medics—to grab weapons and fight. One by one, the battalion's four companies joined the battle as work details returned and commanders pieced together what was happening.

The 9th Battalion commander, racing back from the banks of the Ia Drang, reached the 11th Company an hour later but never returned to his command post, and he never reestablished contact with all of his units.

At 1700, US troops finally withdrew. The 9th Battalion's units also began retreating, scattering in all directions. The 66th Regiment commander bypassed the 9th Battalion to return directly to his regimental command post, got lost and did not find his way back to his headquarters for two days.

Some isolated troops, not realizing their units had left, remained behind and continued to engage US forces in scattered fire fights until late that night. The 9th Battalion reported destroying one US company and crippling another.[20] After the battle, the 9th Battalion commander was severely criticized for failing to regain control of his battalion and allowing it to disintegrate.[21]

Meanwhile, B3 Front Forward Headquarters and the 66th Regiment were trying to control the battle. Learning that the commanders were not at their command posts, Deputy Regimental Commander Pham Cong Cuu, who was at 7th Battalion Headquarters when the attack occurred, alerted the battalion to prepare to move out.

Taking a group of 7th Battalion officers with him, Cuu went forward to assess the situation. He arrived in the 9th Battalion area in the early afternoon and found it in a state of confusion, with many wounded moving to the rear and no one sure what was going on. The wounded deputy battalion political officer could tell him only that the enemy troops were all US forces (no South Vietnamese) and that they were aggressive and well-armed.[22]

Chau, arriving in the area later, encountered the 9th Battalion's retreating 13th Company and directed it to leave one platoon behind to maintain contact with US forces. During the 66th Regiment commander's absence, Chau assumed command.[23]

Late in the afternoon, B3 Forward Headquarters ordered Chau to attack the US position with available forces. Chau sent 7th Battalion troops forward to join the scattered 9th Battalion elements. He placed Cuu in direct command of the assault.[24]

The attack was originally scheduled to begin at 0300 on 15 November, but because of the unfamiliar terrain and continuing US artillery bombardment, it was almost daylight before troops were in position. Two 7th Battalion companies and 9th Battalion elements prepared to assault one side of the US perimeter while the 7th Battalion's weapons company deployed on the other side as a blocking force. This would also allow them to provide machinegun grazing fire across the position.[25]

At this point it becomes difficult to reconcile NVA accounts with what

actually happened. The accounts say 7th Battalion assault companies overran the US position and briefly swept the area before withdrawing at 0645 under heavy US air attack. Surviving US troops were said to have fled into the jungle.

Cuu claims he reported by radio to B3 Front Headquarters that his men had overrun the US position, captured more than 70 weapons and that he had 150 effectives left in his force, which indicated losses of from 300 to 400 men. Cuu admits B3 Front was at first incredulous about his report, asking if Cuu had personally checked the report or if he was just relaying reports from subordinate elements.[26] In fact, a section of the 1st Battalion, 7th US Cavalry's perimeter had been briefly overrun, but the penetration was quickly repaired and the US position held. Forty-two US soldiers were killed and 20 were wounded.[27]

After what was thought to be a victory, the NVA attack force withdrew, leaving only one platoon behind to maintain contact with the US force. According to NVA accounts, the 66th Regiment's commanders were unaware of a new US battalion's arrival on foot—the 2/5 Cavalry—and the "lost platoon's" rescue. They knew only of the incessant US bombing and shelling their stay-behind element endured and of the helicopters arriving at LZ X-Ray to evacuate bodies and bring in reinforcements.[28]

The Second Attack

B3 Forward Headquarters ordered a second attack on LZ X-Ray and ordered the 33d Regiment to attack two nearby US artillery fire bases to support the LZ X-Ray attack—a mission the 33d Regiment could not carry out.[29] With most of 7th Battalion destroyed, the 66th Regiment was forced to use the 7th Regiment's unblooded 3d Company and one platoon of 1st Company as the main assault elements, supported by the 7th Battalion's heavy weapons.

At 2000 on 15 November, NVA troops reached the assembly area and went forward to attack positions. However, the stay-behind force had not noticed that US defenders had pulled their lines back 50 meters in the perimeter section that was the second assault's primary target. This move, with the constant artillery bombardment, confused the attackers.[30]

Not until 0300 on 16 November did NVA troops get close enough to US lines to launch an assault. Although they claim to have inflicted numerous casualties before being driven back, NVA historians acknowledge that the assault was largely unsuccessful.[31] While US forces actually suffered only six wounded; the NVA sustained significant losses.[32]

According to the Vietnamese, 7th Battalion, 66th Regiment elements returned to the area the night of 16 November to collect the dead and wounded but were detected and fired on, causing panicky US troops to fire wildly around the entire perimeter.[33] This probably refers to an incident at first light on 16 November when US defenders at LZ X-Ray, firing a Mad Minute to preempt a dawn attack, flushed out a large group of NVA hiding close to the perimeter.[34] Vietnamese accounts admit that after this attack the 7th and 9th Battalions were *hors de combat*—the 7th because of its horrendous losses and the 9th because its units were still scattered and disorganized after the haphazard retreat on 14 November.[35]

Misperceptions engendered by the fog of war and the exaggerated victory claims that two NVA battalions made began a tragic chain of events. Although actual US losses were 79 killed and 121 wounded, NVA commanders believed the original US battalion at LZ X-Ray, the 7th US Cavalry, had been crippled.[36] Blinded by US airstrikes and artillery, NVA commanders did not know that LZ X-Ray had been heavily reinforced, that the cavalry was being evacuated or that LZ X-Ray was to be abandoned the next day. Ignorant of these facts, An ordered the 66th Regiment's 8th Battalion—still fresh and waiting in the Ia Drang Valley—to move south to finish off what he believed to be a crippled US battalion.[37]

The 8th Battalion commander, Le Xuan Phoi, headed his men out on the evening of 16 November, but when US air and artillery strikes blocked his route, he was forced to stop and reorganize. At dawn the battalion moved out again, heading south in battle formation with the 8th Company acting as an advance guard some distance ahead of the main formation. The battalion's main body followed: the battalion headquarters, two infantry companies, a weapons company and the regimental 12.7-millimeter heavy machinegun company, attached to the battalion for this operation.[38]

For US troops left at LZ X-Ray, the night of 16-17 November passed quietly. The next morning the squadrons left LZ X-Ray on foot, heading north toward the artillery fire base at LZ Columbus about three miles away. While the 2/5th Cavalry proceeded directly to LZ Columbus, the 2/7th Cavalry—10 to 15 minutes behind—turned off about three kilometers out and headed for a clearing designated LZ Albany.

Having seen the hundreds of NVA bodies rotting in the sun around the perimeter and after the quiet night at LZ X-Ray, the troops assumed the NVA was finished. Nearly 2,000 NVA soldiers, almost an entire regiment, had been reported killed. After adding the number wounded, there should have been nothing left of the two NVA regiments.[39] The march to LZ Albany would be just a "walk in the sun."[40]

Shortly before noon, the 2/7th Cavalry point element tripped over several hidden NVA soldiers who belonged to one of the five-man ambush teams from the 33d Regiment that had been assigned to cover potential helicopter landing zones. US troops captured two soldiers, but three escaped. The US column halted to interrogate the prisoners.[41] Meanwhile, the NVA 8th Battalion's main body, 1 kilometer behind its lead company, encountered NVA 1st Company, 1st Battalion, 33d Regiment elements. The escaped NVA soldiers reported that two US platoons were just ahead and moving in their direction. Phoi immediately sent a runner to recall his point company and began deploying for battle.

