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Infantry

May-June 1995

Light Infantry Against a Heavy Force . . . Page 12

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This medium is approved for official dissemination of material designed to keep individuals within the Army knowledgeable of current and emerging developments within their areas of expertise for the purpose of enhancing their professional development

By Order of the Secretary of the Army

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Infantry

May-June 1995 **Volume 85, Number 3**

COVER:With the capitulation of German forces, the war in Europe drew to a close and the attention of America and her Allies focussed on the remnants of Imperial Japanese forces in the Pacific. U.S. infantrymen such as these shown here faced the prospect of bitter, close-quarters combat as they cleared the Philippines and other territories that had been occupied since the early days of 1942.

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Commandant's NOTE

MAJOR GENERAL JOHN W. HENDRIX Chief of Infantry

WARRIOR FOCUS—TAKING THE LEAD

In today's world, threats to our national interests can materialize quickly and in forms not possible even a decade ago. These threats—both foreign and domestic—can range from loosely organized groups to state-sponsored forces with almost state-of-the-art military equipment and skills. Such challenges cannot be ignored for long; the quick, unmistakable response of the United States and her coalition partners to the Iraqi invasion of Kuwait both halted the extent of the Iraqi incursion and prevented their eventual control of much of the Middle East's oil reserves. As we move into the next century, we must retain this capability for rapid, decisive action, not only in the Middle East, but throughout the world as well. In this month's Commandant's Note, I want to discuss WARRIOR FOCUS, an advanced warfighting experiment (AWE) that will help us attain that goal.

The Infantry of the future must be able to deploy before an adversary can react, then mass overwhelming combat power, rapidly accomplish the mission with minimal losses of men and materiel, and redeploy. In order to do this, we must have the latest and most accurate intelligence we can acquire, be able to apply our combat power at the precise time and place it is needed, and achieve immediate, positive target identification to distinguish friend from foe. In short, we must be able to step onto tomorrow's battlefield armed with the best weapons our industrial base can provide, and with the tactics, techniques, and procedures (TTP) that can best defeat the enemy we are facing; that is what WARRIOR FOCUS is all about.

This AWE is noteworthy for a number of reasons, but two clearly stand out; the synergy between evaluation and training, and the level of analytical focus it will entail. In the past, exercises to evaluate doctrine, training, and equipment have often been executed at the cost of readiness; they were costly in terms of both time and money, and represented distractions in the training cycle of the units tasked to support them. Such is not the case with those units selected to participate in WARRIOR FOCUS; they will take part in this rigorous experiment while still being allowed to train on their Mission Essential Task List (METL). Every effort will be made to retain the training integrity of the exercise force, while still recognizing—and meeting—the pressing need for accurate, timely data collection. This warfighting experiment will include light forces (2d Brigade, 10th Mountain Division), heavy units (Team Cobra/1-41 Infantry (M), 2d Armored Division), and elements of the 75th Ranger Regiment and the 10th Special Forces Group.

The analytical focus of the exercise is at battalion level and below; while some insights relevant to brigade operations and manning will be gained as well, the lion's share of the data collection will be at the lower levels. This is critical, since any force design changes to Army Force XXI—and hence

Infantry Force XXI—will have a more direct impact on battalions and their subordinate units. The participating units will receive close scrutiny, as 59 systems and 74 initiatives from all TRADOC battle labs are tested and examined. WARRIOR FOCUS is an Army-wide effort, and is being supported by the U.S. Army Materiel Command, the Test and Evaluation Command, the Training and Analysis Command, the Advanced Research Projects Agency, Team Monmouth (elements of the U. S. Army's Communications-Electronics Command and the Program Executive Office-Command and Control Systems), and the Army Digitization Office.

WARRIOR FOCUS will enable the Army to determine the extent to which lethality, survivability, and tempo can be enhanced among the existing structures of light, heavy, and special operations forces by using advanced technology and the necessary doctrinal support literature. Should such improvements be impossible given the present force structure, then possible force design alternatives will be examined, although analysis conducted to date does not reveal any need for significant changes to the force structure.

WARRIOR FOCUS is a four-phase warfighting experiment. Phase I began in March of this year and will run through the end of May. In this first phase, the planning and design of the AWE have been finalized and the necessary equipment and the TTPs delivered to the participating units. New equipment training will also take place at Fort Drum, Fort Hood, Fort Polk, and Fort Carson. Phase II will run from 1 July 1995 until 7 October; it is here that unit train-up at squad through battalion level will be conducted. At the same time, baseline and experimental unit data collection will take place, and the digital and Own the Night DTLOMS (doctrine, training, leader development, organization, materiel, and soldier) initiatives will be integrated and employed in a collective training environment. This phase will conclude with an after-action review of Phases I and II.

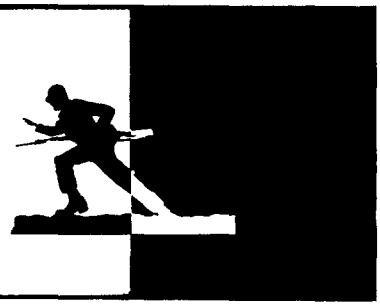
The third phase will run from 8 October until 22 November, and will include deployment to Fort Polk, a rotation at the Joint Readiness Training Center (JRTC), and finally the units' redeployment to home station. While the execution of the AWE itself at Fort Polk from 6-18 November will receive most of the attention, the results of the experimental unit data collection and analysis in Phase II will be closely examined as well, to capture any further information that can be applied toward enhancing force effectiveness.

Phase IV—the post-JRTC mission analysis of data gleaned from WARRIOR FOCUS—will commence on 23 November and run until March of 1996. It will assess the relative contributions of digitization and other improvements in Own the Night technology in the hands of soldiers in the real-world environment of a live training center. A valuable collateral benefit of WARRIOR FOCUS will be the opportunity it gives our soldiers and leaders to see and use the systems that will define the face of combat in the next century. But they are not the only ones who will benefit from this unprecedented event; the information gained from WARRIOR FOCUS—and there will be a lot of it—will be applied to the Army's Joint Venture initiative, which will design and develop Army Force XXI, in which Infantry Force XXI will be a key player.

The Infantry stands to gain a great deal from its support of WARRIOR FOCUS. The Infantryman will possess greater lethality than ever before through his ability to acquire targets and engage them more accurately than has been possible. Digital enhancements will enable commanders to precisely locate every soldier on the battlefield and rapidly transmit information and orders to all battlefield operating systems, and the greater number of first-round target hits will reduce ammunition consumption and enhance our ability to support the soldier. At the same time, survivability will be better than at any time in our history, due to the reduced likelihood of fratricide and the greater range standoff that our weapons permit.

This is what WARRIOR FOCUS will entail, and what we hope to gain from it. As our Nation enters the next century, the Infantryman will continue to be on the point while our Army carries out its responsibilities around the world. This Advanced Warfighting Experiment will ensure that the Infantry will continue to maintain that critical edge in technology, training, and leadership that has given us victory in the past, and that will ensure our country's future as leader among nations.

INFANTRY NEWS



A PATTERN REDESIGN of the battle dress uniform (BDU) has resulted in problems with sleeve tightness in the temperate and hot-weather versions. The problem applies to a small percentage of soldiers and will be corrected in future procurements.

Meanwhile, each soldier who buys or receives a BDU coat should try it on before leaving the store to ensure a comfortable fit when the sleeves are rolled. If the sleeves are too tight, a soldier may have to buy the next larger size.

Soldiers who have already bought BDU coats with sleeves that are too tight may exchange them at any Army Military Clothing Sales Store (AMCSS). The coat being returned should be in serviceable condition and should fit the soldier properly except for the sleeves.

To test for sleeve tightness:

- Roll the sleeves up, but don't use an excessive number of rolls. The standard is two folds up and one down with the camouflage pattern out. Sleeves should be rolled up no more than three inches above the elbow.
- Salute, while exerting maximum effort to flex the biceps muscle, and test for space. There should not be enough space to insert a finger between the fabric and the arm.
- Leave the insignia attached at the time of return to verify ownership; you may remove it once the tightness has been confirmed by AMCSS personnel.

The exchange of BDUs because of variances in color or shade between trousers and coats (due to wear) is not authorized.

The attachment of issue insignia to new uniforms will apply for both officers (one-time exception) and enlisted personnel in accordance with Paragraph 5-5, Issue and Attachment of Insignia, of Army Regulation 700-84, Update 14, dated 28 Feb 1994.

Army National Guard and U.S. Army Reserve personnel will use their normal procedures for exchanging the defective uniforms.

This policy will be in effect until 30 September 1995.

THE OBJECTIVE Individual Combat Weapon (OICW), which will replace the M16, M4 carbine, and M203, will substantially increase a soldier's survivability through its extended range, using both kinetic-energy and high-explosive bursting munition capability. Contracts have been awarded for system design and critical subsystem technology demonstration.

The OICW, one of several advanced technology demonstration efforts in the 21st Century Land Warrior program, is the lethality component of the program, which also includes advancements in communication, integrated headgear, climate control, and body protection capabilities.

COMBAT CASUALTY BLANKETS can be used to avoid hypothermia or help save the life of a soldier already experiencing hypothermia when weather conditions suddenly change.

Seemingly benign weather conditions (moderate to high temperatures mixed with precipitation and wind chill) can change rapidly at unforeseen times and places. The effects of such conditions, along with wet clothing and fatigue, can cause the body core temperature to drop dramatically. These effects can be fatal if immediate steps are not taken to change the ambient skin exposure conditions to reduce the loss of body heat from the victim's skin surface.

The Army supply system has some of these lightweight, inexpensive blankets. The Infantry School recommends that commanders at all levels consider keeping either or both of these casualty blankets, commonly referred to as "space blankets," on hand.

Requisitioning information is as follows:

- Blanket, Combat Casualty Lightweight (12.3 ounces), Waterproof. Aluminized Plastic, 84" x 56", OD/Silver, Price: $3.70, NSN 7210-00-935-6665.
- Blanket, Combat Casualty Lightweight (2.6 ounces), Waterproof, Aluminized Plastic, 96" x 56", OD/Silver, Price: $3.80, NSN 7210-00-935-6666.

THE AN/PRC-139 TACTICAL handheld radio is undergoing modifications under a recent contract. The modifications will allow the three-pound radio full 16-kbps data interoperability with the Army's SINCGARS (single-channel ground and airborne radio subsystem) tactical radio in the single-channel mode.

The radios will be an integral part of the Army's upcoming Advanced Warfighting Exercise Warrior Focus, one of the key tests of the digital battlefield concept. (See Commandant's Note, pages 1 and 2 of this issue.)

These will provide wireless connections between the dismounted soldier system unit computers through links with other AN/PRC-139 or SINCGARS radios.

21ST CENTURY FIELD sanitation methods are available today. A recent INFANTRY article, "Slim, Rommel, and Preventive Medicine" (January-February 1994), discussed the importance of preventive medicine in maintaining combat power, and most preventive medicine programs begin

with field sanitation.

Anyone who has served in uniform can recall a variety of latrines, ranging from the primitive to the most modern, that have served our soldiers, and foreign armies share similar experience. During the war in Vietnam, U.S. forces employed airborne sensors to detect enemy base camps and staging areas by the ammonia compounds and other traces emitted by their latrines. As technology continues to advance, it will be possible to find ever smaller units by these means, and this reveals yet another reason to find a replacement for the old traditional field latrine. Finally, today's heightened emphasis on environmental protection will have its own impact on how field latrines are employed. Fortunately, a solution is at hand.

The Defense Construction Supply Center (DCSC), in Columbus, Ohio, currently stocks three products that have proved beneficial:

- The Disposable Urinal Bag, National Stock Number (NSN) 4510-01-379-0177, costs $2.15 and contains a polymer enzyme that converts urine into a lemon-scented gel. It is leak and spill-proof, odorless, and nontoxic, and can be disposed of in a trash container.
- The Solid Waste System, NSN 4510-01-379-1341, costs $2.92, has the same characteristics and also contains tissue paper and a moist towelette.
- The Daily Restroom Kit, NSN 4510-01-379-0190, contains two urinal bags and one solid waste bag and costs $5.99.

Each of these products is designed to fit in the cargo pocket of the Army's battledress uniform (BDU). They were issued to U.S. forces in Haiti; units using them experienced a .5-percent incidence of diarrhea, a rate approximately 24 percent below that experienced by units not using the kits under similar conditions.

Preventive medicine is just one element of force protection, and these advances in the area of field sanitation are a step in the right direction.

Further information on these products can be obtained by contacting Maxine Copeland, DCSC-CMBA, at DSN 850-1258 or commercial (614) 692-1258.

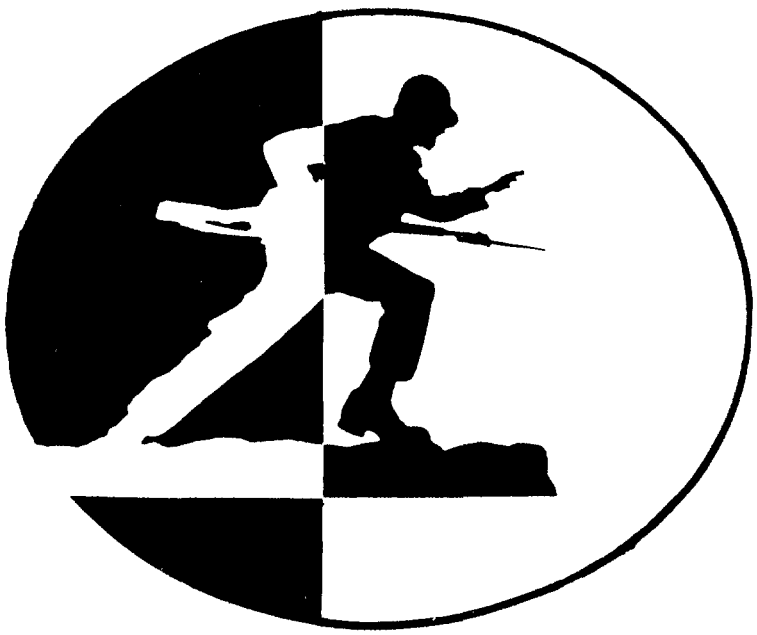
AMERICAN MILITARY University (AMU), a distance education graduate school with headquarters in Manassas Park, Virginia, has received accreditation from the Distance Education and Training Council, an accrediting body recognized by the U.S. Department of Education. More than half of the students enrolled are on active duty or in reserve status.

Students may specialize in any one of four areas of study—Land Warfare, Naval Warfare, Air Warfare, or Defense Management. AMU's catalog contains approximately 135 courses, with 30 to 40 offered each semester. This selection is one of the most extensive arrays of military-oriented courses available anywhere in the country.

AMU accepts up to 15 semester hours of transfer credit for accredited graduate work completed elsewhere, for professional military education that has been evaluated for graduate credit by the American Council on Education, and for significant experience. Thus, members of the military services and civilians may already have a head start toward the 36 hours required for the Master of Arts in Military Studies degree.

The university's accreditation means that eligible military students may apply for the Tuition Assistance Program or the Montgomery GI Bill. Military personnel should check with their Education Service Officers for details.

For further information concerning enrollment, contact the school at (703) 330-5398 or FAX (703) 330-5109.



PROFESSIONAL FORUM

The Combat Trains *In Combat*

CAPTAIN FREDERICK J. GELLERT

The UH-60 streaked across the desert at 50 feet, with 16 soldiers and all their equipment cramped inside. It was an uncomfortable ride, compounded by the uncertainty of going into battle for the first time. It was raining and getting very dark. No one knew what lay ahead at the landing zone. Months of preparation were all coming together in just a few minutes.

The helicopter landed so fast that it left 100-meter skid marks in the thick mud as it came to a halt. The doors burst open as equipment and soldiers spilled out. The pilot kept the rotors turning at high speed for a quick takeoff. The soldiers quickly unloaded the helicopter, just as they had rehearsed it many times before. As the last soldier cleared the door, the chopper roared away. Everyone on the ground began to move the heavy equipment off the landing zone. Each soldier knew what he had to do, and he was doing it.

These were not infantry soldiers moving to attack an objective. Their equipment was not the weapons and ammunition to destroy the enemy. They were combat service support soldiers—in a mix of medical, supply, administrative, and infantry MOSs—straining under the weight of water, medical supplies, and NBC decontamination equipment. These soldiers had flown in the first lift of helicopters to provide much-needed logistical support at the point of decision. Getting them to that decisive point was a long process.

Logistical support in combat theaters is covered in various manuals, and the duties of the battalion S-4 and the standards of performance for the combat trains in others. But none of these publications does a good job of telling how to operate the combat trains *in combat;* they neglect many critical details that can become major concerns in a war zone.

When we arrived in Saudi Arabia, there was no logistical infrastructure in place; most equipment was weeks behind us, and every commodity was in high demand and short supply.

On the basis of my experience as a battalion S-4 in Operation DESERT STORM, I want to share some of these details, the problems they presented, and the solutions we used to overcome those problems. While the ideas presented here are from experiences with an air assault infantry battalion, I believe they have direct application to light and mechanized combat trains as well.

Having been S-4 for nearly a year before deploying to the Persian Gulf, I was comfortable with my soldiers' abilities and thought I understood the tasks that lay before us. Numerous field exercises had taught me the facts and figures. I knew how many MREs (meals, ready-to-eat) we needed, how much fuel we used each day, and how much ammunition was in our basic load. We had a good logistical team in our battalion, soldiers who had been together for many months and could pull off most things quite successfully. Little did I realize, however, the added burdens that combat and the desert environment would place on all of us.

When we arrived in Saudi Arabia, our first tasks were taking care of basic survival needs. We had to support a 750-man task force with next to nothing. No logistical infrastructure was in place. Most equipment was weeks behind us, and every commodity was in high demand and short supply. Each commander, not knowing how soon he might have to fight, wanted everything right now.

After weeks of hard work, things began to settle down. A support structure was established, and all our equipment had arrived. Now we began to focus on the combat operations that probably lay ahead.

To begin with, the battalion ran a series of command post drills. The initial drills focused on checking equip-

ment. Later drills focused on establishing functional command posts, one of which, of course, is the combat trains. We in the combat trains quickly learned about one area that we were used to neglecting in training—security.

The trains never have enough people to perform all the tasks at hand. It is especially difficult to maintain adequate security while also providing continuous support over a long time. When initially setting up after a move, the focus is on getting facilities established quickly, and security takes a back seat. The manuals list what to accomplish, including security, but not how to do it.

So what can you do?

First, you have to re-work your drills so you can provide some security during setup. The priorities of work have to be thought out and reinforced well in advance. Some soldiers will have to man a loose perimeter while others work on tents and camouflage nets. This means it will take longer to get set up, and people will have to work harder, but you can at least give yourself some early warning of enemy attack. Second, the available weapons affect your ability to defend yourself. Our headquarters company changed the distribution of M249 machineguns and M203s so that each of the command posts had at least *some* firepower. And finally, everyone has to think and practice security. Noise and light discipline and guard rotation become part of the daily routine. (When you're actually worried about getting shot, security takes on a whole new flavor!)

Most ofter, the trains personnel—focused on preparing the battalion for combat—forget that they must also prepare themselves for combat.

One element of security for a battalion is redundancy in its systems, particularly command and control. The combat trains command post (CP), as the alternate command post, is a part of the battalion's command and control structure. But this role for the trains is rarely practiced, and personnel manning does not allow the trains to operate readily as a tactical operations center (TOC).

So how can you make the combat trains an effective command post? The first and most obvious answer is to practice TOC operations. Forcing the CP to track the battle rigorously and monitor all reports, not just logistics reports, is a start. Then, periodically, the TOC must be "taken out of action" and the combat trains CP allowed to command the battle.

This solves the practice part but still leaves the personnel issue. A solution we used was to place the chemical officer in the combat trains during all tactical operations. This gave the trains someone who was proficient in TOC operations to perform S-3 functions while the other trains personnel performed logistics functions. Thus, when necessary, the trains CP would have been able to assume the role of battalion TOC much faster and more smoothly. Depending on manning strengths, a radiotelephone operator (RTO) from the TOC could accompany the chemical officer, and a noncommissioned officer from the trains could move to the TOC to monitor logistics.

After our static drills in the division base camp, the battalion began rotations into the covering force area. These rotations helped us develop realistic movement, support, and combat plans. We learned another lesson as well—that space management and load planning were critical. Every piece of equipment and every ounce of supply can mean the difference between life and death, but nobody has unlimited transportation. What do I take? How much? When do I need it? How do I move it? and In what priority?

After months of operating in the desert and wargaming many possible missions, we developed a priority list that carried us through the war. The following are the basics of that list:

- Things that kept soldiers alive (medicines, water).
- Things that kept soldiers function ing (batteries, ammunition).
- Things needed for the mission (NBC, POW support materiel).
- Things to run the trains (tents, radios).

Again, enforcement of the priorities is critical to success. Nobody wants to get caught short, so naturally you want to take it all.

The combat trains are a platoon just like any other in the battalion and deserve the same leadership we give our rifle platoons and companies.

During these rotations into the covering force area we also began to learn which tasks we could realistically expect to perform. Some are tough to do and generally are not taught or practiced. For example, such tasks as mortuary affairs and patient decontamination are talked about in peacetime training but are then set aside. In combat, these and many other tasks take on a far greater significance.

Slowly, we began to train on these tasks. First, we worked out the drills among ourselves in the trains, and then trained the rest of the battalion's leaders. Processing a soldier's dead body properly, for example, is extremely important to the Army and to the family. Although we may overlook it in training, the trains must be able to handle this task expertly in combat, along with many others.

We had to learn the numerous tasks to be performed; then we had to figure out who was going to perform them and when. During the initial phases of an operation, the trains can expect to be very busy. Just moving them requires a lot of labor and a lot of time. Couple that with performing all the required battlefield tasks, and you quickly realize you can't do it all. The answer is to task organize. (It took a long time for me to realize that all the things I had learned as a rifle platoon leader were

just as applicable to the combat trains "platoon.")

This "platoon" could be divided into teams and those teams assigned primary and alternate tasks. A few of these were teams for patient reception, patient decontamination, pickup and landing zone operation, RTOs, resupply, mortuary affairs, and security. These teams could be assigned priorities before the mission, rehearsed just like special teams in Ranger School, and then called for during the mission as needed. This helped establish a high level of proficiency in the trains and allowed us to get all the missions and tasks accomplished.

The final lesson for the combat trains is to start all missions with a complete and detailed operations order. Most often, the trains personnel—focused on preparing the battalion for combat—forget that they must also prepare *themselves* for combat. Nothing can replace a complete and detailed operations order for getting a unit organized and energized. The preparation for combat tasks and time schedules, especially rehearsals, must be planned into the trains' work schedule. The combat trains are a platoon just like any other in the battalion and deserve the same leadership we give our rifle platoons and companies.

Although you may be thinking that much of this is obvious, I submit that it is not obvious at all and must be reinforced continually. I don't remember a single class in the Infantry Officer Advanced Course on running combat trains, and you probably don't either. But all the training we did receive can be applied to running effective combat trains. We just have to remind ourselves to use what we have learned. The combat trains are an extremely important part of any battalion, and we must train accordingly if they are to effectively sustain the battalion in combat.

Captain Frederick J. Gellert served as S-4, 1st Battalion, 187th Infantry, 101st Airborne Division, during Operations DESERT SHIELD and DESERT STORM and subsequently commanded two companies in the division. He recently completed a master's degree at Rensselaer Polytechnic Institute and is now an instructor at the United States Military Academy. He is a 1985 ROTC graduate of the University of Detroit.

Command Philosophy
And Battle-Focused Excellence

LIEUTENANT COLONEL JON H. MOILANEN

A command philosophy communicates the commander's vision for his command. It motivates the leaders and soldiers to work as a team toward achieving a mission purpose. A command philosophy concisely presents the collective beliefs, values, and standards for the future of a command.

I offer here a method of increasing the value of a command philosophy so that it better trains leaders, builds teamwork, and sustains a battle focus. My observations are based on personal experiences as commander of a forward-deployed armor battalion in the Republic of Korea. My proposal highlights mission purpose, warfighting requirements, command climate, and leadership perspectives of sustaining readiness.

The Army's doctrine of battle-focused training is based on the commander's vision. The commander is responsible for clearly communicating this vision—his expectation of success and his concept for achieving it. This vision challenges. The commander ensures that his subordinate leaders understand a readiness standard, have the resources to accomplish essential tasks, and are competent in the professional skills they need to apply Army doctrine and execute their particular wartime mission.

The goal, then, of a properly focused commander's vision is to shape the organizational leadership effort to build and sustain specific warfighting capabilities to a measurable standard of readiness. But the commander must first define and reinforce the way the command will operate as a team. Command philosophy—a concept of professional conduct for enacting the commander's vision—is his expression of personal beliefs, professional values, and his own responsibilities. The character of his command is established when all his subordinates share this philosophy and apply it in accomplishing their own duties.

The Army Ethic and Values

Command philosophy reinforces, in practical terms, at least two elements essential to a unit's mutual trust and respect—the Army ethic and soldier values. If the commander demonstrates how he expects his subordinates to apply a sense of duty and selfless service in

the conduct of their duties, through his example of total commitment, the entire command will soon emulate his actions.

Ultimately, the unit's support of the commander's vision will contribute to the success of the unit in executing its mission. At this point, the command works as one because it believes in its leaders, its ability to do the job, and its mission.

As a team-builder, the commander clearly communicates his demand for commitment, competence, candor, and courage. As the prime role model, he must personify these qualities as he demonstrates leadership and teamwork. His professional ability and personal style motivate subordinate leaders and soldiers to perform effectively as teams. At enlistment, all soldiers take an oath to a set of values that may differ from the values of some of the society that they serve. This obligation often places the individual soldier and the team at risk, but soldiers accept that risk of life in the accomplishment of their mission tasks.

To accept the responsibility for taking care of each other, each member must have complete confidence and trust in himself and his teammates. Each team member knows that he must be competent in his particular military skills while complementing the team's collective skills. Excellence in leadership is mandatory. Leaders show the way and train toward teamwork standards while demonstrating genuine concern for the team and all of its members.

The senior leader's training vision provides the direction, purpose, and motivation necessary to prepare individuals and organizations to win in war. (FM 25-100, Training the Force)

Purpose

A clearly defined statement of purpose focuses the command on its wartime mission and provides a sense of direction as the commander assesses his mission and prepares his unit to accomplish that mission. In defining his vision, he communicates his commitment to accomplishing the mission and analyzes current capabilities that will make follow-on operations easier.

Soldiers must understand their unit's role in the larger operation. While the commander ensures that the conduct of his unit's mission coincides with the intent of the commanders one and two echelons above, he must also ensure that his intent is clearly understood by his immediate subordinates. In an armor battalion task force, these are the company commanders, platoon or section leaders, key staff officers, and the command sergeant major. This shared understanding enhances commitment to the accomplishment of the unit mission and encourages initiative.

Direction

Direction starts with a commander's vision and his guidance on the ethics and values he considers important. The commander's philosophy includes this vision, states the command mission focus, and describes how the command will concentrate its efforts on essential issues. Most important, his philosophy should inspire team effort and stress cohesion to achieve and maintain unit readiness. This guidance identifies particular needs in leader, individual, and collective training. This guidance also includes the probable battlefield and its effects, the capabilities and limitations of enemy forces and friendly forces. and how his command, as a whole, will successfully conduct operations.

The commander uses a well-defined doctrine of examining wartime missions and identifying training requirements to determine his direction. Battle-focused analysis is a proven process. Doctrinal literature contains the tasks, conditions, and standards necessary to achieving and sustaining unit readiness, and a battle-focused analysis prioritizes those tasks that are essential to accomplishing his wartime mission. These become the unit's mission essential task list (METL). The fundamental mission of command is to develop warfighting readiness on identified essential tasks.

Our training doctrine provides an effective framework in which to assess, plan, prepare, execute, and evaluate tasks to the Army standard. The progression of skills is logical. The certification of individual skills precedes the training of collective skills; both of these areas are performance-oriented. Tasks are often performed simultaneously for the best use of available time and resources, and training is normally multi-echeloned. Training is an environment of combined arms or joint services, sometimes both. It strives to replicate the way the Army intends to fight and win.

The status of readiness can best be assessed by hard, honest evaluation that determines the actual performance of duties against a standard. After achieving Army standards, the challenge is to sustain readiness. The commander isolates factors that degrade readiness and counters them with specific programs. He identifies how often individuals and teams must repeat critical tasks to sustain proficiency, and he ensures that the time and resources are available to train to these standards.

Motivation

Motivation is essential to mission accomplishment. Just as the commander must understand the priorities of the mission and the welfare of the troops, he must also demonstrate a genuine concern for soldiers as they accomplish mission tasks; soldiers will in turn demonstrate unit loyalty by performing their duties efficiently and effectively.

The single most important factor in developing this understanding and willing acceptance of teamwork is the commander's personal example. Foremost, he must exhibit ethical conduct and demonstrate these traits in the example he sets. The commander must be the prime role model for his subordinate leaders and soldiers.

Through his example, the commander encourages friendly competition as a means of reinforcing unit cohesion, loyalty, and camaraderie. Competing goes hand-in-hand with

achieving standards. Marksmanship qualification badges, mechanic badges, and driver badges reward excellence and display visible evidence of individual and team proficiency. Other officially approved awards such as certification patches for outstanding physical training readiness promote a confidence that improves trust and pride within the unit team. These forms of recognition—with their distinctive appearance and emphasis on high performance standards—complement unit identity and esprit. They connect directly with "Go-to-War" readiness.

Knowledge of unit history is another important aspect of developing pride in each team member and in the command. Past missions in stressful situations, both in combat and in other conditions, are inspirational examples of teamwork. Visible commendations such as unit citations on a uniform or battle streamers on the regimental colors strengthen individual and team ties to the unit's accomplishments. Each member of the command can appreciate the importance of his individual talents and understand how these abilities contribute to team success. When the commander recognizes these contributions, he reinforces individual and team discipline. The commander must be both patient and diligent in getting subordinates to accept his standards and embrace his command philosophy, and through his personal example he nurtures a common foundation for cohesion.

The Target Group

Who is the key audience for a command philosophy? All of the leaders within the unit. The commander especially emphasizes training one leader level down and evaluating of training two leader levels down within his command. He uses these key leaders to communicate with all the other subordinate leaders and soldiers in order to implement command philosophy. Command philosophy underscores readiness to fight and win engagements as the essential task. Defining success—in war or peacetime—normally requires a quick and decisive "victory" at the least cost in terms of U.S. soldiers or material. Sustained, rigorous, and realistic training is an essential precursor to this success. This warfighting ability reinforces confidence in individual and collective skills and radiates the disire to meet or exceed the established readiness standards. The command learns how to conduct operations in order to execute mission tasks in accordance with the commander's intent. Additionally, leaders and soldiers develop insight and an understanding of the moral correctness of their assigned missions. This understanding is a combat multipier and a decisive adge for developing and reinforcing the will to fight, endure the necessary hardships, and win.

A Leader Application

How does the commander bond his command philosophy of ethical duty performance with developing leaders? He uses command philosophy as a normal coaching and counseling tool during periodic performance assessments with his subordinate leaders. He nurtures these subordinate leaders. Assessing unit, leader, and soldier proficiency includes an evaluation of the unit's demonstrated ability to perform METL tasks to Army standards. Just as important, the commander uses these discussions of practical accomplishments to illustrate the way these achievements complement the command vision. This one-on-one communication transmits the enthusiasm that grows with a commitment to the accomplishment of common goals. Subordinate leaders make a commitment to improve or maintain specific individual and team skills that are directly linked to the unit's mission. These skills in turn contribute to the achievement of the required readiness standard. A candid exchange between the commander and his subordinates encourages the initiative of subordinate leaders and gives the commander an opportunity to communicate his support of responsible risk-taking.

The commander educates. He teaches his subordinates military decision-making skills. To improve effective decision-making, he helps subordinates set goals, assess progress, and evaluate success. Errors in judgment or experience are a learning ground for future success. He acknowledges that mistakes will be made, but his coaching and counseling ensure that subordinates set specific objectives for training excellence and continue to improve readiness performance. Commanders help subordinates learn by doing.

Training is the Army's top priority; it prepares us to fight. As leaders, our sacred resonsibility is to ensure that no soldier ever dies in combat because that soldier was not properly trained. (FM 25-101, Battle Focused Training)

In his command philosophy, the commander tells and shows the members of the unit how important they are. He compliments progress both informally and formally—publicly recognizing outstanding performance—and rewards excellence. He stresses the importance of an excellent reputation for the command, a reputation that each member will embrace as his personal achievement and then strive to sustain. The commander makes his leaders and soldiers winners and lets them know it!

Leadership Principles

Demonstrating effective leadership will enhance a command climate in which leaders can do the following:

- Demand and expect ethical behavior.
- Teach Army and joint doctrine.
- Develop leaders and soldiers.
- Instill individual and unit discipline.
- Enforce safe and realistic training.
- Endorse honest mistakes.
- Promote learning.
- Sustain a balance between work and fun.

- Reward excellence.
- Sustain a quest for excellence.

The commander is the standard-bearer. He builds trust, and trust is founded on integrity. His physical, moral, and spiritual values express a keen sense of human worth and fairness. These virtues demonstrate devotion to the welfare of his comrades—superiors, peers, and subordinates alike—and his actions affirm a selflessness that puts duty above all personal concerns.

In conclusion, the commander has at least three major ethical responsibilities:

First, he must *be the role model* for integrity in physical, moral, and spiritual values. These values promote enthusiasm, disciplined leadership, and effective decision-making. To the best of his ability, he highlights a fundamental rule of treating soldiers and leaders as he would like to be treated.

Second, the commander must *train his leaders.* He develops subordinates ethically and demonstrates initiative, risk-taking, and leadership with his professional actions. This teaches his subordinates to make effective decisions and stand behind them. In doing so, he motivates his subordinate leaders—as simply stated by my command sergeant major near the demilitarized zone in Korea—with how to "do the right thing!"

Finally, the commander must *demonstrate moral and physical courage.* Of course, there is no magic potion for courage, but he will set the example through effective tactical decision-making and leadership. These focus the cumulative combat power of his command on a clearly stated objective. He ensures that each member of the command knows the mission and its importance in the context of the larger tactical operation. This concentrated effort toward successful engagement must support the intent—purpose and end-state—of the commander.

Embracing the core values of courage, candor, competence, and commitment cements the leaders' and soldiers' trust and compelling desire to accomplish a mission with a clear understanding of their commander's intent, and the means to this end is a clear, well-articulated command philosophy.

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The GPS
And the Lost Art of Land Navigation

MAJOR BRICE H. JOHNSON

The global positioning system (GPS) is the device I dreamed about when I was an infantry lieutenant conducting day and night movement. I first used this system as a company commander during Operations DESERT SHIELD and DESERT STORM, and it proved invaluable. I was able to locate the division command post and find water points and mobile resupply points during periods of limited visibility. This was no small feat in terrain that was mostly nondistinctive and included an extensive area of operation.

Nevertheless, with GPS technology now a standard item in most units, we must be aware of some common pitfalls that can be avoided only by applying common sense that is rooted in sound land navigation and terrain association skills.

When I was assigned as officer in charge of night record land navigation at the United States Military Academy, the course was already established. The points on the course were positioned using a 1:10,000-scale orienteering map that is quite accurate. Each location on that map was then converted to an eight-digit coordinate for use with the 1:50,000-scale topographic map of West Point and vicinity, the one cadets must use in negotiating the course.

When I asked about any problems with the site, the previous officer in charge indicated that a few of the points had been frequently questioned. Because all cadets must negotiate this course and receive a "GO" as an MQS (military qualification standard) requirement for commissioning, and because of my previous experience in dealing with disputed locations and grid coordinates, I decided to verify the points using GPS differential positioning technology.

Routine GPS positioning is accomplished when the receiver is able to read three or more satellites. The time it takes a satellite signal to reach the receiver is converted to a distance. By

comparing its distance from three or more satellites, the receiver can calculate its position on the Earth's surface. A greater number of satellites involved in the calculation increases the accuracy of the determined position. Differential positioning involves using two receivers at the same time. One, designated the base station, is surveyed to a known location. The second, designated the rover or mobile unit, is then taken to points that are to be differentially located. Both receivers take satellite readings simultaneously. Because the base station's location is known, errors in the GPS readings are added or subtracted to correct the GPS grids. These same corrections, as a function of time, are then applied to the readings taken by the mobile receiver. Several hundred readings are taken at each point. The mathematically corrected rover grids are then averaged. Depending on the receiver used and on the number of readings taken, the differentially corrected grids can be accurate to less than a meter.

The equipment required includes a base station, a computer, a mobile receiver, and software that is capable of running the required algorithms.

To accomplish my tasks, all I had to do was go to 28 points of the course (each point was a tree marked with paint and luminous tape) and take approximately 100 readings at each point. The relative degree of accuracy dictates how many readings are necessary at each point. Taking 100 at each point would give me an accuracy of plus or minus two meters from the actual location. This was more than enough, since the cadets are given eight-digit grid coordinates that are accurate only to plus or minus 10 meters. Next, I subtracted the error from the readings, then averaged all the corrected readings for each point. Some rounding was necessary as the GPS coordinates were the equivalent of 10-digit grids with decimals to three significant figures. The corrected, averaged, and rounded coordinates were now accurate within the 10-meter range of an eight-digit grid coordinate.

We must be aware of some common pitfalls that can be avoiced only by applying common sense that is rooted in sound land navigation and terrain association skills.

The average distances between the old coordinates and those generated by GPS differential positioning was 64 meters. Three of the 28 grids were correct, with the greatest difference at 180 meters. When I plotted the GPS differential positioning coordinates on the 1:50,000 map sheet of West Point and vicinity, I observed a few minor problems:

Because of cartographic requirements, roads, man-made features, and other geographic features are not always accurate. Furthermore, the width of a line drawn on a 1:50,000-scale map with a fine-point pencil represents approximately 50 meters on the ground. In addition, based on my survey of the land navigation course, the very accurate GPS differential positioning coordinates could be misleading when plotted. Examples include points physically located on hill tops with GPS-generated coordinates that—when plotted on a map—are actually not on the hill top and other GPS-generated coordinates for points located near course boundaries that, when plotted, fall on a side of the boundary other than that indicated by the map.

The moral of my story is threefold:

First, as with all technological advancements, GPS should not be used blindly; its accuracy must be understood in relation to mapping accuracy. Imagine navigation in such featureless terrain as that of western Iraq, and contrast it with navigation at such places as West Point, New York, where there are many distinctive terrain features and human-engineered features. GPS grids would be ideal for navigation in the first instance but might be too accurate for navigation in the latter.

Next, GPS is a wonderful addition to the arsenal of technical aids now available. It provides information at previously unattainable speeds and to previously unattainable levels of accuracy. Such information could include your location, azimuths and distances to objectives, and the range and deflection to other locations.

GPS should not be used blindly; its accuracy must be understood in relation to mapping accuracy.

Finally, as infantry leaders, we must temper this wonderful technology with common sense that is rooted in competent land navigation and terrain association skills. The next time you position a target reference point, a passage point, or an obstacle—or send a net call asking all squad leaders, platoon leaders, or company commanders to meet you at a location you have determined using GPS technology—make sure you have plotted the coordinate on your operational map to see if you are, in fact, where the GPS says you are. Conversely, when you issue an order that involves a grid coordinate, be aware that the coordinate you read off your map and send may be blindly located using GPS technology, even if an adjustment of 50 or 100 meters is logical and would better meet your commander's intent.

No technology will ever replace the need for infantry leaders to understand terrain and to be competent in the art of land navigation, but these skills—when used in conjunction with technological advances such as GPS—will ensure that a commander knows where he and his maneuver units are every time.

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Armor-Light Operations
Light Infantry Against a Heavy Force

LIEUTENANT COLONEL STEPHEN W. GARDNER
CAPTAIN JAMES H. JOHNSON

It appears from recent missions that light infantry and armor will operate together more frequently in the future. Light infantry is becoming more lethal in its tank killing capability. As part of a heavy task force, light forces are likely to be called upon to attack and kill enemy armor during heavy-light operations.

Effective armor-light operations require, however, that both heavy and light commanders change their traditional methods of operation. The heavy brigade commander must decide how to employ his attached light battalion; the light battalion commander must reorganize his forces as well as alter the way he fights. Correctly task organizing the light force for these operations can make the difference between success and failure.

The traditional approach to task organizing for armor-light operations is to divide the attacking light forces into assault, support, and reserve elements. This approach works, however, only if the light battalion is to attack enemy dismounted infantry. If it is directed to assault enemy heavy forces, the organization must be completely changed to make it more effective.

An effective task organization for a light force preparing to attack an enemy heavy unit consists of a reconnaissance element, a security element, a long-range assault element, a short-range assault element, and support element.

The following scenario illustrates how a light task force, organized into these five elements, can contribute to a successful attack by the heavy brigade:

Enemy Situation

An enemy motorized rifle battalion (MRB) is in a deliberate defense. Its mission is to block a choke point and prevent a brigade-size mechanized force from passing through. The battalion has two motorized rifle companies (MRCs) occupying battle positions that tie into the restrictive terrain and form a kill zone in the choke point. The third MRC is positioned in depth with supporting fires into the kill zone. The MRB also has two dismounted infantry companies that occupy restrictive terrain on both sides of the choke point.

Friendly Concept of the Operation

The brigade commander directs the light battalion to infiltrate, bypass the enemy dismounted infantry, and destroy the right flank MRC that is tied into the restrictive terrain. By attacking this company, the light task force unhinges the flank of the enemy battalion defense, forces the enemy to fight in more than one direction at a time, and prevents the enemy from massing all his combat power in his kill zone. The destruction of this MRC will allow the mechanized forces to pass through the opening and destroy the MRB from the flank and rear.

The light battalion initiates the attack on the MRC before first light so the heavy force can assault shortly after sunrise. The synchronization of the heavy and light attacks is critical to the accomplishment of the mission. Each attack must complement the other.

Task Organization

With the concept of the operation understood, the light infantry commander forms his five combat elements and develops a concept for each:

Reconnaissance. The reconnaissance element consists of the battalion scout platoon plus one squad from a rifle company. Its mission is to pinpoint vehicle locations in the MRC so the assault elements can destroy them. Additionally, it will attempt to locate the enemy battalion's reserve and other key weapon systems.

The reconnaissance element infiltrates two nights before the attack and begins reconnaissance the next night using small teams and long-range thermal sights. The teams observe the MRC battle position to find the prepared vehicle and hide positions. The thermal sights, carried in by the attached squad, are used to scan the entire MRB battle position for high-value targets. The attached rifle squad, in addition to being an excellent intelligence gathering source, provides additional security for the scout platoon and allows a better distribution of the mission essential equipment. This added security and carrying ability give the reconnaissance element a better chance

of infiltrating to the objective with the equipment it needs to accomplish its mission.

Security. The security element consists of a rifle company (minus), an attached engineer squad, and a Stinger section. Its task is to ensure that the infiltration lane is clear for the following assault and support elements and then to isolate the objective from enemy reinforcement during the attack.

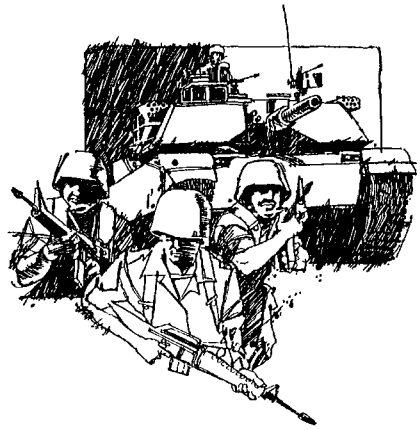
The security element is the first main-body element to move down the infiltration lane. The engineer squad opens lanes in obstacle belts for the follow-on elements as needed. The security element is the lightest main-body element in terms of firepower and soldier's load because its antiarmor and mortar sections are detached.

Long-range Assault. The long-range assault element consists of the battalion TOW platoon, the artillery forward observer, combat observation and lasing teams (COLTs), Stinger teams, and a rifle platoon (minus) mounted on high-mobility multipurpose wheeled vehicles (HMMWVs). The task of this element is to destroy at least two platoons of the MRC on the objective. It then helps the security element isolate the objective from reinforcing vehicles while the short-range assault element destroys the remaining vehicles. All the components of the long-range assault element are mounted on HMMWVs and under the control of the headquarters and headquarters company commander. This element initiates the battalion's attack on the objective.

The TOW systems, the forward observer, and COLT teams represent the battalion's primary means of destroying the enemy at long range. These systems allow the light battalion to engage the enemy with potent firepower while avoiding a direct-fire confrontation against vastly superior heavy weapons. The infantry platoon (minus) provides local security for these assets during the operation. Once the short-range assault element attacks, the long-range assault element helps the security element seal off the objective and adjusts smoke and indirect fire.

Short-range Assault. The short-range assault element consists of a rifle company with all antiarmor sections from the other rifle companies attached. Its task is to destroy the MRC remnants on the objective. It does this by breaking down into antiarmor killer teams, each consisting of a rifle squad and an antiarmor element. Each antiarmor element has two Dragons, with night sights, and AT4s. The antiarmor killer teams fire volleys of Dragon and AT4 rounds to destroy the MRC's remaining vehicles. The rifle squad that is paired with each antiarmor killer team is used to help carry extra Dragon rounds, AT4s, and Dragon night sights and to provide local security.

While these teams are outmatched by the firepower and mobility of the



mechanized enemy, their ability to deliver decentralized fires brings to the battlefield a different type of firepower and mobility. After the initial destruction caused by the long-range assault element, the wide dispersion of antiarmor killer teams that appear before first light makes the enemy feel he is being hit everywhere at once.

Support. The support element consists of a rifle company with all 60mm mortar sections attached, the engineer platoon (minus), an 81mm mortar platoon, and the Stinger platoon (minus). As the last main-body element to move through the infiltration lane, the support element must be prepared to execute a series of tasks: It acts as the battalion reserve, provides immediate indirect fire support, and provides all necessary manpower to carry the mortar rounds for the mortar sections. Additionally, it must carry enough Stinger missiles to support the Stinger teams that are moving on foot with it. Finally, this element must be prepared to open obstacle lanes for the attacking mechanized forces as they exploit the opening created by the destruction of the MRC.

In this scenario, the light force successfully infiltrates, destroys most of the assigned MRC, and helps the attacking heavy force pass through the resulting gap. The enemy forces, surprised by the light battalion's ability to destroy their armor vehicles during darkness, temporarily focuses attention away from the attacking heavy force. This diversion allows the heavy force to mass its combat power and push quickly through the gap. The enemy is then attacked from behind and soundly defeated.

By task organizing into the five elements, the light infantry battalion effectively contributes to the brigade's attack. The heavy brigade commander makes the most of the unique capabilities of the light battalion and increases his overall combat power while also preserving his armor and mechanized infantry for the main attack.

This task organization is unconventional, and each new element formed must rehearse its part. Although it may not be necessary to follow this exact task organization for all light operations against armor, it does provide a basis upon which other ideas on task organizations may be developed in similar situations.

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Captain James H. Johnson is assigned to the 3d Battalion, 75th Ranger Regiment. He previously served in the 82d Airborne Division and commanded companies in the 7th Infantry Division.

Developing a Cohesive Unit

CAPTAIN PETER G. KILNER

Time and again, analyses of the actions of men in battle cite cohesiveness as the most valuable combat multiplier. Soldiers who have bonded with each other and with their leaders are more likely to fight effectively. In combat, where the fate of all depends upon the conduct of each, mutual trust and respect are the cornerstones of success.