Poor visibility caused by thick vegetation and terrain hampered the NVA and US troops. Unaware he

was facing a full US squadron and with little time, Phoi deployed from march formation. He put only the lead company on line, backed by the weapons company. He held the other units in reserve.[42]

The US column again moved forward. Phoi waited until US soldiers were yards away before opening fire. The two lead US platoons were shattered. Behind them more US troops advanced, firing as they came. Only then did Phoi realize that the two platoons were not alone. He moved another infantry company up immediately behind the first, then attacked.[43]

After receiving the battalion's recall order and hearing the sounds of gunfire, 8th Company, on point, sped back toward the battle. The company's lead platoon got lost and never made it into the fight. The other company ran straight into the US column's rear and immediately attacked. Phoi now committed 7th Company, shifting it into a line alongside 6th Company. Meanwhile, two companies of the nearby 33d Regiment, led by Cuu, also entered the fray.[44]

The NVA 8th Battalion was quickly decapitated. The commander died before the battle ended, and the political officer died within the first hour. Almost all company- and platoon-level officers lay dead or wounded. At an 8th Battalion squad leader's request—an indication of how many 8th Battalion officers were down—the 1st Battalion, 33d Regiment, deputy commander assumed command of both battalions. Within hours he, too, was dead.[45]

Leaving the bulk of the 2/7 US Cavalry trapped between and hopelessly intermingled with NVA forces hidden in the tall jungle grass, US forces at either end of the column regrouped into two separate perimeters. Virtually leaderless and under heavy US air and artillery attack, the surviving NVA troops, their hatred of Americans fueled by communist tales of US atrocities in South Vietnam and party exhortations to become "Heroic killers of Americans," mindlessly slaughtered US wounded.[46]

Vietnamese accounts of the battle give contorted explanations of why so many US soldiers were shot in the head or in the back.[47] A postwar review reveals that NVA commanders knew what really happened. During the battle there were "mistakes" in implementing the NVA policy on taking prisoners of war.[48] The NVA took no prisoners.

The next day, US forces counted 403 NVA bodies and hundreds of weapons left on the battlefield. In this instance, however, the NVA claim to have annihilated a US battalion was not entirely without foundation. The 2/7th US Cavalry and attached units suffered 155 killed and 121 wounded.[49] The encounter, which Vietnamese histories admit was completely accidental, was one of the war's bloodiest battles.[50]

On 18 November, the US artillery fire base at LZ Columbus was hit by an attack that was easily repelled. Three US soldiers were killed and 13 wounded in exchange for at least 27 dead NVA.[51] This unsuccessful attack was the 33d Regiment's belated effort to carry out the order it had been given three days before.

The regimental chief of staff commanded the attack. Because of poor reconnaissance, one battalion's assault troops missed the perimeter entirely, hitting only thin air. Admitting serious morale problems, PAVN officers faulted the attack for inadequate coordination and the troops for not pressing the assault with sufficient resolution.[52]

The campaign's final battle was anticlimactic. On 20 November, South Vietnamese airborne forces, supported by US artillery, encountered the 320th Regiment's 635th and 334th Battalions along the Cambodian border. The 635th's commander, whose unit had suffered heavy losses during the South Vietnamese relief column ambush in October, refused to engage the enemy and retreated without authorization, leaving the sister battalion alone on the battlefield.

The two units lost hundreds of men and weapons, and it was several days before the 320th Regiment managed to reestablish contact with the 635th Battalion. A PAVN analysis admits the regiment "did not accomplish its assigned mission."[53]

The Aftermath

An NVA review of the campaign found that in their first major battle with US forces, NVA commanders had seriously underestimated their opponent. Specifically, the NVA had been surprised by the 1st US Cavalry Division's armed helicopters' firepower; the use of B-52s to tactically support ground troops; the power of the 1st Cavalry's field artillery, which the NVA had believed would be unable to deploy and operate effectively in this roadless, jungle-covered region; and the incredible mobility of 1st Cavalry troopers who, even when their forces were caught at an initial disadvantage, used helicopters to concentrate rapidly and decisively to shift the balance of forces and turn the tide of battle.[54]

The North Vietnamese were also disturbed by leadership problems that surfaced during this campaign. All three regimental commanders were censured for their conduct during the campaign. The 66th Regiment commander received a severe reprimand for failing to command his unit during the LZ X-Ray battle. The 33d Regiment Commander was criticized for failing to maintain contact with his troops during the siege at Plei Me, for not personally commanding the attack on LZ Columbus and for delegating all decision-making responsibility to subordinates. The 320th Regiment commander was cited for failing to personally conduct reconnaissance of the terrain before ambushing the South Vietnamese relief column and for clumsily handling his unit throughout the campaign.[55]

A 1966 Central Highlands Front report claimed that in five major engagements with US forces between 14 and 18 November 1965, NVA forces killed 559 soldiers and wounded 669.[56] PAVN histories claim the United States suffered 1,500 to 1,700 casualties during the Ia Drang Campaign.[57] The US military estimates that 3,561 NVA were killed and more than 1,000 were wounded during engagements with the 1st Cavalry. The US Army estimated 305 killed and 524 wounded for the 35-day campaign.[58] Neither side believes the other's figures.

The US military viewed the battle as proof that its helicopter-assault tactics and strategy of attrition could win the war. The NVA saw in the heavy US casualties inflicted at LZ X-Ray and LZ Albany vindication for its belief that communist troops could also inflict sufficient pain on US forces. Clearly, each side saw only the results it wanted to see, and each thought it had hurt the other more than it had.

Later in the war, as firepower and attrition continued to take their toll, the NVA realized it suffered from a problem common to all—the need for truthful reporting and a willingness to hear the truth. "Based on our experiences . . . we can see that reporting from subordinate commanders to their superiors did not accurately reflect the real situation. Successes were usually exaggerated and mistakes and failures were not reported. This had a not insignificant impact on our operations. It caused senior commanders to misjudge and misevaluate the situation, which in turn led them to make incorrect policy decisions and to set goals and objectives which were unattainable. . . . Commanders must listen to the opinions of subordinates. . . . They must not be afraid to hear negatives, they must not be willing to listen only to those things which are positive, and they must never accuse a subordinate of harboring harmful thoughts and opinions when the subordinate is only telling the truth. . . . Commanders . . . must not be afraid to discuss mistakes and failures. Time after time, after every victory we won, so often that it seemed to be the rule rather than the exception, we fell into the traps of subjectivism, over-eagerness and over-simplification."[59] ***MR***