Developing a cohesive combat unit may be the most important task for an infantry leader, and often his most difficult task as well. Unfortunately, there is little concrete guidance on how to do it. In addition, cohesion is intangible. There is no mission training plan that states its critical tasks, and it is a difficult concept to quantify on an efficiency report. Still, leaders must emphasize cohesiveness. If they do not, their subordinate leaders who excel technically and tactically may be frustrated by their unit's sub-par performance.

Field Manual 22-100, *Military Leadership,* provides a general framework for developing cohesion in a unit. It stresses realistic training, personnel stability, and a sense of ownership on the part of the chain of command. Furthermore, it states:

Caring is essential to cohesion among all soldiers and leaders in a unit. A soldier's belief that his leaders and buddies care for him, and will always do their best for him, increases his desire to fight to protect his fellow soldiers. This bonding is the basis for the cohesion needed on the battlefield.

In a profession where leaders have an obligation to develop mental and physical toughness in their subordinates, leaders may not be sure how to demonstrate their care for their men. Like all leaders, I experimented constantly with methods of fostering cohesiveness in my unit. I found three elements to be most successful: establishing a clear standard of integrity, writing to parents, and writing letters of recommendation.

The integrity standard establishes the moral climate in your unit. It marks you as the moral standard-bearer. Post it permanently on your unit bulletin board, and require all soldiers to read it during their initial counseling. Let it stand as a constant reminder—to you as well as your soldiers—that the welfare of the unit supersedes that of any individual. (My own integrity standard is included here as an example.)

This high standard of integrity must be coupled with a leadership climate in which honest mistakes are tolerated. Loyalty and empathy, up and down the chain of command, must be emphasized to insure the positive acceptance of the integrity standard.

The command climate fostered by the integrity standard reinforces unit cohesion in many ways:

- It improves communication, once subordinates realize that their leaders really want to hear the whole truth and that they will not be punished for "coming clean." Problems are thus more likely to surface, and to be solved. Every problem solved becomes a source of pride and confidence for the soldiers. Junior soldiers, who usually know their unit's shortcomings firsthand, appreciate that their leaders are genuinely concerned with being combat-ready, and not simply with looking good for the boss.
- It reduces personality conflicts. Disputes among peers are less likely when there is no doubt about what is and is not acceptable behavior. Those who cannot conform to the norm are likely to leave; those who remain are able to trust each other.
- It encourages initiative among subordinate leaders. The sense of trust and shared mission frees junior leaders to train realistically. Because they are not afraid to fail sometimes in peace, they will be more likely to learn from their mistakes, and to succeed in combat. Realistic training and subordinate leader "ownership" are key elements in the development of unit cohesion.

Two other ways to promote unit loyalty and cohesion are the letter home and the letter of recommendation. These letters, generally written at the beginning and end of a soldier's tour, clearly demonstrate a leader's concern for him. In many ways, they mean more to him than an award or commendation.

The letter home is written as an introduction, and additional letters can be sent to keep the parents abreast of their son's accomplishments. In the first one, introduce yourself and your own background experience. Tell them the soldier is reliable, motivated, hardworking. Tell them specifically what he is doing: For example, "Joseph is a driver for a combat HMMWV (high-mobility, multipurpose wheeled vehicle), the successor to the Army Jeep, which carries a scout squad of three men." Acknowledge the anxiety the parents may be feeling about their son's absence from home, and assure them that the entire unit is committed to his welfare. Tell them something about his platoon sergeant and his section or squad leader. Tell them about the oppor-

Standard of Integrity

Some people think integrity means to refrain from lying. They are right, to an extent—about 10 percent. Integrity is much, much more than simply not lying. It means telling the whole truth, unsolicited, even when it hurts you or someone else. It means not allowing someone to be misled or misinformed. Integrity is pro-active.

Integrity is the bedrock of an effective military organization. In training, it is a soldier's integrity that forces him to accurately record and report shortcomings and problems so they can be addressed and solved. In maintenance, it forces him to do the boring, seemingly inconsequential checks that may make the difference between combat readiness and deadlined equipment. Integrity spurs initiative and efficiency in everyday activities. When leaders can trust their men, they spend less time checking and more time doing.

Integrity fosters trust. Trust breeds cohesion. Cohesion is a critical indicator of how a unit will fight (and survive) in combat. Soldiers need to know that they can count on one another. Integrity is infectious, part of a unit's culture. Practice it, encourage and enforce it, and it will become our way of doing business.

In this unit, integrity in its purest form is the standard. Our job (and our lives) are too important to accept anything less.

I am not so naive that I think everyone will internalize this concept of integrity. But I do expect that every soldier will conduct himself by it.

tunities open to the soldier. Tell them about his state of health and about his upcoming promotion. Thank them for being his teachers and role models. End with an invitation for them to write to you with any concerns they may have.

Your soldiers will appreciate having you do the bragging for them. On leave, they will arrive home heroes, and they will owe it to you. That same sense of "going the extra mile" for each other will foster the personal and professional bonds that pay off in combat.

Most parents are powerful allies for an Army leader. Their encouragement and pride are often a significant source of motivation for your soldiers. Their advice may tip the scales when it comes to reenlistment decisions. Additionally, soldiers who know you are in touch with their parents may think twice before doing something stupid. The small effort in writing their parents pays big dividends in loyalty, motivation, and conduct.

For a soldier leaving your unit, writing a letter of recommendation—to a prospective employer or a college director of admissions—may be the easiest way to demonstrate your genuine concern for his welfare. He has nothing more to offer you, yet you continue to help him. It is the right thing to do. For a soldier who is leaving the service, that letter will be much more valuable than his award in securing civilian employment and schooling.

The time and effort you spend writing letters of recommendation will result in better cohesion within your unit. Your men will see that you care about them, and this will promote vertical bonding. They will be happy to work for someone who makes the extra effort to help them out.

Building cohesiveness in your unit is critically important. By making the extra effort to establish an integrity standard, write letters home, and write letters of recommendation, you will set some conditions that both foster cohesiveness and help the unit accomplish its mission.

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Innovations
From Operation DESERT STORM

CAPTAIN JOHN R. SUTHERLAND, III

Armed conflict and the pursuit of victory (or at least survival) have produced numerous innovations that have led to advancements in all fields of human endeavor. The most obvious area of interest is the improvement of warmaking tools.

The Civil War brought us the minie ball, rifled muskets, primitive hand grenades, and prototype submarines. World War I ushered in the tank, and World War II introduced guided

missiles, V-2 rockets, jet aircraft, shoulder-fired antitank systems, and the atomic bomb. Korea saw the use of the helicopter, and Vietnam brought us the M16 rifle and the CH-47 and AC-130 gunships, with their direct fire systems.

On a grand scale, I suppose the real innovations to come out of Operation DESERT STORM will be in the fields of digitization and strategic lift, two pronounced weaknesses identified during the operation. But several existing systems were tested and proved under combat conditions in this war—the M1 tank, the M2 Bradley fighting vehicle (BFV), the multiple launch rocket system, the heavy expanded mobility tactical truck (HEMTT), the high-mobility multipurpose wheeled vehicle (HMMWV), and J-STARS. A lot of smaller, and perhaps even more revolutionary, systems were also proved—such as the global positioning system (GPS).

I offer here less ambitious innovations that were developed at company level during Operations DESERT SHIELD and DESERT STORM. None of them are revolutionary. Certainly, none will change the face of war as much as did the invention of the machinegun and the tank, but they nevertheless helped us do our job better.

What all of these little inventions have in common is that they make sense, they're cheap, and they improve the chances of survival and success for the infantrymen who use them.

The Hot Box

When the 3d Battalion, 15th Infantry, 24th Infantry Division, was alerted for deployment on 6 August 1990, we packed heavy. We were to be the lead battalion task force of the division's lead brigade. Our positions would be an hour's drive away from Ad Dammam, out in the desert; there was no real logistics base yet, and none was expected to be ready any time soon. The Bradleys were therefore loaded down with all classes of supply.

A fully combat loaded M2 Bradley that is being shipped 7,000 miles to an immature theater of operations, and that faces the possibility of combat immediately upon arrival, must be prepared to sustain itself, its crew, and its infantry rifle team. It is therefore short of space. The M2 strapping plan, which made the most of the space available, was the basis for the load plan, but it was still not enough for the total needs of the fighters in this situation.

One of the hungriest space eaters was the number of 25mm ammunition boxes. Thirty 30-round boxes were needed to fill the Bradley's unit basic load of 900 rounds. When Class V supplies for the TOWs, AT4s, and all the rifle teams were added, the vehicle was packed. The 25mm boxes were strapped to the walls of the Bradley and stored under the floorboards. When the vehicle was maneuvering over rough terrain, some of these boxes would shake loose from their bindings, careen around the rear of the vehicle, and pummel the infantrymen in the back.

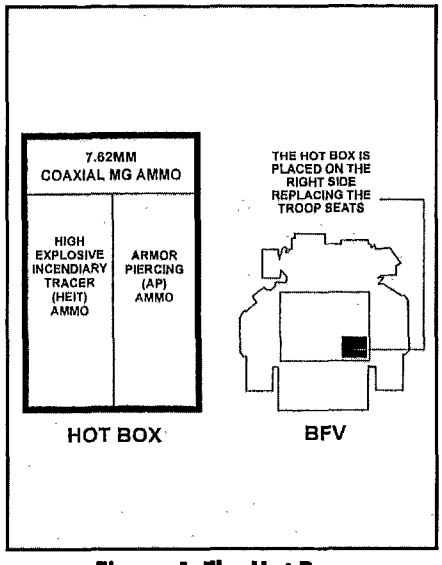


Figure 1. The Hot Box

The ammunition's location also risked sympathetic detonation in the event the vehicle were penetrated by antitank systems or mines. Every BFV that was hit (so far as I know) suffered more casualties from this reaction than from the strike of the rounds themselves. In addition, the 25mm ammunition boxes were awkward to handle and slowed the reload of a buttoned-up Bradley.

The Hot Box was our solution to the storage and reload problem. It was invented by the master gunner of Company D and perfected by the soldiers of Company B. It was, essentially, a fabricated footlocker designed to store the 900 25mm rounds without using the 30 ammunition boxes. We used our overhead cover boards to create the boxes, gambling that we would be on the offense rather than the defense.

The box was sectioned off to create compartments for the 7.62mm coaxial machinegun, the 25mm armor-piercing, and the high-explosive incendiary tracer (HEIT) ammunition (Figure 1). The 30-round belts were removed from the boxes and neatly layered in their compartment. Every fifth round was marked with a wrap or two of tape; this allowed the loader to fan the ammunition in his hand, in the dark, and determine the exact number he needed for the reload. The positioning of the box and the arrangement and marking of the rounds allowed for reloading on the move, buttoned up, and in the dark.

All the troop passenger seats in the center and right of the vehicle were removed, and the Hot Box was slid into that space. Although the weight of the ammunition held the box firmly in place, rails on the bottom would allow the box to slide easily in and out and to be secured. Two or three of the old seat cushions were bolted to the lid of the box.

The Hot Box offered several advantages:

- Reloading, under all circumstances, was much simpler and faster. The ammunition was also much more accessible; there was no need to break open ammunition boxes and lay 25mm rounds on the floor of the vehicle. The marking of the rounds and the layout of the belts made it easier for the loader to count his rounds to break and hang them in the ready boxes. Our rehearsals showed a dramatic time-saving from the simplification of this task.
- We felt that the centralization of the ammunition farther inside the hull and the elimination of the ammunition boxes improved overall survivability, because the boxes that were under the floorboards were replaced by sandbags

for protection against mines.

• The infantrymen in the back of the vehicle were actually more comfortable riding on the box than on the troop seats. They had more space and easier access to their mission equipment.

• We felt that the chances for sympathetic detonation were reduced (although this was never tested), because the ammunition was in one central location instead of being spread out all over the vehicle and close to the hull. Anyone who replaces our wooden Hot Boxes with Kevlar and spall liners should be in pretty good shape.

All in all, the soldiers who used the box felt it was the best innovation, from our level, to come out of DESERT STORM.

Bradley Blow-Down Exhaust

Before my assignment to the 24th Infantry Division, I spent three years in the Mojave Desert at the National Training Center as part of the opposing force (OPFOR). During that time, I learned a lot about down-in-the-dirt maneuver.

One of our little grass roots observations was that we didn't need to see, or even hear, a Bradley to determine its location. All we needed to do was look for the exhaust plume that shoots straight up into the sky from the center

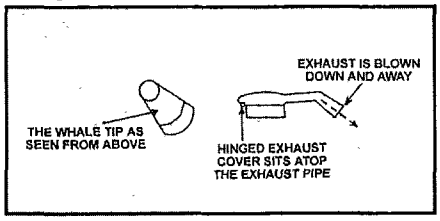


Figure 2. Bradley Blow-Down Exhaust.

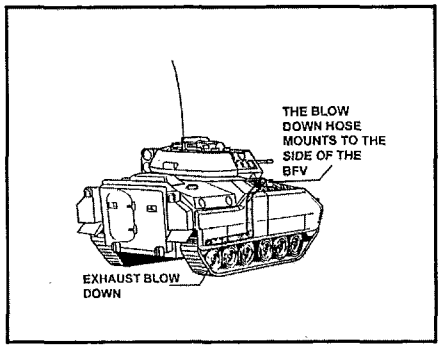


Figure 3. Flexible Hose Exhaust.

and right side of the vehicle. When the battle closed and the close-quarters wadi fighting began, this became a key identification technique for the OPFOR. Later, in the 24th, when using thermal sights, I found the signature even more pronounced.

The crews and mechanics in our unit tried to solve this problem but lacked the expertise and the material to perfect it. We did design a simple solution, which we never got to try, and saw one that another unit had instituted.

We tried to reproduce the "whale tip" that is used on the M551 Sheridan, and I still believe this was the best approach. The whale tip is a flat, triangular, downward-canted device that attaches over the exhaust on a hinged swivel (Figure 2). It resembles a vacuum cleaner attachment and is very simple.

The 3d Armored Cavalry Regiment's solution was to secure a large, flexible, metal hose to the exhaust (Figure 3). The hose, which was somewhat like a drying machine hose, guided the smoke down and to the rear of the vehicle. I didn't get close enough to see just how the system was secured, but it looked pretty solid. It forced the exhaust down and away, and the crew claimed it was effective in reducing the thermal signature.

I liked this approach but felt that the whale tip would be cheaper, tougher, and equally effective. The tubing technique was effective in the desert, but it would be vulnerable in the cargo hold of a ship or the belly of a C5 or C17.

The Backup DMD

When the scouts in the battalion traded in their M3 Bradleys for HMMWVs in 1989, the M3s went to the line companies to be used by the executive officers (XOs), and one of these was the target of our team's next upgrade.

The weak link in the Bradley-Abrams company team is the fire support vehicle (FSV), a reengineered M901 improved TOW vehicle (ITV). This vehicle is renowned for its lack of speed and its unreliable, sensitive, hammerhead. During rehearsals and offensive maneuvers, the FSV habitually fell behind the rest of the team. Some of the FSVs in the battalion were down for maintenance again and again, and usually for a longer time because of the limited number of qualified FSV and ITV mechanics. In addition, the FSV, being easily distinguishable from the rest of the team vehicles, is a high-priority target.

Realizing these weaknesses more than anyone else, my fire support team (FIST) NCO felt the need to create some redundancy in the system. The ground/vehicle laser location designator (G/VLLD) was already capable of being removed and could be backed up by hand-held laser range finders and global positioning systems (GPSs). The key system to duplicate was the digital message device (DMD) that the FIST uses to send digital fire requests through TACFIRE.

By chance, the FSV had an extra DMD as backup. The FIST NCO grabbed this spare DMD, a mechanic, the communications sergeant, and the team master gunner, and they all descended on the XO's Bradley with the intent of wiring it with the extra device. The M3 had the space for an extra radio in the back. A few cables and an extra antenna were required to complete the job.

The DMD was mounted in the troop compartment where the company NBC (nuclear, biological, chemical) NCO rode. The idea was that the NBC NCO would become the backup in the event the FSV went down to maintenance or enemy fire, picking up digital calls for fire until a member of the FIST could be cross-leveled to take over. Once the device was mounted, the FIST NCO spent three days training and drilling the NBC NCO on the operation of the DMD, and he quickly became proficient.

The company therefore had a redundant call-for-fire system at its fingertips. This allowed us to provide multiple coverage to the company and any separate platoon that might be required to operate away from the company. I actually exploited this capability during DESERT STORM when I had to send a

platoon three kilometers away from the company team to tie in a gap between two brigades along the highway that paralleled the Euphrates River. The FSV went with the platoon for the night, since it would be forward while the XO's M3 provided coverage for the rest of the team in the battle position.

This added insurance was easy to rig, cheap to install, required no extra equipment, and was an effective backup to the existing team capabilities.

The 30-Hour Thermal TRP

My unit, like all others, wrestled with the problem of developing a reliable, long-lasting, and low-maintenance thermal target reference point (TRP). We wanted a fire-and-forget TRP that would burn for an entire night without having to be serviced by a dismounted infantry squad. We also wanted a low signature that would not be easily visible to the naked eyes of enemy scouts.

Many ideas brought up with the team were rejected as too high in maintenance, too visible, or too costly to emplace. We toyed with a full range

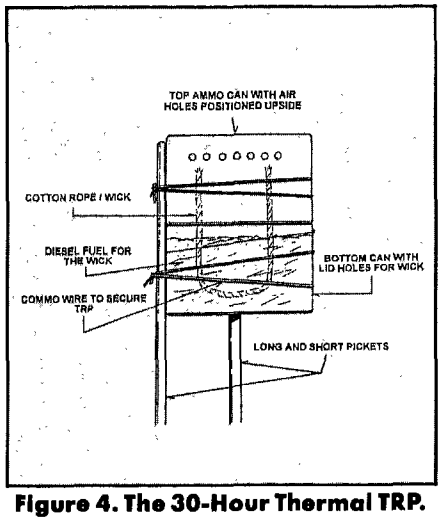


Figure 4. The 30-Hour Thermal TRP.

of possibilities—two nine-volt batteries stuck together, charcoal barrels, dry ice, medic heat pads, and fire pits.

Finally, knowing the answer was out there somewhere, I gave each platoon a week to develop its own proposal and have it ready to go. I told them the TRPs had to be made of common supply items, be easy to set up, and have a good burn time. We emplaced all of the prototypes in an imaginary engagement area and used them for a night of hasty defensive operations. The XO and I assumed the role of enemy scouts and tried to infiltrate the company position. The FSO rode in my HMMWV and used the GPS and headlights to mark calls for fire.

The best TRP proposed was based on Saudi lamps that we had purchased locally and on a class given by a live-fire observer-controller at the National Training Center. It required two 7.62mm ammunition cans, communications wire, one long picket, one short picket, some diesel fuel, and a six-to-nine-inch length of locally purchased cotton rope.

The lid was taken off one of the cans, and two large holes were added to the top of the other can. The one without a lid was placed upside down on top of the other, and small air holes were punched in its side (Figure 4). The two were wired together, with the rope threaded through the two holes in the bottom can to form a wick. The pickets were the base for the TRP and were secured to it with the communications wire.

Once ignited, this TRP provided a thermal signature for more than 30 hours without servicing. In fact, we had to put it out. It also provided virtually no signature to the naked eye. We figured out that we could punch holes in the top can in given patterns to mark a TRP as TOW, tank main gun, or Bradley 25mm chain gun. This made our defenses much easier to mark and sustain, and it eliminated the need to send infantrymen into the engagement area to relight TRPs.

Other Tips

In addition to these major innovations, I also offer the following tips:

- The GPS is excellent for rehearsing and verifying an engagement area. It can be used to pinpoint obstacles, dead space, and TRPs: The XO drives the engagement area under observation from the battle positions. He traces all of the trigger lines and when two out of three battle positions lose sight of him, he notes the grid and distance of dead space until he is visible again. This area is then plotted as an obstacle or artillery target.
- The BFV or tank turret can be used as a compass. A crew member walks from the vehicle out 100 meters on the projected azimuth and then shoots a back azimuth to the turret to verify the heading. The vehicle commander then lays the gun on the soldier and engages the turret stabilizer on the gun. The gun tube will be trained on the right heading wherever the vehicle goes. The commander just keeps the barrel pointing center and dead ahead.
- Nautical compasses from boats can be mounted inside the turret of a combat vehicle. Calibrated to compensate for the vehicle's magnetic field, they can be reliable on-board compasses.
- Firing port weapons are excellent for clearing trenches and bunkers. These weapons are small and light, and they put out a high rate and volume of fire. A unit must carry a rucksack full of loaded magazines and two weapons per clearing team. The lead team must have an antenna with a flag on it protruding from the trench so the BFVs can walk fires in front of their advance, and each team must be able to mark cleared bunkers and turns in the trench.
- Smoke pots can be used to back up on-board smoke. They can be secured to the rear and electrically detonated with communications wire and a nine-volt battery. Or one can be kept on the turret with the Bradley commander, who lights it with the striker and discards it once it has burned out. This is helpful for controlling the position and volume of smoke on a breach lane.
- Tanks and Bradleys can easily drive right through six strands of concertina wire, stacked two high. The skirts on the BFVs must be bolted up so the wire

What all of these little inventions have in common is that they make sense, they're cheap, and they improve the chances of survival and success for the infantrymen who use them.

won't get caught up in the road wheels. So long as there are no mines, there is no need to stop.

• The BUDD light is an excellent means of marking vehicles within the task force formation. All that is required is a little tape, a nine-volt battery, and an MRE bean component box to make a hood (the IR light is very bright). When used with AN/PVS-7s, the light makes an excellent IR flashlight for clearing bunkers and trenches.

Many other lessons were learned during Operation DESERT STORM that could be exploited in the Army today, by both light and heavy forces. With the increased number of deployments to various contingency areas, it is important that these lessons be disseminated to the field. Innovations need to be publicized so that, instead of reinventing them, other units can improve upon them and go on to share their own innovations.

Captain John R. Sutherland, III commanded a company in the 24th Infantry Division during Operation DESERT STORM and served as an observer-controller at the National Training Center. He is now an Infantry Officer Advanced Course small group instructor. He is a 1983 ROTC graduate of Northern Arizona University.

FIFTY YEARS AGO IN WORLD WAR II
May-June 1945

The spring of 1945 saw the end of the war in Europe, as remnants of the once-formidable Wehrmacht scrambled to avoid capture by Soviet forces bent on avenging the staggering military and civilian losses they had sustained over the past four years. The first large-scale capitulation came on 2 May, with the surrender of all German forces in Italy to the U.S. 15th Army group. The official instrument of surrender was signed by representatives of the German High Command at Reims, France, on 7 May, to become effective on 9 May.

In the Pacific Theater, Japanese dreams of victory had long since been replaced by the inevitability of defeat, and remaining Imperial forces continued to hold out in bitter, last-ditch fighting that took a heavy toll on the U.S. and Allied soldiers, sailors, and Marines who were relentlessly closing the circle.

These and other highlights of the closing days of World War II are excerpted from Bud Hannings' superb chronology,* A Portrait of the Stars and Stripes, Volume II, *available for $50.00 from Seniram Publishing, Inc., P.O. Box 432, Glenside, PA 19038.

1 May *U.S. offensive operations in Germany are halted in the U.S. Ninth Army area as masses of German soldiers surrender, preferring capture by the Americans to capture at the hands of the Russians.*

3 May *The Japanese launch a full-scale counterattack against U.S. ground and naval forces on and around Okinawa, hitting the fleet with Kamikaze aircraft and attempting two amphibious landings to flank American units already ashore. U.S. Army and Marine Corps forces destroy nearly all of the landing craft, killing nearly 800 of the enemy. U.S. Navy losses are high; three destroyers are sunk, and three other destroyers, a light cruiser, and four other vessels are damaged.*

25 May *The Joint Chiefs of Staff approve plans for Operation OLYMPIC, the invasion of the Japanese home islands, which is tentatively set for 1 November 1945.*

6 June *Staff Sergeant Howard E. Woodford, Company I, 130th Infantry, 33d Infantry Division, takes charge of a group of Filipino guerrillas, pinned down by heavy Japanese fire, and succeeds in penetrating the enemy lines. The following day, the Japanese hurl a predawn Banzai charge against his position, wounding Sergeant Woodford, who calls in mortar fire until his radio is destroyed. Relying on his own rifle fire, he rallies the guerrillas and holds on. At the end of the fight, he is found dead in his position, with 37 Japanese dead to his front. He is posthumously awarded the Medal of Honor.*

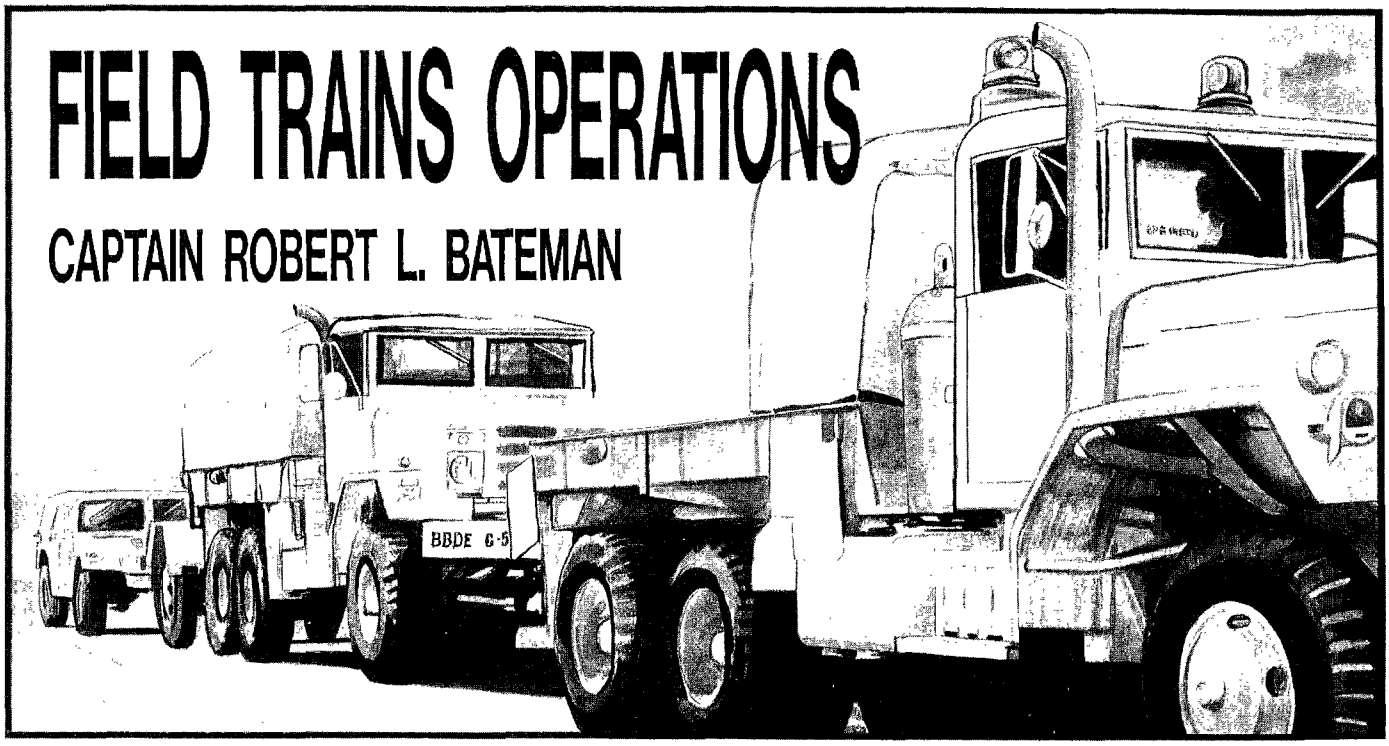
19 June *Japanese forces that have held Wake Island since December 1941—one of their first gains of the war—are subjected to a relentless pounding by planes of Rear Admiral R.E. Jennings' Carrier Task Force.*

22 June *The Stars and Stripes are officially raised over Okinawa, opening the way for the invasion of Japan. The cost has been high, with more than 12,500 Americans killed or missing and another 36,600 wounded. Total Japanese casualties are estimated at 110,000 dead and 7,400 captured.*

30 June *The Luzon Campaign ends, with the U.S. Eighth Army assigned responsibility for mopping-up operations.*

FIELD TRAINS OPERATIONS

CAPTAIN ROBERT L. BATEMAN



A U.S. Army mechanized infantry task force has one great potential weakness, and that is its field trains. This vulnerability is not due to a lack of dedicated soldiers, looser discipline in the rear areas, or missions beyond the capabilities of the field trains. The problems that beset the field trains stem from a lack of realistic training opportunities, the turnover of personnel between these few training events, and too little specific information in the doctrinal and training manuals on field trains operations.

In an effort to alleviate some of these problems for other headquarters and headquarters company (HHC) commanders, I offer here some specific recommendations on the subject. The areas covered are based upon my own experience and the distilled experience of observer-controllers at the National Training Center (NTC) who evaluated my field trains.

These are the areas an HHC commander should examine, in no particular order, looking for the potential weaknesses in each:

Site Selection and Management

Site management is simple: Lay your wagons in a circle, make one entrance-exit, and keep track of where everyone is. One-way traffic is the rule; one entrance-exit reduces traffic, permits monitoring of the traffic, and simplifies the reporting and tracing of the field trains vehicles. A standard and regular layout also helps in planning and executing displacements. The standard layout shown here encompasses the prerequisites for a successful field trains operation.

Site selection, however, is an outgrowth of two factors—the forward support battalion (FSB) command relationship and your security philosophy. That is, will the FSB "command" the field trains of the various task forces and dictate their location? and Do you believe it's better to try to hide the field trains or to select an open but easily defendable position for them?

Based on experience, I believe the field trains must operate independently of the FSB and rely primarily upon concealment for security. This belief stems from two facts:

The FSB and the brigade support area (BSA) are huge and undefendable. Given the FSB's assets, the attendant task force field trains, and the requirement for dispersion to avoid massive casualties in the event of air or artillery attack, the average BSA may stretch across four kilometers, resulting in a perimeter of about 13 kilometers. And this is a perimeter generally without the assets to defend it; it does not have enough trained personnel or Class IV (barrier materials) or V (ammunition) immediately available to make defending it an option while still providing mission support to the maneuver elements—unless the maneuver commander is willing to commit additional assets to the defense of his rear areas.

Therefore, if the BSA chooses to execute a perimeter defense with all field trains occupying positions within it, there is no way you can ensure the protection of your battalion commander's assets. You must rely upon measures designed to minimize losses, not avoid them altogether. During actual deployment situations, this condition may be alleviated by the fact that the maneuver elements establish a lodgement area before departing on offensive combat operations.

Combat service support (CSS) elements then occupy this

initial staging base, which gives them a ready-made, well-established perimeter suitable for defense (but, again, not dispersed, and you will never see that at the NTC). You increase your odds of losing men and materiel to air and artillery because the BSA is a huge target, and there is no practical way of concealing its existence and general location. Added to this is the relative immobility of the BSA, which cannot displace without considerable advance preparation. Finally, there is the dismounted rear area threat (at least at the NTC), which invariably succeeds in locating the BSA and conducting limited raids against it.

Given these limitations and the difficulty of securing a perimeter of 10 to 15 kilometers, the obvious choice is to disperse the field trains of the various maneuver elements. Short of placing the BSA within an urban environment, there is no way to avoid its detection. (If the BSA is in an urban environment, reverse this reasoning: It can be concealed and protected, and it is better to be nearer than farther.)

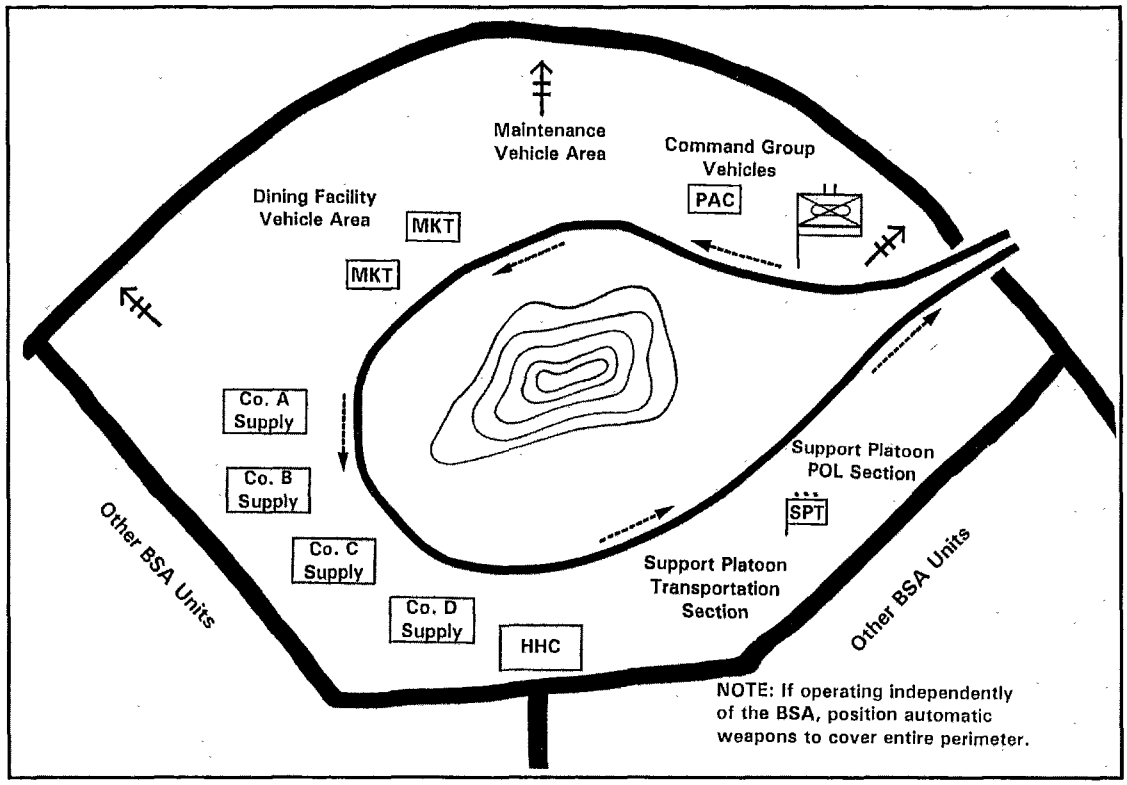
You support *your* task force; the FSB/BSA supports the brigade. The delta between these two may be considerable. As the field trains commander, you may need to make the hard choice and tell the FSB commander, "Sorry sir, I've got to pull out of your perimeter to support my task force. Your BSA is 57 kilometers from my task force, and I just cannot sustain support from this distance. We're moving to within 25 kilometers because of the task force's upcoming offensive operation." I can assure you that he's not likely to be pleased by the 400-meter gap you're leaving. (This can be where you earn your "moral courage" rating on your officer evaluation report.)

Of course, there may also be conflicting guidance in this area. What, exactly, is the command relationship established by the brigade commander? The FSB may expect to plan and direct your employment regardless of your task force's tactical situation, if the brigade commander has so indicated. Before your deployment, you must determine what is expected of you in this area. Does the brigade expect to dictate the positioning and employment of all CSS assets, or is the commander's concept of the operation decentralized enough to allow the task force field trains commanders to determine how they will support their task forces? A possible answer to this argument lies in the future, with the concepts tested by the digitized Experimental Force at Fort Hood.

On the widely decentralized and digitized conventional battlefield of the future, a brigade's area of operation may be twice the size it is now. The implication here is that the task force field trains must remain within the current doctrinal distance of 25 to 30 kilometers if they are to maintain and sustain support to the maneuver elements. This doctrinal support distance is more a function of time and distance factors than of the mutual direct fire support limits imposed upon maneuver elements by the speed and range of their weapon systems. Following this thought, as the brigade area of operations expands, the constituent task force field trains must separate from one centralized location to efficiently support their task forces. Operating independently also affects security.

Security

Security for the mechanized task force trains is always one of the toughest problems for the HHC commander to solve. Manning in the field trains varies with the current task force mission, the time of day (when is the LOGPAC?), and the



threat condition established by the brigade for the rear battle areas. You may find yourself with close to 70 men or as few as 19, just by the departure of the LOGPAC and an additional Class III (fuels and lubricants) and V support package in anticipation of future maneuver operations—not to mention the constant flow of men and vehicles forward as the battalion receives replacements for casualties sustained in previous battles. (Forget using the "replacements" for security; your job is to get them on the first thing rolling forward, including your own vehicle.) Considering the internal requirements to maintain an operational command post (CP), process replacements, and (constantly) prepare Class I (rations), you may still maintain three crew-served weapon positions fully manned at all times. This is slim indeed, but I have met commanders who said they couldn't even man that many and still execute CSS missions. Bite the bullet; remind yourself that if you lose the field trains, the task force you are supporting will crash to a halt just as surely as if it had been engaged and defeated in a maneuver operation.

For the independent task force field trains (operating away from the BSA), the best security methods at the NTC are concealment and movement. Move at least every other day. An observer-controller at the NTC observed that one squadron of an armored cavalry regiment had a field trains that displaced every six hours! (They were never touched by the OPFOR.) On the other hand, that same unit apparently never occupied or maintained individual or crew-served weapon positions. They used a desert laager, moved in a box, and then laagered again. Concealment and local security suffered in this example, but they passed the acid test: They succeeded.

Still, an even balance would be less movement, more local security (three positions), and the selection of a concealed site. My task force field trains once occupied the "Bowl" near the "Tip of the Whale" for five days. This location provided excellent control (limited ingress/egress), defensible terrain, and observation masking from most directions. All the while, this location was no more than 800 meters from the BSA. While the BSA soaked up attack after attack from the air and artillery, our task force field trains suffered none. In fact, the only casualties our assets suffered in that period were those that were in the BSA at the time of an attack (in this case, refueling before our next task force LOGPAC) and the downwind hazard effects of a chemical strike directed against the BSA.

Based on experience, I believe the field trains must operate independently of the FSB and rely primarily upon concealment for security.

Some other hints if your field trains occupy a position in the BSA:

Test fire all your weapon systems twice a day. This will assure you of several facts: that no weapons are without ammunition on hand (don't laugh; it happens); that the weapon itself is functional; and that the crew knows how to fire it. Some may say this will compromise your position, but how do you "compromise" a position that has more than 250 vehicles?

This advice actually came from the OPFOR personnel who operated against us in our second rotation. They said that while they watched the BSA for the afternoon before their attack, they saw one unit test-firing its weapons. This told the OPFOR where to go and where not to go. (It's easier just to go to a section of the perimeter where the soldiers don't even have ammunition instead of testing the alertness of occupied positions where the weapons have been shown to work.)

Although this advice will not save the BSA, it may preserve your own trains' positions. I would also do this in war. Of course, it would take hundreds of sandbags to stop the incoming rounds, but the training for the field trains' low-density military occupational specialties (MOSs)—who would be killed or wounded if caught unprepared—would be worth the cost. (How often do your cooks get to the .50 caliber machinegun range?)

Use local roving patrols. Again, this is advice from the OPFOR. Their reconnaissance will probably observe roving patrols and go to great lengths to avoid them. Again, evidence of your alertness may help preserve your task force field trains. Following this advice (while also using the standard security procedures) may not preserve the BSA, but it should help your slice of the pie remain intact.

LOGPAC Operations

Conducting the LOGPAC falls into the old mold of "planning, preparation, and execution." Planning includes LOGPAC pre-briefs of the current tactical situation, the primary and secondary routes to the planned logistical release points (LRPs), potential hazards on the way, and the reaction to each (hopefully, this is by now SOP, and only the changes must be briefed), and a two-way dialog from the various company supply sections on their previous night's LOGPAC.

This LOGPAC pre-brief should be executed in three phases:

- Last night's LOGPAC: What happened and any problems encountered, and the supply sergeants' submission of requests to the S-4 and the support platoon leader. This portion is covered by the HHC first sergeant and the S-4 NCO in charge.
- Today's timeline; time for preparation, pickup of supplies, marshalling of convoy, start point (SP), and logistics release point (LRP) times. The HHC executive officer (XO) plans and briefs this portion.
- Tactical situation, review of SOPs, backbrief of timeline. This is your responsibility. Use appropriate maps or terrain model to brief all sections of the route.

After the LOGPAC pre-brief, the supply sections generally begin their preparations. This is a period for spot-checking and fulfilling your secondary task force role as jack-of-all-trades in the rear areas. (Preparations by the supply technicians are too specific to be included here.)

The execution phase again depends largely upon the internal SOPs your task force uses. For command and control of the LOGPAC during movement, a successful technique is to place the support platoon leader in the lead, then the main LOGPAC elements, then the HHC XO in trail. Security enroute depends upon the assets the brigade and the FSB are willing to release to see that supplies move forward, and this may amount to no assistance at all.

Cooperation between the S-4 and the elements moving forward from the trains is essential. The S-4 should hold his LOGPAC meeting forward at the designated LRP, beginning no less than one hour before the anticipated LOGPAC arrival. At this meeting, the S-4 discusses the prior LOGPAC with the company first sergeants, receives an initial assessment of their anticipated short-term needs, and updates them on any logistical considerations for the upcoming maneuver operations. This meeting *must* be finished before the LOGPAC arrives.

An efficiently run LRP will remain active for less than five minutes. The idea is to configure the LRP and your SOPs so that, as the LOGPAC rolls up, each company slice of the LOGPAC (led by that company's supply sergeant) identifies its first sergeant and immediately follows him as he rolls out of the LRP and to the company position. In the best case, this means the company LOGPAC elements never even stop rolling at the LRP.

Time to return to the LRP is SOP—generally two, three, or even four hours; time starts when the LOGPAC rolls through the LRP outbound to the companies. Return time is critical; reassembly time at the LRP should also be kept to a minimum. Otherwise, you have a large "soft" target in the main battle area and risk missing your resupply times from the FSB. Of course, times for resupply from the FSB may have to be more flexible, depending upon your relationship with that unit.

FSB Relationships

FSB relationships depend upon your brigade's particular command structure and established command relationships. The following are some key points in establishing a good working relationship with your FSB:

Attend the daily support meetings. FSBs usually have one—and sometimes several—of these meetings a day. There may be a support meeting, a separate maintenance meeting, a BSA tenants' meeting, and an FSB command sergeant major's meeting for your first sergeant. If you are in the BSA, multiple meetings may not be a problem—for those who enjoy sitting in meetings. For those who don't, you should find out exactly which meetings you or members of your battalion must attend.

If possible, suggest to the FSB commander that he consolidate his meeting schedule. This serves two purposes:

First, it reduces travel time and time spent in meetings where your participation is only marginal. Second, it may serve as a secondary place for you to conduct your own battalion internal coordination with the battalion maintenance officer (BMO) or battalion maintenance technician (BMT)—if they are required to attend the maintenance meeting—or the S-4/S-1, if either must attend the meetings at the BSA. One large meeting is always better than four smaller ones.

You may be the security expert in the BSA. In an armor-heavy task force, the other task force field trains commanders are likely to be tankers, unfamiliar with dismounted weapon systems and dismounted security procedures. Since the FSB is not likely to have many ex-infantrymen assigned, it may help you (and the FSB that supports you) if you assume the role of BSA security advisor. This helps you protect your own assets and supports your brigade in accomplishing its missions without the loss of critical CSS assets to enemy attacks that succeed better than they should.

FSB relationships depend upon your brigade's particular command structure and upon established command relationships.

Spend time in the FSB tactical operations center; attend their operations orders (OPORDs), and ask to be allowed to give your input. If you do none of these, you may find yourself receiving orders to jump your field trains at the exact moment your battalion expects to go into action. Make the FSB aware of these issues that affect your ability to move or possibly provide FSB support. Keep them aware of the tactical situation on the front lines and the planned future operations by providing them with copies of your task force OPORDs.

Retain your assets. The FSB may come looking for your manpower and transportation assets, and they may not be familiar with your relative scarcity of both. In my experience, the task force field trains received taskings to provide three trucks (of the six available to me while LOGPAC and a push package were forward) and 13 soldiers (of 24 available) to the FSB medical company to augment casualty evacuation. I had orders to give up these assets and did so; as a result, they were unavailable to my battalion commander when he needed them to conduct a hasty NBC decontamination in the main battle area. These assets spent the next nine hours under FSB control, awaiting orders in the BSA.

This, again, is a difficult area. Do you listen to the FSB commander and his staff (who are in the immediate vicinity), or to your battalion commander (who is fairly distant and has a lot more to worry about than CSS)? Then, what happens when your battalion commander needs an asset that you've had to give to the FSB? All of these questions are best resolved *before* you arrive at the NTC.

Maintenance

There are two schools of thought on the field trains and maintenance. One holds with the solution taught at the Battalion Motor Officers Course: Fix forward but establish set times beyond which a piece of equipment will be hauled toward the rear to the next echelon of support. The second concept is: Fix forward and forget the timetable.

My task force subscribed to the second and maintained a better than 92-percent operational readiness rate on all

fighting vehicles during our second NTC rotation. This was the result of excellent maintenance team members who set records for their service and efforts. To accomplish this, they had all assets forward. The only maintenance in the field trains was three wheeled-vehicle mechanics and their tool truck. All else, the prescribed load list sections, the BMO, BMT, and BMS, as well as the services sections remained with and operated from the unit maintenance collection point (UMCP). This consolidated the maintenance effort, ensured unity of effort throughout the task force, and reduced confusion regarding the status of equipment.

To support the concept, our FSB also pushed forward to our UMCP all the maintenance assets it could afford. The decision to do this stemmed from two facts: One, there are precious few heavy equipment transporters (HETs), no matter what you may hear to the contrary. If a vehicle cannot move under its own power, then another must be committed to moving it. If you don't want to lose your M88 tracked recovery vehicles from the front, then HETs must be requested, come forward, and move the vehicle. Then, when the vehicle eventually comes on line, it must drive forward again. All this time, you may have lost visibility on the asset, dual reporting takes effect, and you've also lost a candidate for controlled substitution.

Some battalions have allowed the PAC NCOIC to operate forward in the combat trains CP. This is wrong.

The only modification I might suggest is to retain the HHC maintenance team chief in the field trains. He becomes an excellent alternate for the BMO in maintenance meetings; he's knowledgeable of the critical Class IX supplies; and he comes complete with his own vehicle. Relieved from tracking the maintenance of the battalion task force, you can focus your efforts in other areas. (Of course, you can still have difficulty focusing if you don't have an efficient field trains command post.)

Field Trains Command Post

The field trains command post (FTCP), like any other CP, is the nerve center for support operations. All actions of the battalion, both tactical and administrative, receive attention here, and your ability to influence the battle rests largely upon your ability to manage assets.

For effective operations, at least the following information must be available and up-to-date in the FTCP:

- The tactical situation; current location and strength of all friendly and enemy units as reported on battalion internal radio nets.
- The current OPORD, highlighting CSS (paragraph 4) and the timeline for enemy operations predicted by the S-2.
- Current status and location of all classes of supply (with omission of all but high-priority Class IX). Have this as: On hand, Need in 24 hours, Projected need in 72 hours. Also annotate Class V by type for all weapons, not just the big guns.
- DA Form 1594, *Daily Staff Journal or Duty Officer's Log*, is critical. Train your CP personnel to fill it out accurate and completely. Remind them to write down everything of interest—traffic from the command net and the administrative/logistical net, things that happen in the area, movement in and out of the field trains by key personnel, and assets (LOGPAC) and administrative actions *as they happen.* Remind them that it's all right to make a late entry, just to annotate it as such and log the information with their best guess at the actual time. This is their (and your) diary of events. Ideally, after a time away from the CP, you should be able to walk in, read the form, look at the situation map, and not have to ask a single question.

One other piece of advice here is to attend your battalion's OPORD briefings, no matter what. And don't believe anyone who says otherwise.