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12. *The Plei Me Offensive*, 44; Moore and Galloway, 39.
13. Toan and Dinh, 26-27.
14. Actual US losses were 4 killed and 25 wounded. US forces reported killing almost 100 NVA; Coleman, 163; Moore and Galloway, 33; Le Nhu Huan quoting Pham Cong Cuu, "The 66th Regiment Annihilates the US 2nd Cavalry Battalion in the Ia Drang Valley," *The Plei Me Victory*, 98; Phuong, 41.
15. Now, PAVN historians admit the Ho Chi Minh Trail was not the main source of supplies for this campaign; weapons and ammunition were shipped in from Sihanoukville, and food and supplies were purchased in Cambodia; *The Plei Me Offensive*, 27.
16. Toan and Dinh, 29; Huan quoting Cuu, 96-98.
17. Nguyen Quoc Dung, *The Plei Me Victory*, 129. This article contains the 1 January 1966 B3 Front "Report on Five Battles Against US Forces," 14-18 November 1965; Toan and Dinh, 29; *The Plei Me Offensive*, 45.
18. CG Nguyen Huu An and Nguyen Tu Duong, *New Battlefields: A Memoir* (Hanoi: People's Army Publishing House, 1995), 36.
19. Toan and Dinh, 29-30; *The Plei Me Offensive*, 45.
20. Ibid.
21. MG Tran Ngoc Son, "A Few Thoughts on the Lessons of the Plei Me Campaign," *The Plei Me Victory*, 205; *The Plei Me Offensive*, 46.
22. Huan quoting Cuu, 98-99.
23. *The Plei Me Offensive*, 47; Toan and Dinh, 31.
24. *The Plei Me Offensive*, 47-48; An and Duong, 37-38.
25. Huan quoting Cuu, 99-101. The 7th Battalion's 3d Company, away on a work detail, did not participate in this attack; Toan and Dinh, 31-32; Moore and Galloway, 171, say the Viet Cong H-15 Battalion participated in this attack. Coleman, 274, says the H-15 Battalion made the later attack on LZ Columbus. Some PAVN histories place the H-15 east of Plei Me and do not mention it in either battle.
26. Huan quoting Cuu, 101-103; Toan and Dinh, 32.
27. Moore and Galloway, 193.
28. Toan and Dinh, 32; Huan quoting Cuu, 102.
29. *The Plei Me Offensive*, 49; An and Duong, 39-40.
30. Toan and Dinh, 33; Moore and Galloway, 214.
31. Toan and Dinh, 33-34; *The Plei Me Offensive*, 49.
32. Moore and Galloway, 223.
33. Toan and Dinh, 34; Do Trung Mich, "66th Regiment Develops the Traditions and Lessons of the Plei Me Victory," *The Plei Me Victory*, 152.
34. Moore and Galloway, 224; Coleman, 241-42.
35. *The Plei Me Offensive*, 50.
36. Moore and Galloway, 233.
37. Toan and Dinh, 35; *The Plei Me Offensive*, 50; Linh, 117-18.
38. Toan and Dinh, 35-36.
39. Moore and Galloway, 112; Coleman, 210. While elements of the 33d might have been at LZ X-Ray, PAVN accounts indicate that most of the regiment was not.
40. Coleman, 248; Moore and Galloway, 233, 251-53.
41. *The Plei Me Offensive*, 51; Moore and Galloway, 258, 262; Coleman, 253.
42. Toan and Dinh, 36.
43. Ibid., 36-37.
44. Other, smaller NVA units might also have participated in the battle. See Moore and Galloway, 261, and [author not given] "Remembrances of the First Fight Against the Americans in the Central Highlands," *The Plei Me Victory*, 238-40.
45. Toan and Dinh, 37-39; Linh, 115; *The Plei Me Offensive*, 52-53.
46. Linh, 109-10.
47. Ibid., 40; Dung, 131.
48. Phuong, 44.
49. Moore and Galloway, 366, 373-74.
50. *The Plei Me Offensive*, 85; Mich, 155.
51. Coleman, 274-77.
52. *The Plei Me Offensive*, 54-55; Mich, 152.
53. *The Plei Me Offensive*, 55-56; Coleman, 278-79.
54. *The Plei Me Offensive*, 60-61.
55. Ibid., 69-70; Son, 205.
56. These included the 9th Battalion's battle of 14 November, the 7th Battalion's two attacks on 15 and 16 November, the LZ Albany fight and the LZ Columbus attack.
57. Dung, 126; *History of the People's Army*, 216 [no other publishing information given].
58. Coleman, 283; Moore and Galloway, 399.
59. Military History Institute of Vietnam, *The Saigon-Gia Dinh Offensive Theater* (1968), Hanoi, 1988, 86-87.

Merle L. Pribbenow is a former operations, language and Indochina area specialist with the CIA. From 1970 to 1975 he was assigned to the US Embassy in Saigon. He received a B.A. from the University of Washington, Seattle. His articles have been published in Vietnam Magazine *and* Parameters.

MR Review Essay

The Luzon Campaign, 1944-1945: Two Windows

by Lieutenant Colonel Russell W. Ramsey, US Army Reserve, Retired

In 1996, in the Donovan Technical Library, Fort Benning, Georgia, I found some microfilm rolls half a century old. They contained the US 37th Infantry Division's daily unit operational summaries for April and May 1945, the time during which the Ohio National Guardsmen pushed north from Manila to Baguio in the Philippines. Many summary entries were signed "R.A. Ramsey, Lt Col, G-3"—my father. Having already published *On Law and Country*, Dad's biography and edited papers, I scrolled hastily through the old film to see if I had made any errors or noteworthy omissions.[1]

Not long afterward, John Ohl of Mesa Community College, Arizona, came to Fort Benning to do research on his biography of Major General (MG) Robert S. Beightler. Beightler successfully commanded the 37th "Buckeye" Division from its 1940

federalization through its demobilization in December 1945.[2]

When I received Ohl's final manuscript in early 2000 for comment, I was fortuitously aided by a review copy of Robert Ross Smith's classic, *Triumph in the Philippines*.[3] The complementary books reveal aspects of World War II not previously evaluated and highlight events and relationships that could occur again during the 21st century.

In his book, Ohl shows how honest biography can make for page-snapping reader interest without having to collaborate with "enhancement hacks." Beightler, a successful Ohio highway and construction engineer, had a sense of public service. Cast in the mold of the 19th-century US military engineers who tamed the frontier, Beightler studied Army tactics and organization and even attended the US Army War College, a rare thing for citizen soldiers.

Appointed Commanding General, 37th Infantry Division, Ohio National Guard (NG), over several senior candidates who had more political clout, Beightler was diplomatic but tough. Mobilized to Camp Shelby, Mississippi, Beightler drove the Ohio Guardsmen through conversion to the triangular division and the famed Louisiana Maneuver of 1941. Shipped to Indian Town Gap, Pennsylvania, for European deployment, then suddenly diverted to the Pacific Theater, the 37th did extensive jungle training on New Georgia, where Beightler quietly relieved and sent home the last politically appointed, incompetent officers.

On Bougainville in the Solomons, the 37th Division was a major land force fighting under MG Oscar W. Griswold's legendary 14th Corps. When the time came for the Luzon invasion, the 14th Corps was General Walter Krueger's 6th Army's main effort. Beightler's 37th Division was the Sunday-punch force that recaptured Manila, forcing the crossing of the Pasig River and the low-casualty recapture of the Spanish Intramuros "Walled City," where fanatical Japanese defenders held internees as human shields and hostages against attack.

When the 14th Corps turned northward to conquer northern Luzon, Beightler was faced with huge leadership challenges. Combat had ended in Europe, and no one knew of the impending use of two atomic weapons at Hiroshima and Nagasaki. Bluntly put, no soldier in any war is enthralled with the idea of being the last casualty of an enemy who is obviously losing. Still, the 37th fought strongly until war's end. Beightler remained in the Philippines until his Ohioans were assured of transport home.