Personnel Administration Center

No area is more intricate and difficult to learn or understand than the personnel administration center (PAC). In many battalions, the S-1 shop is undermanned, or manned with personnel who are not fully qualified in their MOSs. At least some of the PAC personnel may be back in garrison to support the families left behind, and the S-1 owns the PAC but is usually not engaged at other locations. Finally, there are myriad forms and regulations to follow, enough to make any self-respecting infantryman weep at the prospect of ever becoming proficient in an assignment as S-1.

To correct this, and in recognition that the PAC is the nerve center of S-1 activities, the PAC NCOIC should be in the field trains to oversee these operations. Some battalions, mine included, have allowed the PAC NCOIC to operate forward in the combat trains CP. This is wrong. There is too much going on administratively to have the most experienced personnel NCO in the CTCP, no matter how desperately the S-1 says he is needed there. From my experiences, I can assure you that failure to adequately resource the PAC with trained personnel will result in failure.

In summary, the command of a mechanized task force field trains is a complex affair. You must focus attention on areas in which an infantry officer may not be trained. Diplomacy becomes a combat skill in your relations with the FSB people, lest they inadvertently direct support away from your task force. Soldiers in some of the MOSs have skills in areas that you may have only a passing knowledge of, yet they may appear (to your infantry eye) to be severely lacking in what you consider basic soldier skills (such as digging a fighting position to standard). All of these factors can lead to CSS that just misses the mark.

Following the advice I've offered here will not guarantee your success, but it may help you focus your efforts more efficiently, and that is what often spells the difference between success and failure in combat.

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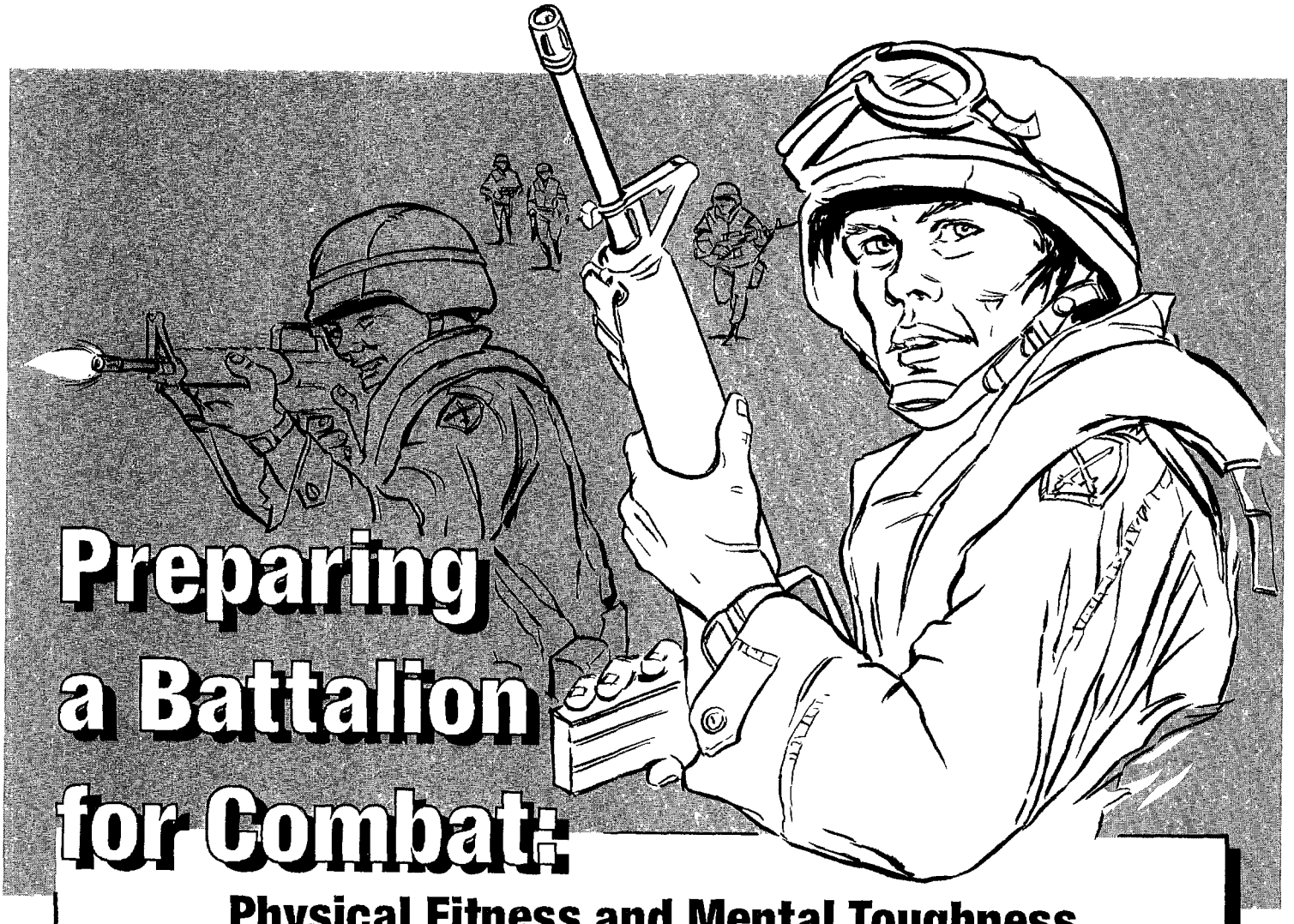


Preparing a Battalion for Combat:

Physical Fitness and Mental Toughness

Lieutenant Colonel William C. David

In late July 1993, soldiers of the 2d Battalion, 14th Infantry Task Force, 10th Mountain Division, left Fort Drum for Mogadishu, Somalia. It was to become the ground element for the 10th Division brigade serving as the Quick Reaction Force for the United Nations command in Somalia. The task force would be the only U.S. maneuver element in country.

Among its other significant actions in Somalia, over a 17-hour period on 3 and 4 October 1993, the task force fought its way from the Mogadishu airfield to downtown and extracted ground elements of Task Force Ranger following the downing of two helicopters. This battle was marked by fierce fighting.

I am one of those who believe that only a really extraordinary infantry battalion could have accomplished this challenging and dangerous mission, and the 2-14 Task Force was clearly extraordinary. I therefore encouraged the battalion commander, Lieutenant Colonel Bill David, to write an article on what is required to make a battalion truly first-rate. The result was a series of articles, covering physical fitness and mental toughness, marksmanship, maneuver live-fire training, and combat leadership lessons learned. This article is the first in the series; the others will appear in subsequent issues.

Colonel David's story is both simple and complex. The insights and lessons, for the most part, are timeless and broadly applicable. This is the story of a battalion commander leading his soldiers as they prepare for combat and in the combat itself. He describes how he built on the basic Army training and doctrine formula and added particular emphasis in core areas to develop a winning team.

This is a personal account, not one drawn from secondary sources.

It will become apparent to readers that the battalion's performance was the result of combat-focused training, careful planning, aggressive execution, and an unwavering commitment to the soldiers' welfare. The story of the 2d Battalion, 14th Infantry, is a lesson in mission focus and readiness.

Major General David C. Meade
Commander
10th Mountain Division (Light Infantry)

Light infantry operations place the human body under great stress. They involve prolonged exposure to the elements, broken sleep on rocky ground, bug bites, rashes, abrasions, contusions, and a ration cycle that is never guaranteed unless you carry rations on your back. These operations require foot movement over extended distances while carrying loads that would tire a pack-mule.

At the completion of any movement, soldiers must still have a reserve of both strength and stamina to fight the close, violent fight against a well-rested enemy. No matter how badly they may hurt, soldiers have to be able to climb, crawl, and sprint long after their adrenaline is gone. Their lives and the lives of others depend on it.

Infantry operations therefore require a high state of individual and unit physical fitness. But physical fitness alone is not enough. Soldiers must also have the mental toughness to reach down inside themselves for an extra burst of strength or speed when their bodies are telling them "No."

Physical fitness and mental toughness are interdependent and inseparable. One is of little use without the other. Together, they are required for every operation an infantry battalion will ever be called upon to execute. They are the essence of light infantry operations and, for this reason, are one of the battalion's core performance areas.

After taking command of the 2d Battalion, 14th Infantry, and making an initial assessment, I knew it was in pretty good physical shape. All the required divisional standards for individual and unit physical training were being met. Like most units, we had a large number of soldiers who wholeheartedly embraced the value of physical fitness and took the initiative to maintain exceptional levels of condition. But we were not aiming for the upper levels in collective physical performance, and as a result, I believed we had not reached our potential in this area and could do even better.

As I talked with soldiers and looked back over the battalion's previous training, I discovered there was also room for improvement in the mental aspect of conditioning. Because mental toughness is an intangible quality, it is virtually impossible to quantify or measure. But even if they can't define it, units that really have mental toughness know that they have it.

This was the type of unit I wanted. Our soldiers had to know in their hearts that they were the toughest soldiers on the block. If companies couldn't go over, under, or around the wall, I wanted them to have the mental fortitude to break it down. When the tactical situation went to hell, I wanted them to have the strength of spirit to find a way to win through a brute force of will.

When it came to physical fitness and mental toughness, the battalion was at the *good* stage, but we weren't getting our extra ten percent. If we were to become high performers in this core area, we were going to have to adopt a training regimen that would stretch our physical and mental capacities in parallel.

Doctrinal and Regulatory Guidance

There is no argument within the Army about the important link between physical fitness and combat readiness. For all the right reasons, every division in the Army establishes individual and unit physical fitness standards that provide an important institutional performance baseline.

The 10th Mountain Division has a standard in this area. Individual and unit physical fitness standards, as outlined in the division's Training Regulation 350-1, are on a par with those of other divisional units. The minimum standards for divisional units, for example, are outlined as follows:

- Physical training conducted five days a week.
- Quarterly four-mile run in athletic shoes in 36 minutes or less, normally conducted as a formation run. (This is also the XVIII Airborne Corps standard.)
- Semiannual 12-mile road march in three hours or less while wearing individual combat gear and a fighting load of 15 to 35 pounds.
- Semiannual Army Physical Fitness Test (APFT) with a minimum overall score of 225, with at least 60 in each event. An average score of 250 is established as a unit goal for PT excellence.

I believed that meeting the division's physical fitness standards were important in guaranteeing that our soldiers would have the physical and mental capacity to do all the things we could reasonably expect to be called upon to do in combat. But in a light infantry battalion, where the highest state of physical fitness is so essential to battlefield success, meeting these standards is only an important first step. The soldiers had to be capable of doing more.

Five days a week for physical training was the right frequency, but we had to be sure we were doing the right things to put real teeth in our PT program. For a properly conditioned soldier, a four-mile run in 36 minutes is no more challenging than a walk in the park. And if unit PT is properly planned and executed, individual fitness levels improve over time so that most soldiers, even on a bad day, can score higher than 265 on the APFT.

The 12-mile road march in three hours is a tough challenge that indicates overall condition, and it has its place in a unit PT program. But it does not accurately replicate all the physical endurance demands of light infantry operations: The prescribed loads for the march are much lighter than those normally carried by soldiers in the field, and meeting the three-hour time limit requires soldiers to maintain a run-walk pace that is too fast to be sustained much farther than the finish line. As a result, the event falls short in developing mental toughness to any significant degree.

Getting the Ten-percent Difference

The process began as a leadership challenge to convince the chain of command that we should, and could, get more out of ourselves in this core performance area. I was confident that if physical fitness and mental toughness could be embedded as a core value of the battalion, then natural interaction among the chain of command in our daily routine would lead us to the ten-percent performance improvement I wanted. This approach had three important components.

To get at the physical fitness piece, we built on an existing

SIGNIFICANT OPERATIONS OF TASK FORCE 2-14 INFANTRY DURING OPERATION CONTINUE HOPE

8 AUG 93: TM B/2-14, TAC CP, HHC(-) respond to no-notice alert to secure the site and recover wreckage/casualties at the scene of a command-detonated ambush that destroyed one HMMWV and killed four MPs. No friendly or enemy casualties.

15 AUG 93: TF 2-14 IN conducts pre-dawn raid that results in the capture of three perpetrators of the 8 AUG ambush. No friendly or enemy casualties.

13 SEP 93: TF 2-14 IN(-) attacks to clear two large compounds in the vicinity of Benadir Hospital. Intelligence sources had indicated that these compounds contained large weapons caches and quartered personnel involved in attacks against UNOSOM (United Nations Operation in Somalia) forces. The operation escalates into a four-hour firefight with the Somali National Alliance (SNA) Militia. TF 2-25 AV provides attack helicopter support. TF 2-14 IN suffers three WIA. Enemy casualties are estimated at 60 killed or wounded.

20 SEP 93: TM A/2-14, TAC CP, HHC(-) conduct pre-dawn raid to capture SNA Militia believed responsible for mortar attacks against the Embassy/University compound—the major UNOSOM and U.S. Forces installation in Mogadishu. TF 2-25 AV provides attack helicopter support. TM A/2-14 receives RPG and automatic weapons fire on withdrawal from the objective area. A brief firefight ensues. No friendly casualties. Enemy casualties are estimated at five killed or wounded.

25 SEP 93: TM C/22-14 IN responds to a no-notice alert to conduct a crash search and rescue operation of a downed QRF UH-60 aircraft. The operation escalates into a six-hour firefight with the SNA Militia. TF 2-25 AV provides attack helicopter support. TM C/2-14 IN suffers three WIA. Enemy casualties estimated at 200 killed or wounded.

3-4 OCT 93: TF 2-14 IN responds to a QRF alert and, over a 17-hour period, performs linkup and extracts ground elements and casualties of TF Ranger following the downing of two TF Ranger helicopters during an earlier operation. TF 2-25 AV provides attack helicopter support throughout. TF 2-14 IN losses total two KIA and 24 WIA. Total U.S. casualties are 18 KIA and 78 WIA. Enemy casualties are estimated at more than 300 killed and 600 wounded.

NOTES:

1. The SNA was the political apparatus in support of "Warlord" Mohammed Farah Aideed following the 1991 overthrow of President Siadd Barre and the subsequent civil war. The SNA Militia was the active military arm of this organization. Its leadership was composed primarily of former Somali Army officers. Many of its soldiers also had military experience.

2. All Somali casualty estimates are based on information provided at the time of the engagements to the Headquarters, UNOSOM, by local human intelligence sources and the International Committee of the Red Cross.

value system—very noticeably present in combat arms units—that stressed carefully planned, balanced, and tough PT every day to improve overall physical conditioning.

To address the mental toughness piece, we regularly stretched ourselves by scheduling grueling unit activities to force everyone through the physical and mental "wall" that is familiar to any marathon runner. And to support this effect, we held ourselves rigorously accountable to every regulatory tool at our disposal.

When the battalion was in garrison, PT was regarded as the most important unit activity of the day. We jealously guarded this time and rarely let other activities interfere. At each weekly training meeting, daily PT was briefed in detail down to platoon level. I looked closely for the proper mix of running distance and time, speed work, road marching, and strength development.

Although unit sports activities were highly encouraged, they were not allowed during PT hours. PT was not the time to play games. It was a time of hard work for everyone. At the outset of my command tour, this philosophy met with considerable resistance by the chain of command and engendered a lot of professional discussion until all key leaders understood my intent.

To model the behavior we wanted, the command sergeant major and I did vigorous PT every day and made sure the battalion saw us doing it. We regularly spot-checked physical training to make sure it was being conducted as briefed. Impromptu after-action reviews (AARs) at the conclusion of PT sessions did a lot to help soldiers better understand the concept of what we were trying to achieve.

Battalion runs were conducted on Friday mornings on an average of every two or three weeks. As the unit's physical condition improved, we began to use these runs to work on our mental conditioning as well. We gradually increased the length of the runs to eight miles. Following extended periods in the field, we temporarily reduced this mileage to five or six miles.

The battalion executive officer (XO) and a small cadre of noncommissioned officers were put in charge of straggler control to ensure that everyone in the unit had an opportuni-

ty to share in the same experience. The XO's group noted all fallouts by name and policed them into a group to complete the run at a slower pace.

The fine-tuning adjustments of establishing command interest in all activities associated with PT and increasing the length of battalion runs really got the ball rolling. The companies had to conduct vigorous daily PT to avoid incurring the unwanted attention of the battalion commander during one of his unexpected visits. But when I was not around, pride drove units to maintain this rigor, because any deficiencies were bound to show up when the battalion rolled down the road for the next eight-miler.

The program soon began to sustain itself. In fact, after a while, my biggest concern was whether we were working as smart as we were working hard. To ensure that the chain of command was maintaining a responsible approach, the medical platoon leader produced a weekly report of all battalion physical profiles. This report was disseminated to the orders group and reviewed every Friday at our command and staff meeting. If we noticed an increase in lower-body stress-related injuries, we backed off on the mileage or the intensity of our PT sessions until the problem was resolved.

For developing mental toughness, the 25-mile road march was one battalion activity that had a big payoff. We marched in full combat gear with a field load in a rucksack and all TOE equipment. This was the infantryman's marathon. It did more to instill true mental toughness than any other single training event we conducted.

Our goal was to execute one 25-mile road march every quarter, but seven off-post deployments in 25 months limited us to doing it about twice a year. Nevertheless, we always had a 25-mile road march on the long-range planning calendar to keep our PT program focused on this high-performance challenge.

We put mile markers along the road-march route and conducted the march at a sustained pace of 17:30 per mile. The battalion took one 30-minute and two 20-minute rest halts during the nine hours it took to finish. The soldiers could complete the first 20 miles on their conditioning, but the last five required guts and determination. Completing the march was a real badge of honor. When it was over, all the soldiers knew they had accomplished something few other units would attempt.

Every summer, the battalion conducted Combat Olympics, which was one and one-half days of full-contact, bone-crunching, intercompany competition based on both military and athletic competitions. This was not just organized athletics under a different name; it was a carefully constructed event intended to force as many soldiers as possible into the competition.

Rules, uniform requirements, and schedules were worked out to the last detail. Any violation resulted in disqualification for the company team. To prevent team stacking, multiple events were run simultaneously. Company internal organization was always extended to include every soldier. We used a weighted scoring system that was based on the scale of each event. At the end of the competition, trophies were presented in a battalion formation to individual, team, and company winners.

The Combat Olympics left just about everyone in the battalion battered, bruised, and physically spent, but the soldiers thrived on the competition. The tougher and more physically punishing it could be, the better. Not surprisingly, the margins separating the individual, team, and unit winners from the runners-up were very slim, usually less than ten percent.

The battalion also put on boxing smokers and participated in the post intramural sports program. While these activities were done more for fun, they reinforced the values we were trying to embed in the unit—that physical fitness and mental toughness are inseparable components of being an infantryman.

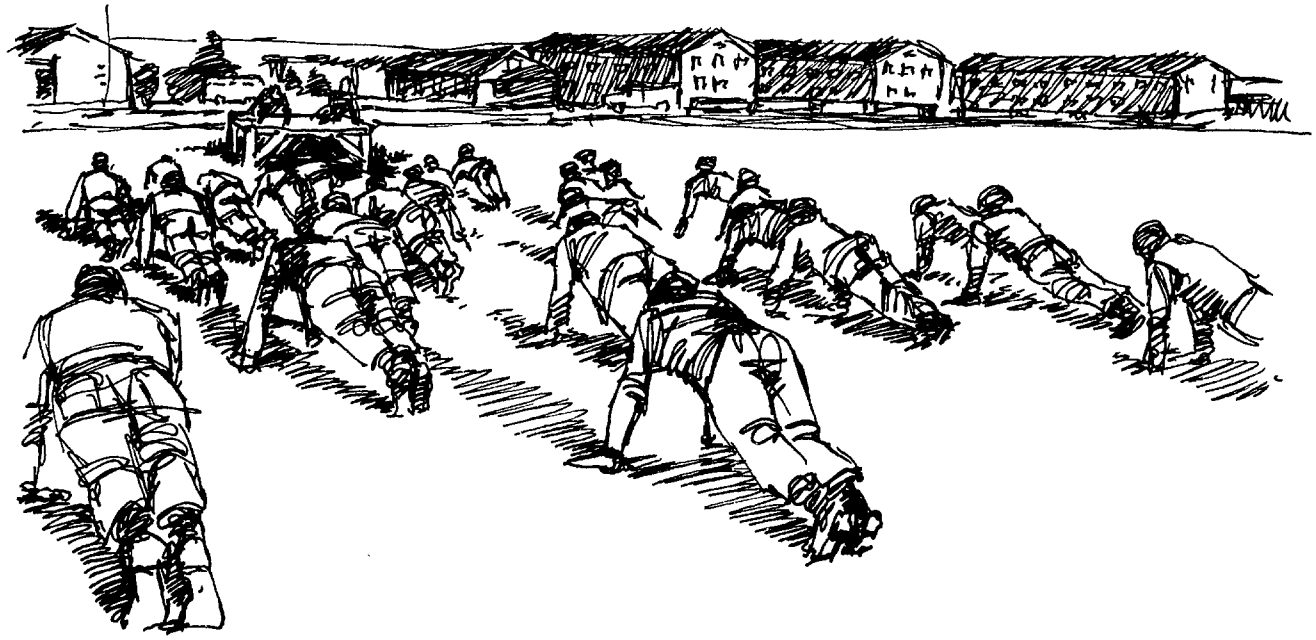
Two regulatory tools provided immeasurable support for this effort: the Army Weight Control Program and the Medical Evaluation Board process. Both are excellent ways to address factors that impede unit performance. But these are also programs in which the battalion commander must take the lead. Company commanders and first sergeants cannot do it on their own. They are often too close to the personalities involved to make the tough, impartial decisions these programs require. Nor do they have the necessary time and experience to shepherd the administrative requirements of these programs through to completion. It takes the full weight of battalion commander and staff to make them work effectively.

The battalion scrupulously enforced the weight control program. Regardless of position, each soldier in the battalion was weighed quarterly, without exception. I personally reviewed the results of all company weigh-ins. Those who failed to meet the standards were immediately enrolled in the program, and their progress was openly reviewed at least once a month during command and staff meetings.

In addition, all soldiers who fell out from battalion runs or road marches were weighed on their return to the battalion area, and these results were reviewed at command and staff. While most soldiers had bona fide physical or medical reasons for failing to complete the event, this technique helped keep the system honest by identifying habitual fallouts and the odd man who was not detected during weigh-ins.

Putting the medical platoon leader in charge of the battalion profile log enabled us to maintain control of all our physical profiles. Those who routinely "rode sick call" were easily identified. If their medical complaints showed signs of becoming chronic, these soldiers were referred for "Fit for Duty" medical examinations. When it could be supported, they were entered into the Medical Evaluation Board process. A separate column on the weekly profile report was used to track every step of their progress. These results were also reviewed at command and staff.

Achieving high performance in physical fitness and mental toughness is a goal that is within reach for every unit. It took six or seven months of hard work before I realized that



the battalion had passed from being merely good in this area to being at a higher level. It occurred when the battalion deployed to Fort Stewart in July 1992 to take part in a ten-day XVIII Airborne Corps exercise.

Obviously, coming from the temperate summer of upstate New York, our soldiers needed a high level of physical fitness to acclimatize quickly to the Georgia heat. Despite everything we had been doing in physical training, however, I was fearful that the battalion's performance would be degraded until the acclimatization process ran its course.

The weather could not have been more brutal. Temperatures rose above 100 degrees every day, amid torturous humidity. The effects of weather on the soldier were exacerbated by their combat loads and the heavy weight desert camouflage uniforms (DCUs) we wore in our role as the opposition force.

As the exercise wound down, I discovered that neither the weather nor the high operational tempo had significantly reduced the battalion's performance. Although the soldiers had been pushed hard, they remained physically strong and mentally alert. Moreover, we did not sustain a single heat casualty over the ten-day exercise.

This told me the battalion had arrived. We were getting our ten-percent improvement. Better yet, as our soldiers observed from other units that had not fared as well, they knew it too. We were clearly on the right track. Little did we know at the time, however, that about a year later this core performance area would be tested even more severely.

The Payoffs in Combat

Throughout the task force's tour in Somalia, fatigue was a constant problem. Daily temperatures ranged from the low-to-high 90s with humidity between 80 and 100 percent. Our standard operational uniform consisted of either heavy or medium weight DCU, load-carrying equipment, M17A1 protective mask, Kevlar helmet, Level II body armor, and assigned individual or crew-served weapon.

The combined effects of uniform and weather for extended periods, particularly through the heat of the day, were enough to sap the strength of the fittest man. Environmental stress, interrupted sleep patterns, and diet also contributed to the cumulative effects of fatigue. A high level of physical fitness and mental toughness was therefore essential in combatting this ever-present and insidious enemy.

Being quartered in the Mogadishu University compound gave the task force a relatively secure base of operations that allowed us to sustain our physical training program. Even with the demands of the mission, companies conducted vigorous PT at least four times a week, sometimes more. Weight sets in each company area gave the soldiers an opportunity to improve their upper-body strength on their own time.

With few competing time demands other than the mission, individual and unit physical fitness actually improved during our tour. Before redeployment, company APFT averages ranged between 265 and 285 points. All our attention to physical fitness and mental toughness, both at home station and in theater, had tremendous payoffs in every facet of the task force's Somalia experience.

Without question, a high level of fitness improved force protection all around. The soldiers had the mental and physical fitness to stay in the proper and complete uniform, regardless of their physical discomfort. Any deviations from the prescribed uniform were based upon conscious decisions of the chain of command, not from personal whim.

When soldiers rolled out of the compound for any mission, they were alert and dressed for combat, remaining that

way until their return. Their very appearance meant business and was a silent deterrent to any hostility. Not a single one of our convoys or outposts was taken under enemy fire as a target of opportunity. I don't believe this was from chance. There had been too many other examples in theater to the contrary. Physical fitness and mental toughness gave the task force an increased tactical capability. We did not have to slow the pace of operations to that of the slowest man, because all soldiers were able to keep up with the main body. This was clearly demonstrated on numerous occasions, but one in particular illustrates this point:

In the pre-dawn hours of 13 September 1993, the task force (minus) conducted an attack to clear two large compounds in Mogadishu. Dominating the objective area was a hospital densely populated with hundreds of noncombatants. Not surprisingly, this hospital also doubled as a major Somali National Alliance (SNA) militia base of operations.

As morning twilight gave way to sunrise, the task force was completing actions on the objective and beginning its withdrawal. Suddenly, we began receiving RPG (rocket-propelled grenade) and automatic weapons fire from the area of the hospital and its surrounding streets. What followed was a major firefight between the task force and the SNA militia that lasted almost five hours.

Despite all planning and preparation, most meeting engagements begin with some element of surprise. Soldiers experience a jolt of adrenaline that lasts about 15 or 20 minutes. As their minds and bodies become adjusted to the situation, however, adrenaline-depleted soldiers often experience a deep fatigue. Veterans of close combat know best that unless soldiers are in top physical condition, they will have nothing left in reserve when the adrenaline runs out.

Even with the accumulated effects of fatigue due to loss of sleep, combat loads, heat, humidity, and adrenaline depletion, every soldier in the task force had physical energy when it mattered most. The soldiers used proper individual movement techniques over a two-kilometer route while under continuous fire. Casualties were carried along with no loss of speed and no disruption in the integrity of formations. If the task force had not been in such good physical condition, our movement discipline could easily have broken down, with higher casualties than the three we suffered.

Likewise, the unit's mental toughness was clearly visible in everything we did. But it was highlighted most dramatically in another action, on the night of 3 October 1993 when the task force was called out to link up with and extract ground elements of TF Ranger pinned down by the SNA militia at the site of the downed helicopter.

At 1745, the task force's quick reaction company and battalion tactical command post left the Mogadishu airfield in an effort to break through to the Rangers with our entire element mounted on either high-mobility multipurpose wheeled vehicles (HMMWVs) or five-ton trucks. Over the next 90 minutes, we encountered a series of almost simultaneous ambushes and found ourselves in a more intense fight than in any of our previous engagements. The SNA militia had effectively sealed off the area around the Rangers against any penetration by thin-skinned vehicles and inflicted three severe casualties on our force in the process.

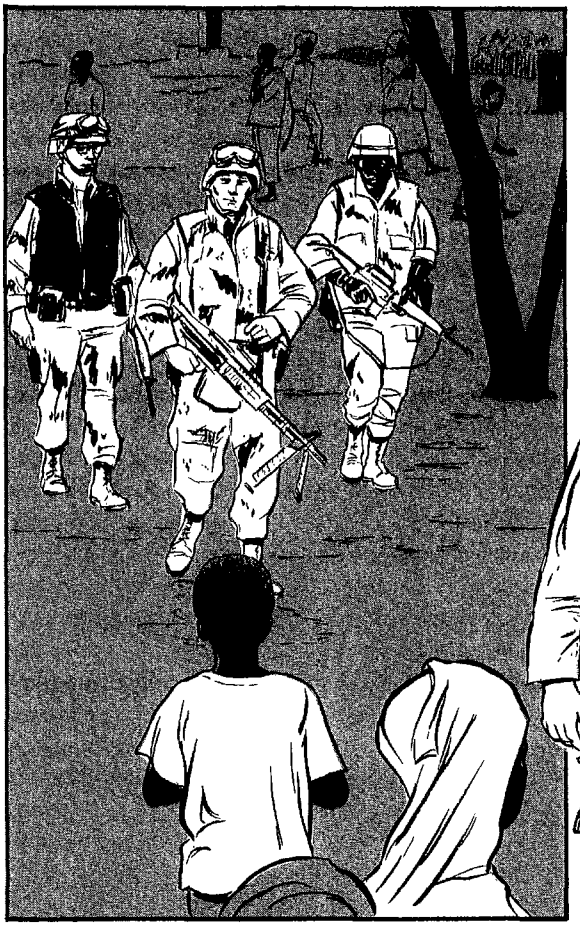
Despite this setback, as quickly as another effort could be planned and coordinated, the soldiers were ready to go. At 2300, a second effort was launched with a large force involving most of the task force. Two rifle companies were loaded into armored personnel carriers provided by the Malaysian battalion in theater, and we were given a Pakistani tank platoon for additional support. The ensuing seven and one-half hours was a continuous fight of great intensity. This time, however, the task force was successful in breaking through to the Rangers and accomplishing the mission. *(See "Mogadishu, October 1993," in INFANTRY, September-October and November-December 1994.)*

Sometimes, close combat boils down to a test of willpower between adversaries. Because I had seen our soldiers' perseverance and determination in training, I was confident we would have the mental resilience to bounce back quickly from our unsuccessful effort. Moreover, I was confident that our soldiers would have both the mental and physical staying power to see the task through to the end, even when the situation appeared grim. On both counts, the soldiers proved me right.

After everything we had done in training, any doubts I harbored about being unrealistic or unfair in the demands we placed on our soldiers were put to rest in Somalia. The exceptional physical fitness and mental toughness of the battalion in close combat spoke for itself. The soldiers, in our casual conversations with them in the mess hall or field, candidly thanked the command sergeant major and me for insisting that the unit do the tough physical training that they felt helped keep them alive. Although they couldn't define it, these soldiers knew they were part of a physically fit and mentally tough unit.

Lieutenant Colonel William C. David served as deputy chief of staff of the 10th Mountain Division after completing his assignment as commander of 2d Battalion, 14th Infantry, and is now assigned to the U.S. Southern Command. He previously served in the 82nd Airborne Division and the 9th Infantry Division and served as a battalion executive officer in the 101st Airborne Division during Operations DESERT SHIELD and DESERT STORM. He is a 1975 graduate of the United States Military Academy and holds masters degrees from the University of Southern California and the University of South Carolina.

PEACEKEEPING OPERATIONS IN SOMALIA



LIEUTENANT WILLIAM A. KENDRICK

Peacekeeping operations are the colonial wars of our time—the "savage wars of peace" described by Rudyard Kipling. When I first stood in the Mogadishu seaport and looked up at the city, I expected the Italian colonial governor to appear to welcome us to his province.

In the colonial wars of the 19th century, European armies were able to overwhelm far more numerous native levies because of superior organization and more advanced weapons, particularly the British Maxim gun. The Maxim guns of today are the armored and other heavy forces, including attack helicopters—that modern American and Western European armies possess but that local militias of the Third World typically do not.

As the Rangers demonstrated in Mogadishu, Somalia, in October 1993, even elite light infantry forces may meet considerable resistance from irregular forces. By contrast, Bradley fighting vehicles and tanks were feared by the Somalis, who never seriously engaged them and often fled from them. Although the locals understood these tracked vehicles, they were in a situation analogous to that of the Indians of Central and South America in the early 1500s, who had no weapons that could counter those of the Spanish conquistadors. Even when the Somalis had antiarmor weapons—such as the disassembled MILAN missile we discovered in the oil refinery on the United Nations Road—they were unable to overcome their fear enough to attempt to use them.

The armored forces of our task force and other United Nations contingents were the undisputed masters of the city streets. They provided the "credible military response" that the Somalis respected and feared. Although the militia violence never entirely abated, as evidenced by the frequent attacks of lone gunmen or small bands on our checkpoints, their scale was greatly reduced. Still, the the natives' fear of armored forces cannot always be assumed in future peacekeeping missions.

During my unit's deployment to Somalia in late 1993 and early 1994, in which I served as a mechanized infantry platoon leader, I noted several areas in which our units could improve their preparations for such missions.

Security and Civil Affairs

U.S. forces are likely to encounter few "secure areas" in the peacekeeping environments of the future. In Somalia, our only secure areas were the fortified bases—Victory, Sword, and Hunter—and the University-Embassy Compound.

None of the countryside was ever "secured," and this was where the units of our task force bivouacked for several weeks in November while awaiting the construction of Victory Base. Throughout the deployment, companies of the task force practiced the downed aircraft rescue drill in unsecured areas, and on at least one occasion had to clear itinerant Somalis out of the training area.

Civil affairs (CA) proved of questionable value in Somalia. On several occasions CA personnel quickly and effectively dispersed demonstrators, but in the long run, their methods proved ineffective: They sometimes dispersed people by offering them money for "transit privileges" or for the right to build checkpoints or other facilities on their lands; the unintended end effect was to encourage the Somalis to put forth even larger and more spurious claims.

In one case, for example, I was operating Checkpoint 31 on 21 October Road where an observation tower was built on a small square building standing opposite the old Somali Military Academy. Somalis of a certain family, complete with lawyer, claimed the small building was a mausoleum for a revered ancestor. I had previously learned from the Pakistanis, who had been operating the checkpoint for more than a year, that the building was a boot store attached to the academy when they arrived.

Such problems got out of control because the CA personnel had no direct interest in the locales where they went to deal with Somalis. The personnel operated out of one or the other of the secure bases and were dispatched on an ad hoc basis to the checkpoints where disturbances were reported. As a result, they never had to contend with the results of their actions the next day or the next week, and they failed to understand the connection between the *baksheesh* they paid one day and the riot at the same location two days later. Instead of accomplishing their mission of "minimizing civilian interference with U.S. military operations," they often unknowingly—and wholly unintentionally—contributed to the problem.

A possible solution would be to assign CA personnel as "case officers" for particular locales or groups. In this way, the CA personnel would become familiar with the local problems and people and would see the cause-and-effect relationships between events.

A mix of light and mechanized forces from the very beginning is the best force structure to accomplish most peachkeeping missions.

In some cases, my company conducted its own civil affairs program. At the checkpoint between the airport and the seaport, for example, the company operated a "community relations" program with the local village of clanless Somalis. Our platoon medics provided aid for the villagers, and platoon leaders took severe cases to the battalion doctor at the nearby Pakistani compound. We paid the men (with food and bottled water) for filling sandbags and keeping their children away from the concertina wire. We also we made it easier for the villagers to move through the area to the ocean for washing and to the Pakistani compound where many of them worked. At this checkpoint, we enjoyed excellent relations with the villagers and never faced a rioting mob or a false claim for land-use damages.

Force Integration

Field Manual (FM) 7-98, *Operations in a Low-Intensity Conflict,* says that "light infantry forces, with minimal augmentation, are organized, equipped, trained, and suited for the conduct of [peacekeeping operations]," and the peacekeeping force must be strong enough to "defend itself and set up a visible presence" and "concentrate forces in response to a local theater."

The case of Somalia shows, however, that in a mission environment where there is a constant threat to friendly forces—even a low-level threat—light infantry forces alone often lack the ability to protect themselves and other units. As the following examples demonstrate, a mix of light and mechanized forces from the very beginning is the best force structure to accomplish most peacekeeping missions.

I was involved in one operation with combined heavy and light forces that was planned but not executed. The mission was to cordon and search a compound north of Sword Base that we suspected was being used by Somali snipers. In this operation, a mechanized infantry company team was to form the cordon, and two companies of light infantry, each with one Bradley section attached, were to conduct the search. This would have enabled each type to make the most of its capabilities: The mechanized company had the speed to sweep down on the compound and create a cordon before any of the Somalis could react, while the light companies had the personnel and the experience in military operations on urban terrain (MOUT) to search the compound. The Bradley sections attached to each light company could provide direct fire support and would also be capable of flattening the compound's walls and buildings for immediate breaching.

Joint training for missions of this type from brigade level down would have given both mechanized and light infantry commanders a better grasp of their counterparts' capabilities and limitations. On one occasion, the quick reaction company (QRC), a mechanized unit, was alerted for a mission near Sword Base. The enemy threat was a lone Somali sniper who was already being engaged by a U.S. sniper team on site. Although mechanized forces were not suited to this kind of mission, the QRC was scrambled and nearly rolled out. It would have helped if light and mechanized forces had not been segregated in separate bases. (All mechanized forces operated out of Victory Base, while the light infantry operated from Sword and Hunter.)

A mix of light and heavy forces improves a task force's abilities if all the commanders fully understand the others' capabilities and limitations. The Bradleys have unique abilities the light forces lack, and vice versa.

The Bradleys' thermal sights are superior to any of the night-vision devices available to light infantry, and the

vehicles can move rapidly through most roadblocks and other obstacles that would delay or block truck movement. In addition, the Bradleys carry their own large allotments of concertina, barbed wire, and materials for overhead cover; a Bradley platoon or company can occupy a location and fortify itself in a matter of hours. The M88 recovery vehicle is ideal for clearing fields of fire in terrain dominated by low scrub and small trees. Bradley fighting positions can be dug while the vehicles themselves pull security, preferably behind anti-RPG screens and concertina wire. Aside from digging Bradley fighting positions, little engineer support is required.

The Bradleys' thermal sights are superior to any of the night-vision devices available to light infantry, and the vehicles can move rapidly through most roadblocks and other obstacles that would delay or block truck movement.

Light infantry has its own advantages. Many light units train extensively for MOUT and foot patrolling, skills that are not often emphasized in mechanized infantry units. Light companies are normally much larger than mechanized companies, typically having 130 soldiers instead of 100 or 110. This numerical advantage is even greater, considering the need to retain the Bradley crews—38 soldiers, excluding senior leaders—in or near the vehicle. Light forces also have far smaller support requirements, while mechanized units must dedicate a large number of personnel to maintenance, and they consume far more logistical assets.

Tanks in Somalia also offered certain advantages and disadvantages. They were useful in dispersing mobs, because the Somalis feared the heat of the gas turbine engines. The mine plows mounted on some tanks (though not used to clear mines in Somalia) had a tremendous psychological effect on the people. In the downed aircraft rescue drill, we always planned to lead with tanks because of their armor protection.

One problem with tanks in Mogadishu was that many of those in our task force had only two or three crewmen, which prevented them from effectively dismounting personnel for checkpoint operations. Even when they did dismount, their organic crew-served weapons were unsuitable, and they had to borrow M249 machineguns from the infantry for guard-tower duty.

In addition, the main guns of the M1A1s could not be superelevated to counter threats from upper stories of buildings. We solved this problem by covering the tanks with a section of Bradleys, using the excellent elevation of the 25mm chain guns.

In convoy operations, speed was stressed. Routes were normally familiar, and the crews were carefully trained to look for signs of mining and other hostile activity. When confronted by mobs or other possibly hostile personnel, we traversed our guns onto them. Although we never fired on such groups, the intimidating effect of looking down a succession of Bradley or tank barrels at close range often dispersed them. Since we remained on frequently travelled routes, the Somalis had little time to lay mines on them. On the two occasions when we did discover mines in our path, we found that they had been hastily laid and were easily removed.

In all peacekeeping operations where there is a threat to U.S. Forces, the superior mobility, optics, and firepower of responsive air cover are essential. Our task force found the OH-58 and AH-1 Cobra helicopter teams quite responsive. The pilots were familiar with operating on our FM radio nets and usually gave excellent situation reports. The Air Force's AC-130 Spectre gunships also provided excellent support. Their infrared searchlights permitted rapid visual searches of large areas, such as the fields of fire and the bush areas immediately outside the bases.

Every time we practiced the downed aircraft rescue drill, we trained with the attack and observation helicopters. In one case, an AH-1 landed in our training area, and the crew provided hands-on training for my company. This training included blowing the canopy off the helicopter, safing the weapons, and using the correct lift points to move the fuselage. It would have helped if this type of close training had been conducted between the light and mechanized infantry as well.

Since U.S. Army policy is to avoid dedicating particular units to a peacekeeping role, we can instead expect ad hoc task organizations to be used in future peacekeeping operations. To prevent a recurrence of the difficulties we experienced in Somalia, more joint training exercises between mechanized and light infantry should be conducted back home. Deployments to the Joint Readiness Training Center could easily be configured to replicate peacekeeping operations in different contingency areas around the world. In this way, the Army could maintain the training focus on warfighting while also achieving valuable cross-training and preparation for possible peace operations.

Political Considerations

Although few political decisions regarding military operations have an immediate and direct effect on platoon and company level operations, such decisions did affect us in two areas:

First, because of the political cost of even a few civilian casualties, all indirect fires, even smoke and illumination missions by 60mm mortars, had to be cleared by the joint task force. Getting the fires therefore took half an hour or more, by which time the situation could have completely changed.

Conditions in each peacekeeping mission will be different, but the focus on preventing civilian casualties is likely to continue, for obvious reasons. Even in Somalia, however, we always prepared fire support plans. In the event of another firefight like the one on 3 October, we expected that the rules of engagement would become more expansive for the enemy.

Second, we sometimes encountered difficulty in clearing

fields of fire around our checkpoints and guard positions. We could not remove brush because of possible violations of Somali land rights. We had to send requests for land clearance to the joint task force, just as we did for indirect fire, and these requests were normally disapproved. For this reason, our fields of fire often extended no more than 50 meters, and the possibility of a lone gunman crawling up through the brush concerned us greatly. At Checkpoint 31,

In an environment where indirect fire is severely restricted, the firepower provided by mechanized infantry, tanks, and tactical air support is likely to be the foot soldier's greatest support.

our fields of fire were no more than 100 meters wide, and we received sniper fire from little more than that distance on several occasions.

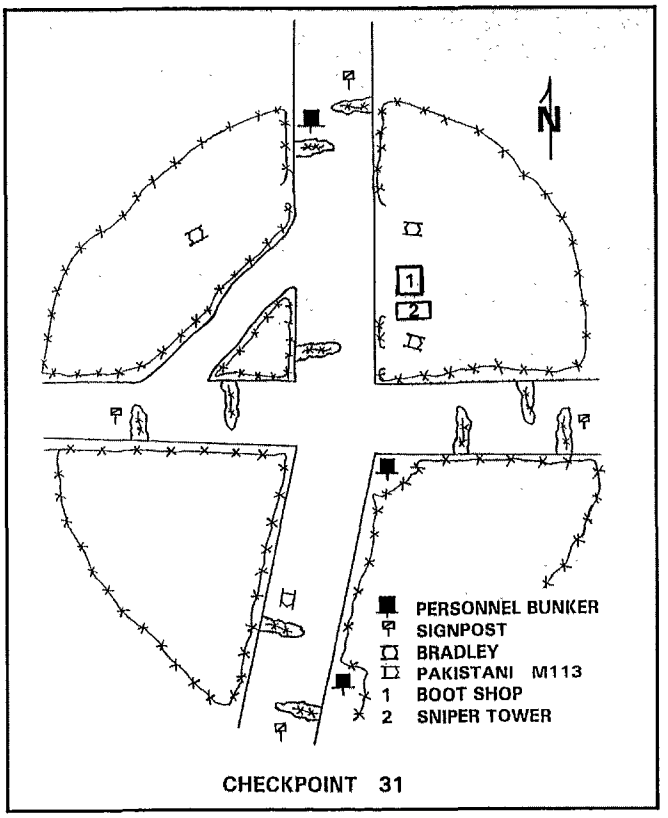
Because of these twin restrictions, direct-fire weapons and enhanced optics can be expected to assume greater importance in peacekeeping missions. In an environment where indirect fire is severely restricted, the firepower provided by mechanized infantry, tanks, and tactical air support is likely to be the foot soldier's greatest support. Enhanced optical systems such as the AN/TAS-5 and the AN/UAS-11 thermal viewers, Bradley and tank thermal sights, the helicopters' forward looking infrared (FLIR), and the AN/PAQ-4 designator will also assume greater roles in peacekeeping missions. Even in brush or built-up areas, the positive identification of targets is critical.

Intelligence

Operations in Somalia demonstrated that the intelligence preparation of the battlefield (IPB) guidance found in FM 7-98, *Operations in A Low-intensity Conflict,* is sometimes of limited usefulness. Throughout the deployment, human intelligence (HUMINT) was the major element of the IPB process. Although HUMINT provided data for a variety of overlays showing past and projected enemy activity, the enemy usually acted in an unexpected and unpredictable manner.

HUMINT in Somalia was often accurate concerning locations and objects but extremely unreliable in predicting events. The task force S-2 pinpointed numerous arms caches and suspected mortar points and militia strongpoints; some of the Somali contractors hired to help build Victory Base freely discussed with the gate guards the locations of recoilless rifles and other heavy weapons buried by the militias. Although no action was taken on this information because of constraints placed on us by the mission, independent confirmation verified its accuracy.

Almost every day, however, we were warned of imminent attacks that never materialized. In Somalia, the enemy was a completely decentralized force of bandits, drawn from disparate clans and operating seemingly independently of any command structure. In many cases, lone Somalis (often



CHECKPOINT 31

high on the drug khat) were responsible for attacks on task force personnel. Much of the adult male population of Mogadishu was under the influence of the drug during daylight hours, and nearly all of them had rifles. It was therefore impossible to predict the number of Somalis who might attack U.S. forces while suffering from hallucinations and paranoia. The task force could expect an average of one or two attacks a day, but there was no way to predict when or where they would occur.

Checkpoints

Although the establishment of checkpoints and observation points is a major part of a peacekeeping mission, so far as I know, there is no published standard for checkpoint operations. Although I do not claim to have a fully developed concept that covers all contingencies, I found the following techniques to be effective:

We often operated as sections, meaning that platoon sergeants and senior section sergeants were the key leaders operating independently at isolated checkpoints or in conjunction with other United Nations forces. Senior NCOs must therefore have, in addition to superior tactical sense, the ability to exercise judgment and discretion in dealing with representatives of other nations' armies.

In checkpoint operations, we were not normally tasked to conduct extensive personnel searches. We searched all motor vehicles and conducted random searches of the innumerable donkey carts, generally following the methods discussed in Appendix G, FM 90-8, *Counterguerrilla Operations.* When we guarded the gate of Victory Base, we

used portable metal detector wands to search Somali nationals, which made these searches much faster.