At a speech before his heavily decorated veterans on a cold night in late December 1945, in Columbus, Ohio, he thrilled my 10-year-old heart. Beightler was one of only two NG flag officers integrated into the Regular Army in grade because of their fabulous combat records. At that time, Regular Army officers were taking two-grade cuts in rank to remain aboard.

Beightler's biography is filled with vignettes showing the delicate line an officer must walk in the shadow of Cincinnatus, the legendary Roman militia hero that George Washington and the founding fathers admired. Ohl also shows how militia or citizen forces can only succeed if an officer of Beightler's no-nonsense commitment to training, maneuvers and personnel decisions based on military ability instead of political backing commands them.

After reading Ohl's biography of Beightler, one jumps easily into Smith's *Triumph in the Philippines*. First issued in 1961 and updated in 1993, the book comes with splendid maps in a packet. Smith is the writer who first and best portrays the difference between Lieutenant General (LTG) Robert L. Eichelberger's 8th Army in southern Luzon and islands farther below and General Walter Krueger's 6th Army lodged to the north on Luzon.

The 8th Army was a control headquarters for dozens of regiment- and battalion-size engagements, whereas the 6th Army fought on an integrated Army front similar to the 1st, 2d and 3d Armies in Western Europe. Smith emphasizes this point, unintentionally perhaps, as he discusses what happened when the 1st Cavalry Division moved from the 8th Army to the 6th Army, where it joined Griswold's 14th Corps and flanked the 37th Division in storming Manila. The news media have created the illusion of two divisions racing for bragging rights about who liberated Manila. In fact, the two divisions operated in adjacent sectors under the most experienced corps commander in the Pacific Theater.

The 37th Division was highly skilled in the types of operations the 8th Army undertook, but it was new to operations as part of a corps sector in an Army area of operations—the task of the 6th Army to which it belonged in Luzon. Further, the 37th Division assumed multiple, diverse tasks: an amphibious assault (Lingayen Gulf); a flat terrain advance on axis (to Manila); an urban-reduction operation on a European scale (Battle of Manila); another flat terrain advance (central Luzon); and a tortuous mountain campaign in totally unfamiliar terrain (to Baguio).

Ohl draws on 37th Division histories, field notes and interviews, and Smith corroborates every major military point in Beightler's biography. Smith sketches clearly but with less detail the delicate command relationships between regular Army and NG generals. And despite the thorny, egotistical portrait that most historians render of General Douglas MacArthur during the Luzon Campaign, both Ohl and Smith, in different ways, show that MacArthur successfully integrated disparate Army elements within the World War

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II theater that was always secondary to Europe and naval rather than terrestrial in strategic overview.

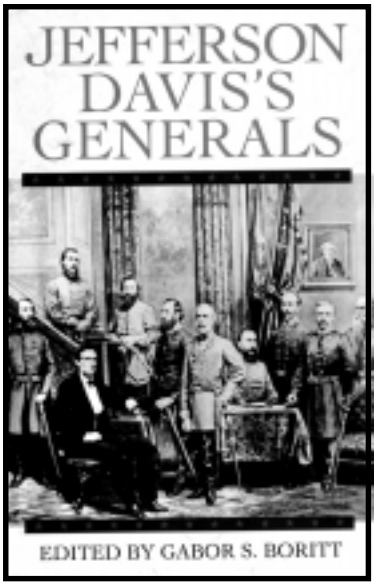
Smith does not say so in exact words, but he paves the way for Ohl's modest conclusions. Beightler was the Pacific Theater's most effective division commander, and the 37th Division was one of the most effective five or six divisions in either major theater of operations.

Since 21st-century Army combat mixes centralized and decentralized operations and blends professional with citizen-soldiers, military and national security professionals need to read and apply the lessons of these complementary books. Smith details the Luzon Campaign where these two mixes occurred; Ohl shows how one competent commander and the citizen soldiers he led produced victory. ***MR***

NOTES

1. Russell W. Ramsey, *On Law and Country* (Boston: Branden Publishers, 1992).
2. John Kennedy Ohl, *Minuteman: The Military Career of General Robert S. Beightler* (Boulder, CO: Lynne Rienner Publishing, 2000).
3. Robert Ross Smith, *Triumph in the Philippines* (Washington DC: US Government Printing Office, 1993).

MR Book Reviews



JEFFERSON DAVIS'S GENERALS, Gabor S. Boritt, ed., Oxford University Press, NY, 1999, 213 pages, $27.50.

Gabor S. Boritt and the Oxford University Press have made a successful sideline of publishing relatively thin essays written by first-class authors about the Civil War. Therefore, a book about Jefferson Davis as Confederate commander in chief and his relationships with his senior subordinates was inevitable. This is not to say that *Jefferson Davis's Generals* is just a product of an editor and press on automatic pilot. As in other books in this series, Boritt has collected essays from acknowledged experts writing on their particular subjects of expertise: Craig Symonds on Joe Johnston, Emory Thomas on Robert E. Lee and Steven Woodworth on command in the Western theater.

The final entry in this compilation is by James McPherson, perhaps the greatest living Civil War historian. He too says nothing he has not said before, but a McPherson retread still remains very good indeed.

Michael Pearlman, ***Historian, Fort Leavenworth, Kansas***

HUMAN BULLETS: A Soldier's Story of the Russo-Japanese War, Tadayoshi Sakurai, University of Nebraska Press, Lincoln, 1999, 270 pages, $15.00.

Human Bullets: A Soldier's Story of the Russo-Japanese War, Tadayoshi Sakurai's story of fighting for his country and his emperor, simply but strongly states his idealism and dedication. Sakurai's writing is gripping.

The war's adversity was tremendous. Yet, despite the rain, mud, leaking tents, poor food, constant shelling and attacks, and the loss of friends, Sakurai's morale remained high, and his willingness to serve never wavered.

In Japanese culture, a soldier departing for war considers himself already dead. The ceremony of a "last drink" focuses soldiers on their fate. The Japanese word for victory is the same as part of the word for dry chestnuts, so a soldier going to war is also given a chestnut for success.

The fear of failure and its accompanying shame are strong motivations in sustaining a soldier's courage. There is no discussion in this book as to the right or wrong of war. Sakurai writes of a soldier's obedience, trust in his superiors, willingness to sacrifice all for his country and respect for the enemy's fighting qualities.

MAJ William T. Bohne, ***USA, Retired, Leavenworth, Kansas***

THANK GOD THEY'RE ON OUR SIDE: The United States & Right-Wing Dictatorships, 1921-1965, David F. Schmitz, University of North Carolina Press, Chapel Hill, 1999, 400 pages, $45.00.

Political strategies invariably require compromises, some of which involve accepting the lesser of any number of unsatisfying options that trigger endless speculation—"what if" or "if only." David F. Schmitz's *Thank God They're on Our Side* applies this approach to US foreign policy that between 1921 and 1965 supported right-wing dictatorships in developing countries.

Schmitz views such policies as a betrayal of the US commitment to freedom and democracy. He contends that policy makers consistently resorted to political expediency in favoring the political stability offered by authoritarian regimes over the more turbulent, less-predictable, democratically inspired revolutionary movements. As Schmitz sees it, the options were to endorse ruthless dictators, limit support to minimal diplomatic recognition or indirectly support democratic movements.