In constructing the checkpoint, however, we modified the schematic described in Appendix G. Instead of building a checkpoint in the road with obstacles, the engineers built speed bumps and barricades stretching from the shoulders to the center line on alternating sides of the road. These barricades and speed bumps forced approaching vehicles to slow and provided protection against drive-by shootings. These barricades incorporated industrial metal (including girders from gutted warehouses and armor plates from vehicles destroyed during the Somali civil war), and these were surrounded by concertina wire. In addition to being quite intimidating to Somali drivers, the barricades also provided suitable cover for soldiers who might come under fire while searching vehicles.

Vehicles and donkey carts could pass through the checkpoint itself, where they were subject to searches, but we did not generally permit the local Somalis to walk through. They had to walk around the checkpoint perimeter wire, as did herds of camels and goats. This reduced the workload for the searching personnel and also increased security. In spite of the signs we erected at checkpoint perimeters, the locals continually tested our enforcement of them; every morning, we had to be firm in directing the first pedestrians around the outer wire so they would understand that the policy would be enforced.

Because of restrictions imposed by the rules of engagement, the key dismount weapon was generally the M24 sniper rifle instead of the M60 machinegun, and the primary response to any hostile activity was the sniper team. It is therefore critical to find or build sniper towers or other positions from which the company sniper can observe the surrounding area. If the fields of fire are cleared and the position is well secured by other members of the platoon, the sniper tower need not be concealed, though this is preferable.

Battle Drills

Two of the battle drills in FM 7-7J, *Mechanized Infantry Platoon and Squad (Bradley),* need to be revised to reflect the experiences of the battalion's soldiers in Somalia:

Battle Drill #2, *React to contact,* requires that once all personnel and vehicles are covered and returning effective fire, the leader must determine whether to execute an attack or break contact. In the peacekeeping context, a platoon may be required to occupy a specific location or checkpoint that it is not permitted to leave, either to attack or to break contact.

If the entire platoon is occupying the checkpoint, one section may displace to maneuver on the enemy while the other provides overwatch. If only one section is on duty, the two Bradleys may maneuver on the enemy if the checkpoint is small enough that the section's dismounted soldiers can maintain security alone for a brief period. In this case, however, the dismount element must be provided with secure radio communications and enough cover to repel any assault that may develop while the vehicles are engaging the original threat. In no case should the vehicles move so far from the checkpoint that they cannot provide immediate support for the dismount element in case it comes under attack.

Battle Drill #5, *Enter building/Clear room or building,* needs some modification for a peacekeeping environment. In the case of clearing operations, the doctrinally preferred method of clearing the first room of the building is with a tank main gun round, direct-fire artillery shell, or antitank missile, but this is likely to collapse the entire structure or set it on fire. Due to the requirement to use minimal force, these preferred methods may not even be permitted. In Somalia, we encountered buildings made primarily of stucco, cinder block, and poured concrete construction, especially warehouses. Similar building styles may be expected in other contingency areas.

To prevent a recurrence of the difficulties we experienced in Somalia, more joint training exercises between mechanized and light infantry should be conducted back home.

In summary, future peacekeeping operations should consider the following points:

- Civil affairs operations would be much more effective if case workers were assigned to particular locales or clans.
- The peacekeeping task force should include both light and heavy forces from the beginning, and its units should practice joint operations throughout the deployment.
- Since political considerations may rule out the use of indirect-fire weapons, the emphasis should be on direct-fire weapons and superior optics.
- HUMINT should be carefully weighed and, where possible, verified by other sources. Other forms of intelligence, such as aerial photography, are preferable.
- Checkpoint operations will be a major part of the mission. For the security of personnel manning the checkpoint, barricades and speed bumps should always be integrated into the design, and foot traffic should be prohibited.

Peacekeeping will be one of the most challenging tasks to face the soldiers of Infantry Force XXI, but with the proper training and equipment our deployed forces will be able to successfully accomplish even this demanding, high-visibility mission. Success in this crucial area will enable our nation and her allies to provide the credible deterrence and stability that will define the course of events in the next century.

Lieutenant William A. Kendrick was assigned to the 1st Battalion, 64th Armor, 24th Infantry Division, in Somalia. He is now battalion signal officer of the 3d Battalion, 15th Infantry. He is a 1992 ROTC graduate of the University of Virginia.

won't get caught up in the road wheels. So long as there are no mines, there is no need to stop.

• The BUDD light is an excellent means of marking vehicles within the task force formation. All that is required is a little tape, a nine-volt battery, and an MRE bean component box to make a hood (the IR light is very bright). When used with AN/PVS-7s, the light makes an excellent IR flashlight for clearing bunkers and trenches.

Many other lessons were learned during Operation DESERT STORM that could be exploited in the Army today, by both light and heavy forces. With the increased number of deployments to various contingency areas, it is important that these lessons be disseminated to the field. Innovations need to be publicized so that, instead of reinventing them, other units can improve upon them and go on to share their own innovations.

Captain John R. Sutherland, III commanded a company in the 24th Infantry Division during Operation DESERT STORM and served as an observer-controller at the National Training Center. He is now an Infantry Officer Advanced Course small group instructor. He is a 1983 ROTC graduate of Northern Arizona University.

FIFTY YEARS AGO IN WORLD WAR II
May-June 1945

The spring of 1945 saw the end of the war in Europe, as remnants of the once-formidable Wehrmacht scrambled to avoid capture by Soviet forces bent on avenging the staggering military and civilian losses they had sustained over the past four years. The first large-scale capitulation came on 2 May, with the surrender of all German forces in Italy to the U.S. 15th Army group. The official instrument of surrender was signed by representatives of the German High Command at Reims, France, on 7 May, to become effective on 9 May.

In the Pacific Theater, Japanese dreams of victory had long since been replaced by the inevitability of defeat, and remaining Imperial forces continued to hold out in bitter, last-ditch fighting that took a heavy toll on the U.S. and Allied soldiers, sailors, and Marines who were relentlessly closing the circle.

These and other highlights of the closing days of World War II are excerpted from Bud Hannings' superb chronology,* A Portrait of the Stars and Stripes, Volume II, *available for $50.00 from Seniram Publishing, Inc., P.O. Box 432, Glenside, PA 19038.

1 May *U.S. offensive operations in Germany are halted in the U.S. Ninth Army area as masses of German soldiers surrender, preferring capture by the Americans to capture at the hands of the Russians.*

3 May *The Japanese launch a full-scale counterattack against U.S. ground and naval forces on and around Okinawa, hitting the fleet with Kamikaze aircraft and attempting two amphibious landings to flank American units already ashore. U.S. Army and Marine Corps forces destroy nearly all of the landing craft, killing nearly 800 of the enemy. U.S. Navy losses are high; three destroyers are sunk, and three other destroyers, a light cruiser, and four other vessels are damaged.*

25 May *The Joint Chiefs of Staff approve plans for Operation OLYMPIC, the invasion of the Japanese home islands, which is tentatively set for 1 November 1945.*

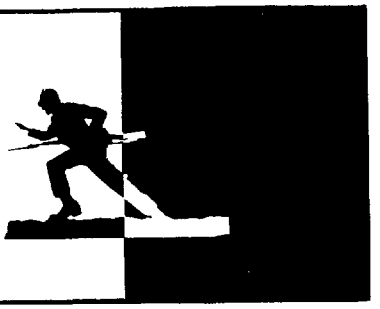
6 June *Staff Sergeant Howard E. Woodford, Company I, 130th Infantry, 33d Infantry Division, takes charge of a group of Filipino guerrillas, pinned down by heavy Japanese fire, and succeeds in penetrating the enemy lines. The following day, the Japanese hurl a predawn Banzai charge against his position, wounding Sergeant Woodford, who calls in mortar fire until his radio is destroyed. Relying on his own rifle fire, he rallies the guerrillas and holds on. At the end of the fight, he is found dead in his position, with 37 Japanese dead to his front. He is posthumously awarded the Medal of Honor.*

19 June *Japanese forces that have held Wake Island since December 1941—one of their first gains of the war—are subjected to a relentless pounding by planes of Rear Admiral R.E. Jennings' Carrier Task Force.*

22 June *The Stars and Stripes are officially raised over Okinawa, opening the way for the invasion of Japan. The cost has been high, with more than 12,500 Americans killed or missing and another 36,600 wounded. Total Japanese casualties are estimated at 110,000 dead and 7,400 captured.*

30 June *The Luzon Campaign ends, with the U.S. Eighth Army assigned responsibility for mopping-up operations.*

TRAINING NOTES



Battle Drill
React to Armor While Dismounted

CAPTAIN FRED W. JOHNSON

Most light infantry platoons and squads that rotate through the combat training centers demonstrate a lack of proficiency in reacting to contact against armored vehicles. One reason for this is infrequent training with or against armor. More important, because our training materials do not offer a battle drill for reaction to this kind of threat, units have no frame of reference for planning and conducting this training. The result is slow and indecisive action against a very lethal opposing force.

Units must develop their own conditions, standards, and performance measures for a *React to Contact Against Armor* battle drill. Then they should conduct situational training exercises that incorporate an armored threat.

The development of the training objectives for this drill must consider two separate conditions: The friendly unit identifies the enemy vehicle without being sighted by the enemy, or the enemy vehicle identifies the friendly unit first. Additionally, the contact may take place during daylight or during hours of limited visibility.

The performance measures for these two conditions may also vary, depending upon the availability of indirect fire illumination from mortars, artillery, or from the 40mm M203. The unit has either AT4 or Dragon antiarmor weapons, and the unit has been ordered to destroy enemy armor within its capability.

The standards should be that the unit destroys or disables the enemy vehicle, and that the unit sustains no friendly casualties. Although these standards seem obvious, the performance measures that lead to mission success must be executed promptly and efficiently. This can be done only if the actions are sequential and if they represent mental steps that require minimal orders. The unit must standardize these actions and rehearse them.

The friendly unit identifies the enemy vehicle first. When the vehicle is identified, the signal for *halt* is given, followed by a signal for *enemy armored vehicle.* If the platoon leader cannot see the vehicle, he moves forward to identify it and assess the situation. He must determine the availability of cover and concealment, the route to an assailable flank, and an attack-by-fire position. If the vehicle is within range of the platoon's antiarmor weapons, these weapons are deployed immediately to the flanks of the platoon oriented on the enemy vehicle. The unit should already have task organized into several two-man or three-man AT4 teams with a leader responsible for their positioning. The weapons squad leader or the platoon sergeant positions the Dragons selected to engage the target in case the vehicle identifies the unit.

If the unit is identified, the command to fire is given immediately. The platoon forward observer initiates a call for fire to be executed on the platoon leader's command. The purpose of the indirect fires is to force the enemy vehicle to button up, reducing the commander's and the gunner's field of vision. Given this intent, variable time fuse is used. Since the unit may close to within 200 or 300 meters of the vehicle, the fires should be from 60mm or 81mm mortars because of their smaller minimum safe distance.

Once a route and an attack-by-fire position have been identified, the platoon conducts bounding overwatch to those positions, ensuring that both the moving and the overwatching units have antiarmor capabilities. The Dragons remain in the overwatch and are positioned to ensure the best possibility for a first-round kill. The AT4 teams

maneuver to an attack-by-fire position well within their range for a stationary target. The purpose of having both a support-by-fire with Dragons and an attack-by-fire with AT4s is to ensure that the unit has redundant means of destroying the vehicle.

Once both elements are in position, the platoon leader initiates the engagement, with the Dragons using the pair-fire method: One gunner fires while the other observes; if the first gunner misses, the second immediately engages the target. At this time, indirect fires are called. The engagement may be initiated with mortars to button up the enemy vehicle, but only if the unit does not have Dragons; if it has Dragons, the mortar fragments may cut the missile's wire. If both gunners miss, the attack-by-fire element initiates, using sequenced, pair, or volley fire.

During hours of limited visibility, the platoon leader should plan to use mortar or 40mm illumination or parachute flares to illuminate targets for the AT4s. If the platoon does not have Dragons available—with their nightsights—illumination is critical for successful AT4 engagements. Ideally, the illumination should be fired from the support position instead of the attack-by-fire position to avoid compromising the engaging element.

The enemy vehicle identifies the friendly unit first. Although the most obvious reaction to being compromised by an armored vehicle is to break contact, this may not be the wisest choice. Unless cover is immediately available, it is unlikely that a dismounted platoon can successfully run away from a tank's main gun or coaxial machinegun.

The response to this situation must be immediate. The Dragon gunners, if within range of the enemy vehicle, immediately employ their weapons. Smoke is used and the remaining personnel maneuver to the flank or a blind side of the vehicle. If possible, the AT4 teams attempt to close with the vehicle, and the forward observer immediately calls for fire.

The actions described here are a starting point for platoons in developing standing operating procedures for reaction to an armored threat. These actions, at a minimum, should be addressed in the coordinating instructions of operations orders and should be rehearsed generically when the unit is fighting an enemy with armor capability. This training will help ensure that soldiers and leaders alike will be able to react with the required speed and precision when they unexpectedly encounter an armored vehicle.

Captain Fred W. Johnson is an observer-controller at the Joint Readiness Training Center. He previously served as a rifle platoon leader in the 2d battalion, 22d Infantry, 10th Mountain Division, and has commanded a rifle company in the 3d Battalion, 187th Infantry, 101st Airborne Division. He is a 1985 ROTC graduate of Wofford College.

Rehearsals
The Key to Mission Success

CAPTAIN ANDREW M. HERBST

A junior officer serving as an assistant operations officer in a light infantry battalion is often given the additional duty of battalion rehearsal officer. In this role, he must be aware of the resources for a rehearsal kit and also of set-up procedures and execution methodology.

Gathering Resources. A rehearsal kit must contain all the required items, must be durable, and must be configured for transport by air, land, or sea. Its size depends upon the specificity and the variety of the battalion's rehearsals. The unit's mission essential task list (METL) and battle drills are good indicators of the types of rehearsals likely to be conducted.

Waterproof, compartmented containers best protect and organize kit materials. A kit can weigh more than 50 pounds, and handles make the container easier to carry. Suggested containers include footlockers, empty ammunition cans, and filing cabinets.

Today's light infantry battalion task force is assigned missions within a wide range of military operations, and the versatility of the battalion's rehearsal kit must match the diversity of the unit's possible missions.

Materials must be gathered and models built that represent operational symbols in accordance with Field Manual 101-5-1, *Operational Terms and Symbols.* In addition to the manual itself, the following materials are needed:

- Engineer tape for phase lines and unit boundaries.
- Candy-stripe tape for area of operation boundaries.
- Colored tape for routes, roads, areas.
- String for unit boundaries, group targets.
- Colored markers for friendly and enemy symbols.

- Sticky labels for edits to friendly and enemy symbols.
- Nails to secure tape and markers.
- Cardboard for symbols.
- Clear lamination paper for water proofing cardboard.
- Rubber bands for organizing materials.
- Chalk for marking hard surfaces.
- Chem-lites for illumination during limited visibility rehearsals.
- Model buildings, airplanes, helicopters.
- Pointer.

Set-up Procedures. The kit must be constructed to scale, and the graphics must be accurately transferred to the terrain model. The systematic transfer of graphics from the general to the specific can eliminate the chance of overlooking or distorting the representation. The area of operation should be depicted first, then the phase lines, unit boundaries, objectives, units' axes, friendly and enemy locations, target reference points, and key terrain. Constructing the terrain model to scale reduces graphic distortion. A terrain board that closely represents the operational graphics also increases the rehearsal's clarity and validity. There may be occasions, however, when a particular area should be enlarged for greater emphasis.

Rehearsal Methodology. A clear rehearsal methodology improves synchronization, initiative, and agility at all levels. The battalion commander's intent and mission execution determine the methodology of a rehearsal. During the rehearsal, the commander communicates his intent and shares his vision of the mission's outcome. The sand table provides the commander with a key leaders' briefback that reinforces his orders and requires the leaders to describe their actions throughout an operation. A well-executed rehearsal gives unit members a better understanding of the commander's intent and mission requirements.

A rehearsal is conducted chronologically, the same way the mission is to be executed. Each leader moves from phase to phase within the sand table's boundaries, representing his unit during the mission. Leaders also familiarize themselves with the leaders of adjacent units. This method reinforces the scheme of maneuver by providing a vivid picture of the operation in relation to the other units involved.

To prepare a good battalion rehearsal kit, junior officers must be aware of the commander's intent for rehearsals. A self-contained rehearsal kit, configured for deployment with the battalion task force, provides the materials necessary to execute walk-throughs and briefbacks. Well-resourced and executed sand-table rehearsals represent the operational graphics, convey the commander's intent, and familiarize leaders with mission requirements. Finally, a battalion is more likely to succeed if it uses sound methodology in conducting rehearsals.

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Night CAS
On the Conventional Battlefield

CAPTAIN PHILLIP P. TABER, U.S. AIR FORCE

Certainly, nighttime conditions complicate all aspects of combat operations. Before the Gulf War, night close air support (CAS) had not been actively pursued within the U.S. Air Force. Night CAS and air interdiction had been dedicated almost exclusively to contingency operations for special operations forces. During Operation DESERT SHIELD, however, the need for night CAS on the conventional battlefield became very apparent.

As a result, the U.S. Air Force implemented aggressive night CAS training programs for both pilots and tactical air control party (TACP) personnel. This training raised serious questions concerning such issues as target acquisition, identification and fire control measures for friendly positions, and terminal control by ground forward air controllers (GFACs). Myriad field expedient techniques were developed to support the night CAS mission. Unfortunately, little information on the subject has found its way into the training publications that have appeared since the Gulf war.

Night CAS is inherently more difficult for both the pilot and the GFAC, but there are some techniques that overcome these difficulties.

During night operations, fighter and attack aircraft enjoy the advantage of being less vulnerable to optically sighted surface-to-air threats. At the

same time, however, the darkness also limits the pilot's ability to visually acquire targets and friendly positions. Generally speaking, as the threat intensity decreases, target acquisition improves. Likewise, as radar-guided surface-to-air missile and antiaircraft fire intensifies, the accuracy of night CAS employment decreases.

On a fluid battlefield, the positive identification of target locations and friendly positions is not only the most important task but also the most difficult. When this task is combined with night operations, it can be virtually impossible for the pilot to tell who's who without the assistance of a GFAC. It is imperative, then, that the GFAC be able to provide target and friendly positions, using the best means available. Accurate target identification improves the probability of a successful first-pass attack by the fighters. Accurate marking of the target also reduces the risk of fratricide.

Mission Planning

Successful night CAS operations require extensive mission preparation by both the aircraft crews and the TACP personnel. Pilots should address the way night operations affect tactics, formations, coordination of simultaneous use of airspace, terrain, and contingency plans. TACPs require detailed integration with all available fire support element assets.

Tactical Air Command Pamphlet 50-44, *Multi-Service Night and Adverse Weather Combat Operations,* lists the following planning factors:

- Location of friendly forces.
- Method of target and aircraft identification.
- Availability of mortars or artillery for target illumination and suppression of enemy air defenses (SEAD).
- Infrared (IR) and laser capability of CAS aircraft.
- Laser designation capability of the TACP or fire support team.
- Aircraft support for illumination with aircraft flares (LUU-1 or LUU-2 from OA-10 or U.S. Marine Corps OV-10).
- Friendly and enemy air defense systems.
- Deconfliction of airspace control areas (ACAs) and other procedural control measures used to prevent fratricide for direct and indirect support.

Target Acquisition

With few exceptions, units of conventional brigade or battalion size have the organic assets necessary to mark or illuminate a target during hours of darkness. These assets include flares, artillery, and laser designators. The TACP is responsible for selecting and integrating the assets that best suit the aircraft's capabilities.

Illumination flares are now the most commonly used assets for target acquisition. Flares can be fired from artillery, mortars, or naval guns. A flare can be set either to "air-detonate," for airborne illlumination, or to "ground-detonate" and burn for 10 to 15 minutes. Air-released flares (LUU-1, LUU-2) can also be dropped by an airborne forward air controller (AFAC) fighter or flare-ship, although higher threat environments may preclude this type of flare delivery.

On a fluid battlefield, the positive identification of target locations and friendly positions is not only the most important task but also the most difficult.

Ground-detonated flares (GND flares) serve as excellent target marks and can be used as common reference points (a CAS bull's-eye) for the fighters. These flares allow additional targets to be located by referencing the target to the flare by cardinal direction and distance. GND flares do not affect night vision devices (NVDs) to the same degree as airborne flares. Additionally, GND flares do not offer the enemy an illumination source that he may be able to use to his advantage.

Artillery and mortars can also deliver white phosphorous (WP) or high explosive type rounds to impact in the target area. This type of mark also serves as SEAD for the fighters. WP is an excellent heat source, but if the fighter is using a forward-looking infrared (FLIR) system, the WP smoke can obscure the target area.

Laser designating devices are, by far, the most accurate means of marking a target or a friendly location. Laser designators allow for target acquisition without conventional illumination devices. TACPs with access to either the laser target designator or the ground/vehicle laser locater-designator (G/VLLD), equipped with NVD/thermal sights, can ensure positive target identification and marking. Aircraft equipped with the laser spot tracker (LST) or Pave Penny Pod, can acquire the laser spot and attack without the pilot's visually identifying the target. Aircraft equipped with either self-contained or pod-contained LSTs include the A-6E, AV-8B, A/OA-10, F-15E, F/A-18, F-111F, OH-58D, AH-64, and AC-130. The use of laser designators to mark targets also carries an additional advantage—a ground laser can provide terminal guidance for laser-guided munitions. This type of employment requires a very high level of proficiency and planning by both the air crew and the TACP.

Hand-held near-IR lasers can be used not only to designate targets but also to mark friendly positions. The LPL-30 and the personal illumination marker (PIM) are lightweight cigarette pack or flashlight-size laser systems used to point out targets with unpulsed laser energy. They produce a near-IR spot that is invisible to the naked eye but easy to see with NVDs. Aircraft equipped with NVDs can visually acquire the near-IR spot or mark. This type of designator requires an unobstructed line-of-sight to the area being designated. It must be noted, however, that it also allows anyone else with NVDs to see both the designated target and the designator.

Friendly Location

During night operations, the risk of fratricide increases dramatically. Normal ground references used during

daytime operations are not available to the pilot, or the GFAC. It is imperative that the GFAC be able to provide the fighters with a mark for the relative position of friendly units. This mark greatly reduces the probability of fratricide, but it must be used in a way that does not compromise friendly forces.

Visual marking devices must be shielded from direct enemy observation. The marking devices can be "hidden" by direct terrain masking (operating them from behind a hill or other land mass), or by using vehicles parked in either a V or a U pattern. Directional near-IR lasers and blue lighting are the preferred devices for covert marking of friendly positions. A position marked with white lights can easily be seen with the naked eye and will undoubtedly be compromised, while IR marking devices are invisible to the naked eye and require the enemy to use NVDs to acquire the marks.

A narrow-beam, or focused, light similar to the MAG-LITE, equipped with either IR or blue light filters, can be used along with NVDs to mark positions. The light can be made directional by fitting a tube or sleeve over the end of the light. The sleeve overcomes the "halo" effect that most flashlights produce and makes the filtered light difficult to observe by anyone except the aircraft at which the light is being aimed. The light can be "aimed" at the aircraft with NVDs. This type of mark is easily seen by fighters in a low-threat wheel type formation. The LPL-30 and PIM can be used in a similar manner.

Laser designating devices are, by far, the most accurate means of marking a target or a friendly location.

IR strobe lights can also be an effective mark, but when used as the only mark they are difficult for the fighter to detect. Placing a strobe beneath a piece of thin white fabric enhances the flash. The fabric should be suspended from the side of a vehicle or vegetation and must be shielded from direct enemy observation.

Friendly locations can also be identified to the fighters with an accurate grid, or latitude-longitude, position. Currently, all TACPs are equipped with the global positioning systems (GPSs), which allow them to fix their positions accurately. This information can be passed to the fighters by secure voice or UHF radio. This will enable the pilots to build a picture of the battlefield and to increase their situational awareness. The pilots must understand which grid is the target area and which grid is the friendly position. Grid information is meant to increase situational awareness; it should not normally be used as the only means of showing the location of friendly positions.