Schmitz sees US foreign policy

after World War I as being influenced by the threat of global communism. There is no doubt that the "Red scare," as well as US Senator Joseph McCarthy's 1950s inquisition, exaggerated the threat. However, recently available Soviet documents confirm that the threat was real.

Schmitz's assumptions that US support for autocratic leaders precluded the development of middle classes are more problematic. He argues that the absence of a middle class paved the way for communists and other extremists to take over nascent revolutionary movements. While this argument might have merit in Nicaragua, it is less obvious in Iran, Cuba, Brazil or Argentina, four cases that underpin his charge that misguided US policy brought these revolutionary movements to power. There is every likelihood that policy makers at the time believed granting or withholding favored aid provided leverage with legitimate, if less than ideal, governments and offered a more promising future for democratic prospects than either benign neglect or tacit support.

The results of policy choices are a matter of history; the outcome of choices not taken is necessarily speculative. Schmitz's book legitimately questions US foreign policy's effect on emerging democracies. An objective, thoughtful analysis of the rationale behind these decisions is long overdue. Unfortunately, this book fails to answer that need; Schmitz allows his personal bias to color his appraisal.

COL John W. Messer, ***USAR, Retired, Ludington, Michigan***

TO END A WAR, Richard Holbrooke, The Modern Library, New York, 1999, 410 pages, $27.95.

Richard Holbrooke's memoir, *To End a War*, is the story of the haggling that eventually produced the Dayton Accords. Support to peace operations is an essential task for the Army and one that will be a part of the spectrum of Army missions for years and probably decades. Operations to sustain and move refu-

Pass In Review

THE WAR: Stories of Life and Death From World War II, Clint Willis, ed., Thunder's Mouth Press, New York, 1999, 375 pages, $16.95.

Editor Clint Willis states that war memoirs with a "hollow, pseudohappy, sentimental ring" miss the truth found in more-serious writers' "suffering, guilt and anger." *The War* contains only passages Willis believes accurately portray this truth. His selections focus on war's dehumanizing aspects and the suffering it causes. However, the selections are so carefully screened I wondered whether the writers' views are accurately represented. This unbalanced approach encourages further study of the original writings.**—LTC David G. Rathgeber,** ***USMC, Quantico, Virginia***

1939: The Alliance That Never Was and the Coming of World War II, Michael Jabara Carley, Ivan R. Dee, Chicago, IL, 1999, 321 pages, $28.95.

1939 examines European governments' failure to effectively counter Nazi Germany's expansionist policies from 1937 to 1939. The European situation demanded an effective alliance between France, Britain and Russia if Hitler was to be stopped. Unfortunately, Western European power brokers were more afraid of communism's spread than of Germany. Appeasement was the policy. The book's most exciting passages describe efforts by various leaders—the most famous being Winston Churchill—who opposed appeasement but whose voices were not heeded.**—LTC John A. Hardaway,** ***USA, Retired, Leavenworth, Kansas***

CUSTER AND HIS COMMANDS: From West Point to Little Bighorn, Kurt Hamilton Cox, Stackpole Books, Mechanicsburg, PA, 1999, 72 pages, $13.95.

Custer and His Commands, one of the latest in a pictorial series displaying US Army uniforms, weapons and equipment, brings to life the story of Lieutenant Colonel George Armstrong Custer, his family and friends, the units he commanded and the soldiers who served with him. However, the book—and others in the series—would be of greater value if they included more background information on the era portrayed. But readers interested in uniforms and equipment will find this book interesting.**—Richard L. Milligan,** ***Fort Leavenworth, Kansas***

THE BRADLEY AND HOW IT GOT THAT WAY: Technology, Institutions, and the Problem of Mechanized Infantry in the United States Army, W. Blair Haworth Jr., Greenwood Publishing Group, Inc., Westport, CT, 1999, 199 pages, $57.95.

Overall, *The Bradley and How It Got That Way* offers well-documented, balanced coverage of how the US Army struggled with the concept of a mechanized infantry, the doctrinal debates on its employment and the nature of its equipment. The book's thoroughness is an asset as well as a liability; the information-rich text often bogs down the reader in its comprehensive approach. Thus, the book will most likely appeal only to acquisition officers and history-minded mechanized infantrymen.**—MAJ Steven A. Smith,** ***USA, Fort Leavenworth, Kansas***

gees at the end of the Gulf War and operations in Rwanda, Somalia, Bosnia and Kosovo are typical of those that followed the Cold War. Understanding how these missions develop at the national level is critical.

Holbrooke's book is his surprisingly honest perspective on the development of the Dayton Accords, despite the fact that he comes through as arrogant, acerbic, opinionated and not particularly fair. But Holbrooke does not claim objectivity. Since he was the architect of the Dayton Accords, his view is the one that counts and is indispensable to understanding how the peace we currently have in Bosnia evolved.

Just as every author has a point of view, so do reviewers. I led a brigade into Bosnia in December 1995 and therefore cannot pretend to be objective. My viewpoint stems from the conviction that it is soldiers' business to execute—not to determine—policy. Thus this review comes from a low-level executor of the policy Holbrooke developed.

Actual events at the peace conference make fascinating reading. Shuttling between belligerents, Holbrooke worked hard to find a solution that would assure Muslim survival and dissolve the Bosnian Serb republic. Holbrooke generously praises his colleagues and US General Wesley Clark.

Holbrooke is also clear that Slobodan Milosevic's willingness to cut loose his Serb colleagues in Bosnia proved central to reaching an accord. The Bosnian Serbs had no seat at the peace conference and fundamentally no voice. According to Holbrooke, Milosevic cut the deal at the Bosnian Serbs' expense and enjoyed playing power broker. Milosevic made concessions that brought Alia Izetbegovic back to the table after he had decided to break off talks.

Holbrooke's account of the actual conference is compelling, but his account of implementing peace seems more than a little unfair to the military units and commanders on the ground. According to Holbrooke, the implementation force (IFOR) could have used the "silver bullet" clause

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KIM IL-SONG'S NORTH KOREA, Helen-Louise Hunter, Praeger Publishers, Westport, CT, 1999, 262 pages, $45.00.

Kim Il-song's North Korea is a chilling look into the lives of citizens in the Democratic People's Republic of Korea. The major themes pursue the cult of Kim Il-song and the role of *songbun*, which defines the social standing of every person in the Republic. After the communist revolution, all proletariat were promoted to the top of society, all bourgeois demoted. Kim Il-song rose to leadership within this society, connecting with his people as few leaders do. This book gives insight into how a powerful and charismatic ruler can influence a strictly layered society and is valuable to any military professional studying Korea.—**MAJ John M. Lynch,** ***USA, Schofield Barracks, Hawaii***

LEE'S ENDANGERED LEFT: The Civil War in Western Virginia, Spring of 1864, Richard R. Duncan, Louisiana State University Press, Baton Rouge, 1999, 340 pages, $29.95.

In spring 1864, the Union Army positioned to strike Confederate General Robert E. Lee's left flank. Grant's ultimate goal was to destroy railroads and canals, salt works, lead mines and agricultural crops vital to the South's cause. In *Lee's Endangered Left*, Robert R. Duncan admirably describes both armies' hardships when cut supply lines forced the armies to subsist off the land. In turn, civilians—Union and Confederate—suffered greatly as crops and livestock were confiscated for military use. Eventually Grant's forces were turned back, giving Lee's endangered forces a reprieve. Duncan covers numerous aspects of the campaign in this informative and highly readable book.—**COL C. E. Hatch,** ***USMC, Retired, Foster, Oklahoma***

DEMOCRACY BY FORCE: US Military Intervention in the Post-Cold War World, Karin von Hippel, Cambridge University Press, New York, 2000, 224 pages, $49.95.

Democracy by Force provides excellent insight into success and failure in US post-Cold War nation-building efforts. Karin Von Hipple analyzes US policy strengths and weaknesses in an effort to provide an understanding of the conditions under which military intervention and nation building are most likely to succeed. She examines US efforts in four post-Cold War interventions: Panama, Somalia, Haiti and Bosnia. By looking at the relationships between the Department of Defense (DOD) and civilian agencies, she concludes that for successful nation building operations, the military should focus on security, coordination and logistics; civilian agencies should focus on nation building. This book provides a perspective into the intricate web between DOD and civilian agencies and is a valuable tool for the military professional who must interact in a military intervention followed by nation building.—**MAJ William Pleasant Isler Jr.,** ***USA, Fort Leavenworth, Kansas***

in the military section of the treaty to do anything it liked. While there is some truth in this assertion, the clause clearly does not stipulate military responsibility for civilian implementation. One lesson from Bosnia is that only in the early days of this kind of operation does the military have the resources to move the process forward.

No matter how the peace turns out ultimately, Holbrooke's book is important for understanding how the policy was developed. If sometimes the participants do not seem admirable, it is important to remember the work is hard and dirty.

COL Gregory Fontenot, *USA, Retired, Leavenworth, Kansas*

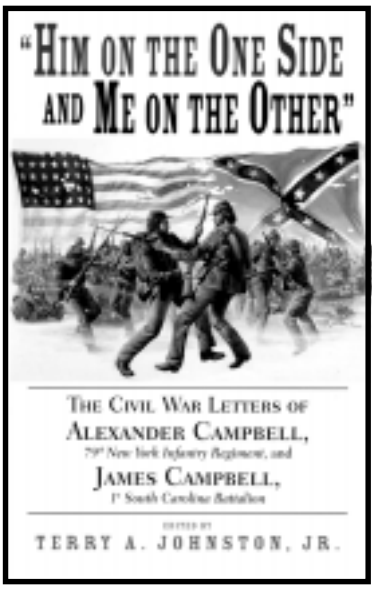
DISCOVERING CHINESE NATIONALISM IN CHINA: Modernization, Identity and International Relations, Yongnian Zheng, Cambridge University Press, New York, 1999, 189 pages, $64.95.

Writing this review in the aftermath of the NATO bombing of China's Belgrade Embassy and US charges of Chinese atomic espionage, brings nationalism, as Yongnian Zheng defines and discusses it, to the fore in almost every conversation about Chinese foreign policy. *Discovering Chinese Nationalism in China: Modernization, Identity and International Relations*, is a concise, trenchant examination of historic and contemporary Chinese nationalism. Zheng examines this phenomenon from several views based on a close reading of the Chinese press and opinion journals. His discussion is informed by his knowledge of Chinese nationalism and xenophobia.

Although Zheng is a political scientist, he eschews systems-oriented, model-driven, quantitative research in this work. Instead, he returns to an older analytic school that examines a political system in its own context and evaluates it in relation to the wider world. The context is necessarily historical. Zheng shows how different interpretations of the past interact to create present and possible futures.

In the final chapter, Zheng summarizes his ideas and speculates on future Chinese foreign policy as influenced by the new nationalism. Using Albert Hirschman's terms to describe political strategy—"voice," "exit" and "loyalty"—Zheng explains why he believes China's leaders will choose "voice" by which to find wealth and power and become more engaged in the international system.

Lewis Bernstein, *Historian, Fort Leavenworth, Kansas*



"HIM ON ONE SIDE AND ME ON THE OTHER": The Civil War Letters of Alexander Campbell, 79th New York Infantry Regiment, and James Campbell, 1st South Carolina Battalion, Terry A. Johnston Jr., ed., University of South Carolina Press, Columbia, 1999, 190 pages, $24.95.

"Him on One Side and Me on the Other," a wonderful book, is a unique addition to any collection of first-person Civil War accounts. James and Alexander Campbell, native to Ireland, immigrated to the United States several years before the war. Alexander settled in New York City where he became a stonecutter. James settled in Charleston, South Carolina, where he became prominent in the community and growing commercial middle class. Both prospered until war interrupted their lives.

Alexander's letters, predominantly written to his wife, give a spectacular view of army life in the field. He describes camps, marches and food. He becomes a sergeant in the color guard, one of the regiment's most honored and dangerous positions, and his apprehension mounts when

MR Letters

Battlefield Chaos

I read Major Charles A. Pfaff's article "Chaos, Complexity and the Battlefield" in the July-August 2000 issue of *Military Review* and agree with Pfaff that modern information-gathering technologies have made the battlefield more chaotic. The original intent was to simplify or streamline information flow.

I disagree with Pfaff's statement that "[o]n a battlefield where small changes can have dramatic and unpredictable effects, commanders must remain flexible, ideally with fully resourced contingency plans that account for enemy responses and effects throughout the system. Contingency plans are therefore important for maneuver and support units at all levels."

If the commander must react to the enemy; that is, manage chaos, his staff can plan multiple contingencies. But, will the commander use them? The answer depends on what type of variable the enemy throws into the equation. The next question is, will the commander have time to rehearse the contingency plans? Probably not.

Contingency plans are an important part of planning. However, if we cannot predict "where small changes can have dramatic and unpredictable effects," what good are multiple contingencies? We would be better off just following standing operating procedures and letting commanders "adjust fire" to manage the chaotic battlefield.

CPT William A. Martin, *US Army, Giessen, Germany*

his regiment faces his Confederate brother's unit at Secessionville, South Carolina. That realization gives a firsthand understanding of the sobriquet "brother against brother."

James Campbell's letters are addressed to Alexander. James had enlisted in a prewar militia unit, the Union Light Infantry, which became part of the 1st South Carolina Infantry Battalion in March 1862. He served with distinction and rose to second lieutenant. James was captured while defending Battery Wagner on Morris Island in Charleston Harbor in July 1863 and spent the rest of the war in Union prisons.

The only drawback to this fine book is that James's letters are mundane because of prison restrictions and censorship. The letters are mostly about family matters and give little insight into actual prison life or life in the Confederate Army before his imprisonment. His letters could have been a virtual gold mine had they have been of the same caliber as Alexander's. However, this disparity does not detract from the book; readers will enjoy this superb, enlightening look at the soldiers' lives.

COL James L. Speicher, *USA,*
Fort Leavenworth, Kansas

1001 THINGS EVERYONE SHOULD KNOW ABOUT THE CIVIL WAR, Frank E. Vandiver, Doubleday, New York, 1999, 276 pages, $24.95.

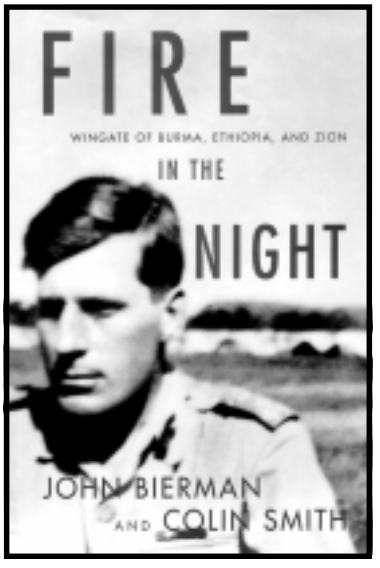
1001 Things Everyone Should Know About the Civil War is a good reference book for the War Between the States—the name sanctioned officially by Congress. To maintain some semblance of order, author Frank E. Vandiver has divided the book into a lineal progression of the war years. The style is easy to follow and maintains the reader's attention as it wends through a variety of topics.

The book is not without faults. Although editing errors do not detract from readability, factual errors could have been prevented. For example, Jefferson Davis's birthplace is not Mississippi, but Kentucky; the name of the school that began at Fort Leavenworth in 1881 was not the "Command School" but the "School of Application of Infantry and Cavalry"; Pickett did not charge on the second day of Gettysburg, but the third. While these errors do not degrade the book's overall content, they certainly do not make for a polished product.

Vandiver's treatment of black Confederates conforms to long-standing stereotypes despite the amount of new material being published regarding this subject. Many prominent black historians show that blacks served with the Confederate Army in armed, combatant roles in numbers too large to conveniently ignore. While Vandiver is technically correct about blacks not being "in" the Confederate Army until 1865, they were active combatants from the beginning. This politically incorrect view is backed by numerous firsthand accounts.

This book is a good primer for the beginner and an excellent refresher for the veteran. It ties disparate events and people into a manageable whole.

LTC Edwin L. Kennedy Jr, *USA,*
Retired, Leavenworth, Kansas



FIRE IN THE NIGHT: Wingate of Burma, Ethiopia, and Zion, John Bierman and Colin Smith, Random House, NY, 1999, 434 pages, $29.95.

The life and career of World War II-era British Major General Orde Wingate still excites controversy. To some, Wingate was a brilliant eccentric whose pioneering work organizing special night squads in prewar Palestine, native militia forces in World War II Ethiopia and long-range penetration groups—*chindits*—in Burma mark him as one the true forefathers of modern special operations.

To his critics, Wingate's forces produced few tactical victories and contributed little to operational or strategic success. To his fans, Wingate was a gadfly who restored initiative and energy to his units and a visionary who accurately foresaw the shape of future wars. His critics counter that Wingate was a shameless self-promoter whose antics created antagonism that detracted from overall mission accomplishment. His premature death in Burma in 1944 gave his life a tragic aura of greatness cut down in its prime—or just short of it.

John Bierman and Colin Smith, British authors with wide experience in Wingate's operating locales, recapture the Wingate debate in *Fire in the Night: Wingate of Burma, Ethiopia, and Zion*. Although Wingate's story has been told many times, Bierman and Smith are the first to draw on recently released personal papers. The authors also summarize well the "battle of memoirs" already published by Wingate's contemporaries and draw on a final round of testimony by aging warriors and friends who knew him personally.

Bierman and Smith, though not afraid to be critical, sympathize with Wingate's ability to break through bureaucratic sloth and tactical inertia to get things done. Wingate's willingness to criticize and risk the dislike of his peers and superiors, combined with his vision and energy, were welcome antidotes to the clubby, business-as-usual attitude of many British officers.

The authors emphasize that the British army was as closed-minded and resistant to change as any army. However, they repeatedly point out that Wingate might have accomplished little without his pattern of persistently calling on favors from politicians and relatives in high places, whose good graces Wingate

assiduously courted. This pattern established itself early in his career; the greatest example is Wingate's garnering Prime Minister Winston Churchill's support for the Burma campaigns.

Therein lies *Fire in the Night's* greatest theme: the potential and limitations for any one man to reshape military doctrine, organization and tactics to meet rapidly changing tactical, operational and even strategic scenarios. Bierman and Smith deserve congratulations for bringing the Wingate story to life for a new generation.

MAJ Peter Molin, *USA, Fort Leavenworth, Kansas*

A TIME FOR SPIES: Theodore Stephanovich Mally and the Era of the Great Illegals, William E. Duff, Vanderbilt University Press, Nashville, TN, 1999, 231 pages, $27.00.

A *Time for Spies* is a good book that lights a shadowed corner in the world of espionage. William Duff is a retired FBI special counterintelligence agent whose job was documenting and forecasting the behavior of Soviet agents and their unique colleagues—the illegals. An illegal is any individual conducting espionage under a false identity in a foreign land. An illegal runs great risks including arrest and criminal sanctions.

The great era of illegals encompassed the years between World Wars I and II. The illegals functioned from Brazil to Germany and from the United States to Great Britain, serving primarily with the Fourth Directorate of the Soviet Military Intelligence and the Foreign Department of State Security (KGB) and the Communist International (COMINTERN). Administratively, they were in one or the other; in reality, they worked off and on in each. They were highly intelligent, educated or both and were believers in world revolution after World War I's disillusioning losses and displacement.

Their missions were many. They established mechanisms for sabotage and supported local communists to weaken potential foreign enemies, recruiting agents who would provide information or effect policies to benefit the "homeland of socialism." Duff focuses on Theodore Stephanovich Mally because of Mally's eventual role recruiting for and initially developing the influential Cambridge Network.

Mally's story provides insight into non-Russian illegals' almost-religious experience. Why did they accept Marxist and Leninist doctrines with such fervor? Even when Joseph Stalin was ruthlessly purging the intelligence service of the old guard, the illegals went to their doom believing their deaths would contribute to mankind's eventual salvation.

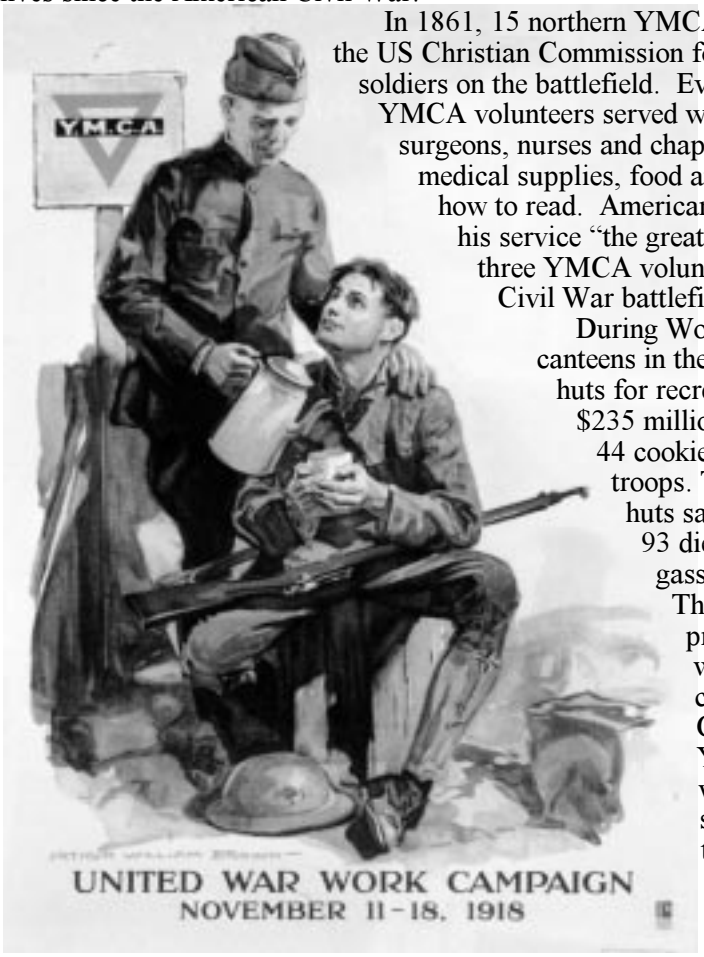
A *Time for Spies* is well written, based on solid documentation and toward the end has the drama of a spy novel. It is an excellent contribution to the intelligence field.

Peter Charles Unsinger, ***San Jose State University, California***

YMCAs HONOR WAR VETERANS

Service in trenches dates back to American Civil War

On Veterans' Day, Saturday, 11 November 2000, YMCAs across the country honored local war veterans and all Americans who have served their country around the globe. Easing the burden of American soldiers — and others whose lives have been disrupted by warfare and natural disasters — continues a YMCA tradition in which hundreds of YMCA volunteers have lost their own lives since the American Civil War.



In 1861, 15 northern YMCAs joined to create the US Christian Commission for the relief of soldiers on the battlefield. Eventually 5,000 YMCA volunteers served without pay as surgeons, nurses and chaplains and distributed medical supplies, food and clothing. Y Volunteers even taught soldiers how to read. American poet Walt Whitman, a YMCA volunteer, called his service "the greatest privilege and satisfaction" of his life. Forty-three YMCA volunteers, including three women, lost their lives on Civil War battlefields.

During World War I, American YMCAs operated 1,500 canteens in the United States and France; set up 4,000 YMCA huts for recreation and religious services; and raised more than $235 million for relief work. The Ys even built and operated 44 cookie and candy factories in Europe to serve the troops. There was a human cost to this dedication. YMCA huts sat on the front lines and of 26,000 YMCA workers, 93 died in service. A hundred more were wounded or gassed in battle.

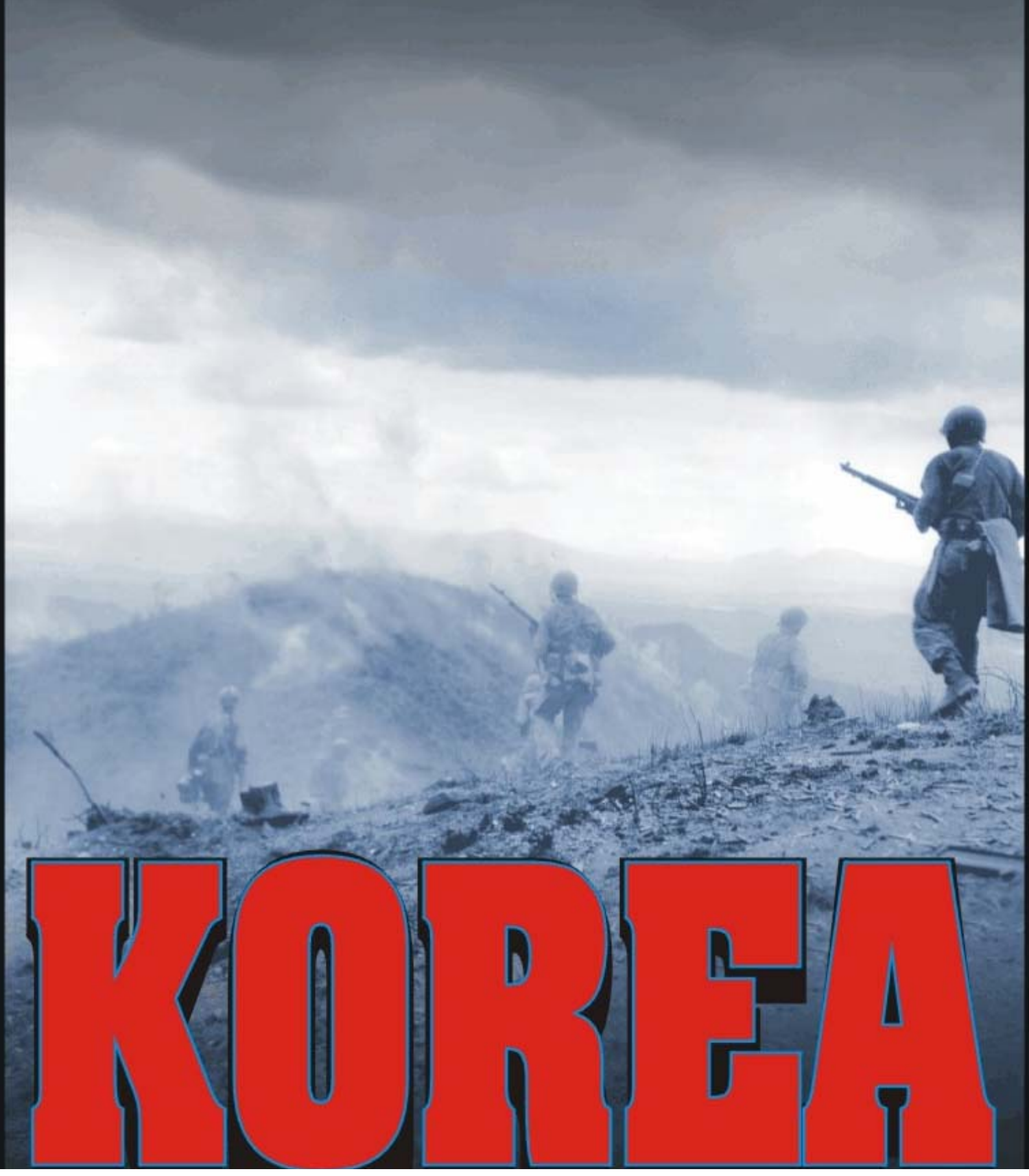
The service of YMCA volunteers on the battlefronts provided a vital respite for weary fighting men and was memorialized by one American doughboy, composer Irving Berlin. Berlin wrote the song "I Can Always Find a Little Sunshine in the Y.M.C.A." during his WWI service. After the war, the YMCA awarded 80,000 educational scholarships to veterans, providing the model for the "G.I. Bill" that followed World War II.

In 1940, the YMCAs, with five other national voluntary organizations, founded the United Service Organizations for National Defense, today known as the USO. YMCAs went on to operate 25 percent of the USO centers during WWII. Additionally, Ys served 6 million soldiers who were held prisoners of war in 36 foreign nations, as well as thousands of German and Italian POWs held in the United States. For the Ys' war relief work, YMCA leader John Mott was awarded the Nobel Prize in 1946.

In 1983, the YMCAs' Armed Services Department was chartered as the Armed Services YMCA of the USA, today operating 18 military Ys and 70 program centers and serving 146,000 US military personnel and dependents. The Armed Services Ys also provide child care for 74,000 children of US service men and women.

Military Review

THE PROFESSIONAL JOURNAL OF THE US ARMY ■ JANUARY-FEBRUARY 2000



KOREA