Terminal Control

One of the most difficult tasks for the GFAC is ensuring the safety of the friendly units. Night operations present the GFAC with many of the same challenges the pilots face. Those challenges include visual acquisition and depth perception, both of which directly affect when the fighters are given clearance to employ ordnance. Additionally, the aircraft's capabilities (LST, NVD, or laser fire interface) affect the way the GFAC will employ the fighters in the target area.

It is imperative that the GFAC establish positive control of night CAS operations. Thorough mission preparation is vital if the GFAC expects to maintain situational awareness during the operation. If the situation permits, the GFAC should conduct a reconnaissance of the observation position and the general area of operations. The selection of initial points will dictate attack geometry. This will give the GFAC some idea of where he can expect to visually acquire the fighters before ordnance is employed. A thorough reconnaissance will help in the visual acquisition of the fighters. Mandatory radio calls from the fighters will help build the GFAC's situational awareness—"Departing IP, one minute out, five miles out, JLASER calls," etc. The fighters can expect to receive an earlier clearance to drop, if the GFAC knows where they are during an attack. These control measures enable the GFAC to ensure the safety of friendly units and increase the opportunity for target destruction on the first pass.

Visual acquisition can also be assisted if the fighters are equipped with either external IR position lights, or formation tape lights. The GFAC should also know the fighters' run-in altitude during the attack; this gives him an area of sky to search instead of an entire horizon or a tree line to scan.

Currently, all TACPs are equipped with the global positioning systems, which allow them to fix their positions accurately.

Due to the inherent risks involved with night CAS operations, minimum safe distances should be based on aircraft capabilities, type of target mark, attack geometry, and ordnance fragmentation patterns. Aircraft are equipped with operational LSTs, NVDs, or FLIR, and a compatible target mark, can be brought in as close as one kilometer to friendly positions. Aircraft attacking "grid only" should be brought in no closer than two kilometers to those positions.

Regardless of aircraft capability, attack geometry will affect minimum safe distances. If the attack heading is parallel to friendly units (plus or minus 30 degrees), the minimum safe distance should not be affected. But if the attack heading is perpendicular to friendly units, the minimum safe distance moves out to at least two kilometers. In a troops-in-contact situation, the decision to employ ordnance inside the minimum safe distances for night operations would still fall to the Army ground commander.

The Gulf War has shown the importance of the Air Force's ability to provide night CAS for Army operations. In most situations, Army units will conduct offensive operations during periods of darkness to exploit their

technological advantage. If aircraft are equipped with LSTs and NVDs, this greatly improves the fighters' ability to pin-point target locations and accurately identify friendly positions.

The Navy and Marine Corps currently have a night CAS capability with the F/A-18, A-6E, and AV-8B. The Air Force is now developing this capability with the acquisition of NVDs for both the A/OA-10 and the F-16 communities. This acquisition will require both CAS pilots and TACPs to establish building-block training programs for night operations. As Air Force operational fighter squadrons receive this capability, TACPs will increasingly be able to train at night with Navy, Marine Corps, and Air Force assets.

Night CAS requires equipment that is not currently authorized for most conventional TACPs, and the cost of this equipment may be prohibitive, given smaller budgets. The tables of allowances are being adjusted, however, to reflect night CAS requirements. TACPs will be equipped with IR position markers and IR target designating devices as funding allows. With this type of equipment and training, the Air Force will consistently be able to provide ground forces with the accurate close air support they need at night.

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Air Assault Decision Matrix

CAPTAIN S.F. KUNI

No formal criteria exist for selection or rejection of an air assault course of action employed by the opposing force (OPFOR) regiment. I have made, used, and refined an air assault decision matrix at the National Training Center (NTC). Although this matrix is fairly objective, it can be tailored to fit the needs of U. S. Army units in different situations and locations.

Some of the factors shown on the matrix are defined as follows:

Enemy locations and reaction times. Enemy elements are not in a position to bring effective direct fire (mounted or dismounted) on the air assault forces for 20 minutes after landing.

Landing under friendly observation. Reconnaissance has eyes on proposed LZ and has reconned the mounted routes to the LZ and found no enemy there.

Landing zone (LZ) secure. No enemy is currently in a position to bring effective direct fire on the LZ without moving.

LZ inaccessible to tracks. Terrain between the LZ and the actual or templated position of tracked vehicles is so broken that traversing or bypassing it would take longer than 20 minutes.

Hides at or near LZ. Ground within 200 meters of the LZ gives infantry 360-degree protection from mounted weapons.

Good alternate LZs. Alternate LZs at least 1,500 meters from primary LZ with terrain that blocks direct fire between them.

Distance from LZ to objective. Ten kilometers or less for last-light insertions, 500 meters or less for first-light insertions.

Covered and concealed routes to objective. Adequate 360-degree cover from direct-fire weapons is within 25 meters of the planned route.

Objective hot or cold. No enemy can bring direct fire on the objective without moving.

Doctrinal application. Air assault goes to the objective or lands unopposed in support of higher operations, and link-up with mechanized forces is planned and accomplished.

Length of time until link-up with mechanized forces. A realistic link-up is planned within six hours.

Some of these criteria may change, and some factors may have to be added or deleted on the basis of different unit needs. Some other factors I am considering for inclusion later are listed below. They all relate to one another.

Did the air mission commander (AMC) attend the order briefing? Did the plan change after the aviators left the briefing?

Complexity of air mission and unit cohesiveness. Does the mission involve splitting lifts into serials or multiple LZs or is it "same way, same day"? Is one unit flying the mission or two (such as allied aviation attached for training)? Is the AMC familiar with the area and unit procedures?

How much time does the commander get between final plan and execution time? Is he or his unit flexible enough to react to a late change or a fragmentary order (FRAGO) and still accomplish the mission?

What is the overall proficiency of the unit involved? Some units can ac-

complish simple missions, given enough time to practice and plan them. But if time is taken away and complexity increased, they will fail dismally. Other units need only Class V and a FRAGO to succeed.

The following are the directions for using the matrix:

For each factor, place a 1 (good), a 2 (neutral or not so good), or a 3 (worst or bad) in the column for each COA. Repeat values are possible (for example, both COAs 1 and 3 might receive the value of "1" for hides at or near the LZ). Factors that are equal get the same number. The usual method is to combine and divide for an average, but this works when the desired end is to select one course of action over the others.

The purpose of this matrix is primarily to evaluate the probability of success of each COA. This gives a relative number to each. The COA with the lowest total number has the best chance for success and subsequent mission accomplishment. The commander can then select one on the basis of which survivable COA best suits his plan.

AIR ASSAULT DECISION MATRIX

COURSES OF ACTION	COA 1	COA 2	COA 3
FACTORS			
Air routes not subject to enemy fires and observation			
Enemy locations and reaction times to LZs			
LZ under friendly observation			
LZ secure			
LZ not accessible to tracks			
Hides at or near the LZ			
Good alternate LZs			
Distance to the objective from the LZ			
Covered and concealed routes to the objective			
Objective hot or cold			
Doctrinal application			
Length of time until link-up with mechanized forces			
RISK	1-	2-	3-

Table 1

In 14 air assaults conducted earlier, I retroactively assigned values to each based on the above matrix. I arrived at values from 17 to 31.

I define success as having at least a squad still alive at change of mission and/or able to affect the outcome of the battle. Table 2 places the score of each air assault on a value line with either an "S" (success) or an "F" (failure). Without statistical interpretation, it is apparent that anything over a value of 26 incurs an increased chance of failure.

The weakness in this tool is that all values were assigned after the fact, a luxury of hindsight. To test the accuracy and reliability of the matrix, I needed to test it by applying values to an operation twice—during rotational planning (wargaming) and again at the conclusion of the operation (hindsight) as a control.

Using one of the rotations, I assigned values ranging from 18 to 22 for the different COAs for the first motorized rifle regimental (MRR) air assault, 21 for the forward detachment's air assault, and 22 to 24 for the second regimental attack. What remained was to reassign values at pre-mission just before jump-off and again after the operation to see if the instrument offers any predictive capability.

In a blind comparison of the first MRR's air assault, wargaming produced a score of 22, pre-mission information produced a 24, and post-mission produced a 19. Factors that produced the final score included the presence of regimental reconnaissance on the LZ and securing it. This mission was marginally successful.

VALUES AND SUCCESS/FAILURE OF 14 NTC AIR ASSAULTS

16	
17	S
18	S
19	S
20	SS
21	S
22	SS
23	SS
24	S
25	
26	
27	
28	F
29	F
30	
31	F
32	

Table 2

The forward detachment's air assault had its wargaming score invalidated by late change of plan. The pre-mission score was 24, and the post-mission score was 21. The factors that helped lower the score were unopposed infiltration, enemy locations and reaction times, and a cold LZ. This mission was a resounding success.

A change of plan also invalidated the second MRR's air assault wargaming score. The pre-mission score was 17; the post-mission score was 19. Factors that influenced this mission included two different units with two types of aircraft, a last-minute change of plans, and an incorrect touchdown point well within range of a Bradley's direct fire. The insertion of the second lift at the alternate LZ was well-executed by the aviators. This low numerical value results from factors that do not appear in the matrix (as described above). This mission was not successful.

After some time, I received suggestions to weight some of the variables. Using the 14 previous air assault scores, I doubled the numbers of the factors for

infiltration route, hot-cold LZ, and hot-cold objective. I did this again, doubling the scores of just the infiltration and LZ factors. Both times, I noticed no real changes in the data points, just an increase in the spread. From this I draw several general conclusions: Post-mission scores *appear* to be lower than pre-mission scores. When I add five more scores from the two groups to Figure 2, I have a total of 19 missions (the infantry liaison officers did two of the air assaults). These points show successes at 19, 19, 21, and 24 and a failure at 19. Even given the small sample, these five additional data points indicate that post-mission scores are equal to or less than pre-mission scores.

I also tried to "fit" the air assaults from the two rotations after adding weights to both the scores and the success-failure spread. Although I do not feel a need to do so, it makes sense (or at least adds comfort) to weight the factors that are most critical to the success of the operation. In predicting success and failure, they fit well in all cases, weighted and unweighted.

I believe this instrument is basically reliable, but its accuracy can be improved with the use and refinement of the factors involved. It offers a way to select the least risky COA and, by extension, the best chance of survival for air assaults. And without survival, even the highest payoff possibility turns into no payoff at all.

Captain S.F. Kuni currently assigned to Fort Bragg, was liaison officer to the National Training Center's opposing force, the 1st Battalion, 63d Armor, in which he has also served as a platoon leader and a company executive officer. He is a 1989 ROTC graduate of Augusta College in Georgia.

Readiness in the Reserves
Active Component Support to RC Training

LIEUTENANT COLONEL ROBERT W. BROWN

The "Active Component to Reserve Component" (AC/RC) dedicated support program is an aggressive, Congressionally mandated measure designed to improve the readiness of selected RC units. Unfortunately, the program is complex and not well understood by most soldiers in both components.

The AC officers and noncommissioned officers (NCOs) assigned to the program help RC units plan, prepare, and conduct collective training at company level and below and command and staff training at battalion and brigade level during premobilization periods. Upon mobilization, the AC soldiers provide dedicated assistance to mobilization station commanders in validating Army National Guard (ARNG) and U.S. Army Reserve (USAR) units for deployment.

The mission of this program is to improve the ability of the RC commanders and staffs to train their units. As part of this effort, regional training teams (RTTs) and resident training detachments (RTDs) exist to help the commanders of selected RC units develop and execute training plans that support their mission essential task lists (METLs).

RTTs and RTDs are the critical links between RC units and their wartime counterpart AC organizations. The members become personally involved in teaching, coaching, and mentoring RC units. They provide unit commanders with accurate and timely feedback on the execution of training and then help develop plans for any corrective training that may be needed. The AC soldiers assigned to the teams and detachments are highly proficient subject matter experts in their technical and tactical areas and in the application of battle-focused training and after-action review (AAR) techniques.

The initial RTDs were assigned to readiness groups (RGs) for command and control but were stationed for duty with a supported RC battalion or brigade and its subordinate units. A detachment consisted of four AC soldiers—two officers and two NCOs. Members of an RTD normally provided direct-support advice and assistance for one RC commander and staff and worked with that RC unit on a daily basis.

The RTD's primary mission consisted of the following:

- Help with battle-focused training management (including the development of METLs, command training guidance, yearly training calendar, and yearly training briefing).
- Help in developing and conducting high-quality soldier, leader, and battle staff training.
- Help in integrating simulation devices and software-based training.
- Help in developing training sites,

establishing lanes, coordinating ranges, and conducting leader drills.

• Provide feedback to the unit commander on all training.

Readiness groups coordinated or provided basic administrative and logistical support. Efficiency report raters could be either AC or RC, but senior raters were always AC. Duty locations were normally more than an hour's driving time or 60 miles from an active service installation. This meant that the assigned soldiers usually had to "live on the economy"—that is, rent or buy a home, shop at local supermarkets, buy insurance supplements to offset the cost of local medical treatment, and the like.

RTTs were assigned to RGs for command and control but were centrally located to provide regional coverage for several RC companies and battalions. Depending on the regional alignment, one location might have 5 to 15 positions for AC officers and NCOs. As a rule, these teams provided priority general support to the contingency force pool units and enhanced brigades (in the past, called roundout or roundup brigades) in their regions.

Members of RTTs worked out of the same facility, but traveled to an RC unit's location to provide advice and assistance. A team's training support mission was the same as that of the RTD. Readiness groups provided basic life support, but efficiency report raters and senior raters were strictly AC. Duty locations were either remote or located on or near military installations.

A second and often misunderstood type of RTT is AC/RC duty with an exercise division (or "Div Ex"). In October 1993 the Army activated five regional USAR TDA (tables of distribution and allowances) organizations: the 85th Division (Exercise) in Arlington Heights, Illinois; the 78th in Edison, New Jersey; the 87th in Birmingham, Alabama; the 75th in Houston, Texas; and the 91st at Ft. Mason, California.

Authorized more than 2,500 USAR observer-controllers (OCs), each exercise division is organized with one battle command staff training (BCST) brigade and four lane-training brigades. The BCST brigade provides for a battle projection center and for mobile OC teams to conduct and evaluate simulation-based staff training exercises. The lane-training brigades conduct and evaluate lane training at company level and lower, primarily for combat support (CS) and combat service support (CSS) units.

Each exercise division RTT consists of 12 AC officers—two lieutenant colonels, three majors, three captains, and four sergeants first class. Like other RTTs, exercise division RTTs are assigned to RGs for command and control and stationed for duty with the supporting exercise division. By the nature of their mission, these teams are employed differently from the other RTTs and the RTDs assigned to RC TOE (tables of organization and equipment) units.

Unfortunately, some exercise division RTTs have not been used effectively because they were broken up and pigeon-holed with various staff sections or were in direct support of one or two brigades. The most successful use of this type of RTT (as well as the correct and logical use) has been in general support of the division. In this role, they could focus their hands-on, train-the-trainer assistance on planning, preparing, and conducting OC training and certification, BCST exercises, and lane training.

During Fiscal Year 1994, RTDs and RTTs were highly successful, primarily with CS units (military police, chemical, signal, non-combat engineer) and CSS units (adjutant general, finance, medical, quartermaster, transportation). Beginning in Fiscal Year 1995, additional legislation authorized another 3,000 AC soldiers for duty with RC combat arms maneuver units (defined as infantry, armor, field artillery, air defense, aviation, military intelligence, and combat engineer) as well as CS and CSS units and exercise divisions.

This new legislation also authorized the TDA fielding of regional training brigades (RTBs) and operational readiness evaluation (ORE) teams:

An RTB is an AC organization aligned under a Continental U.S. Army (CONUSA) headquarters for command and control. Its mission is primarily to help in gunnery training and in company, platoon, and squad combat lane training. An RTB consists of 345 AC soldiers organized into 11 battalion observer-controller teams under the command and control of a brigade headquarters.

Like the RTBs, ORE teams are TDA organizations aligned under a CONUSA for command and control. ORE teams consist of AC soldiers who conduct inspections and evaluations of selected RC units to determine whether they meet premobilization requirements for deployment and deployability standards.

AC/RC Assignments

What is it like serving in an AC/RC assignment? Daily routines can vary unit to unit, but they are essentially similar to my experience as a member of RTT, 87th Division (Exercise). Duty hours are normally 0730-1630 hours. RTT soldiers work Monday through Friday plus one or two weekends each month (drill weekends) and two or three weeks during each RC unit's annual training period.

As AC role models, the team's soldiers ensure that Army standards for appearance, discipline, ethics, physical fitness, and so forth are met (the assignment itself motivates us to set an example). If PT is conducted in the morning, the duty day begins at 0830; if PT is conducted in the afternoon, the duty day ends at 1530. PT is done on an individual basis and is usually conducted in a local gym (contracted and paid for by the RC unit).

The RC unit commander or operations officer passes daily work requirements to the RTT chief. The team chief monitors all taskings and funnels all work back to the RC unit chain of command.

AC/RC soldiers can be assigned to locations with duty in areas more than 60 miles from military installations that offer quarters, medical/dental, commissaries, and exchanges. For example, my RTT in Birmingham is 120 miles

south of Redstone Arsenal, 85 miles west of Fort McClellan and the Anniston Army Depot, and 75 miles north of Maxwell Air Force Base.

As a result, the first priority is finding suitable quarters. Since most duty locations have non-transient populations, soldiers should not expect to see much in the way of quality rental property (except in one or two-bedroom apartments), which leaves purchasing a house as a scary option. Rent or mortgage payments usually equal or exceed basic allowances for quarters, and variable housing allowances can be minimal or nonexistent.

The second priority is enrolling school-age dependents in the local schools, and since most schools are zoned into districts, proof of address (lease or mortgage agreement) is required. Shopping opportunities are limited to the local supermarkets and malls. While routine medical services can be scheduled long distance, emergency medical treatment is obtained locally through civilian doctors or hospitals, which may or may not file CHAMPUS paperwork; medical supplements are recommended if charges routinely exceed the CHAMPUS allowable cost. Civilian dental care is easier, as most dentists accept Delta Dental Insurance.

The readiness groups provide most life support functions for the teams and detachments. They provide command and control by exercising Uniform Code of Military Justice (UCMJ) authority, establishing rating schemes, and ensuring that the AC/RC mission priority meets legislative guidance. They provide training by establishing and conducting an RC orientation program within 90 days of assignment, and by coordinating individual training requirements such as common task training and officer or NCO professional development.

RGs provide administrative and personnel support by developing and implementing memorandums of agreement between the supported RC unit and the RG for AC/RC support, conducting in-processing and out-processing with local military installations, ensuring that RTT/RTD soldiers forward personnel and finance transactions through the RG, and coordinating soldier and family medical and dental care from available military installations.

RGs manage logistical support by ensuring that AC/RC soldiers receive CTA-50 equipment and supplies, office furniture, telephones, ADT equipment, and general office supplies. They also handle budgeting and funding of temporary duty and submit unfinanced requirements to a supporting CONUSA.

The Reserve Component units themselves also provide support. They help the RGs develop RTT/RTD mission statements, duty descriptions, and mission guidance. Further, they maintain direct liaison with RGs on RTT/RTD command and control, standardized reports, and other matters concerning the AC/RC program. RC units provide full-time offices, office furniture, supply accounts, and administrative supplies for conducting day-to-day business. The units integrate RTT/RTD soldiers into all aspects of unit planning and execution of training by establishing specific goals to focus or make the most of AC/RC assistance.

The RTTs and RTDs exist solely to provide dedicated hands-on, train-the-trainer support to selected RC units. AC soldiers are assigned to facilitate maximum daily contact. They do not fill RC unit vacancies or become project officers. They do not represent the supported RC unit or its soldiers, or perform official functions for them. Neither do they compete with or replace

AC full-time unit support or Active Guard and Reserve (AGR) soldiers assigned to the RC unit. Upon mobilization of the RC unit, the AC/RC soldiers do not deploy unless directed by the supporting RG or CONUSA.

Overall, AC/RC duty is not a bad assignment, and its efforts have already borne fruit. Professionally, I have seen tremendous growth and development in the RC units that have received dedicated AC/RC assistance.

In sum, both the AC and RC have identified "growing pains" and a general lack of standardization and guidance with regard to RTT/RTD assignments, funding, use, and command and control. The U.S. Army still depends on the continued training progress of the RC force, however, and U.S. Army Forces Command, together with the CONUSAs, the Army National Guard, and the U.S. Army Reserve, will continue to refine the AC/RC program.

Regional training teams and resident training detachments must continue to ensure the training fidelity of RC readiness by thorough planning, coordination, and AC commitment. All AC personnel have an obligation to become personally involved in teaching, coaching, and mentoring the Reserve Components, as well as assessing RC training performance.

Lieutenant Colonel Robert W. Brown, now assigned to RTT, 87th Division (Exercise), Birmingham, Alabama, previously served in Europe as executive officer for the Combat Maneuver Training Center's opposing force regiment and for the 3d Infantry Division's 4th Battalion, 7th Infantry. He is scheduled to assume command of 1st Battalion, 16th Infantry, 1st Infantry Division, at Fort Riley, Kansas, in June 1995. He is a 1978 ROTC graduate of Virginia Military Institute and holds a master's degree from Troy State University.

SWAP SHOP

A Company Tactical SOP

As an executive officer and a staff officer, I observed the limited value of a thick company tactical standing operating procedure (TACSOP) book that sits on the shelf during training. As a result, when I took command of an infantry company, I decided to include in the TACSOP only the tactical SOPs the company would train on and the written operations order format I would use when we trained in the field or in simulation.

I used both the draft TACSOP and OPORD format during the train-up for a rotation to the Combat Maneuver Training Center (CMTC) in Germany and was rewarded with input and refinements from the company leaders as well as my fellow commanders.

I used Harvard Graphics and the Army's reproduction system to ensure that every leader and attachment in my company team had a pocket-sized copy of the final version before we deployed to the CMTC. I also had in my field desk (in the back of my Bradley fighting vehicle) extra copies of the TACSOP and packets of each page of my standard OPORD format with carbon paper between them for rapid order production.

But the big reward came during the rotation itself—the company team was very successful, and I was happy to hear the leaders referring to the TACSOP. The phrase "per unit SOP" actually had meaning and greatly simplified the OPORD.

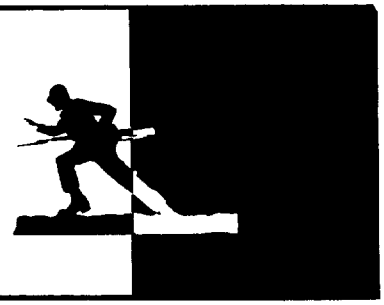
This company TACSOP may not be a perfect solution (it is somewhat inflexible in sub-unit missions and formations), but it is a vast improvement over a huge TACSOP that has been written primarily to "check all the blocks" for the observer-controllers at the training center and is never actually used or referred to by unit leaders.

As with many problems in the Army, simplicity is the key to solving this one. A unit's TACSOP must include only its understood tactical SOPs.

(EDITOR'S NOTE: INFANTRY will send a copy of the contents of this TACSOP to anyone who requests it. The address is P.O. Box 52005, Fort Benning, GA 31995-2005.)

(Submitted by Captain Thomas Goss, 3d Battalion, 5th Cavalry, 1st Armored Division.)

INFANTRY CAREER NOTES



DEEP-BATTLE PREPARATION FOR YOUR CAREER

When you receive the long-awaited word that you've been selected for promotion to captain, you feel great. You have worked hard to learn the fundamentals of your job and the important technical, tactical, and leadership skills that are necessary to achieve the all-important goal of command. Of course, there is the advanced course and maybe some staff time, but you are focused and nothing will keep you from the cherished privilege and challenge of being "the commander." But maybe your goals are too short-sighted.

All too often, young, energetic company-grade officers are so oriented on command that they don't realize another "deep battle fight" is just beyond their view. Company command is a key career objective, but once that becomes more of a close-battle fight, plans and actions must begin for the next objective—what to do after company command. Here is some important intelligence on the subject:

During the time you are a captain, several key events take place that can have a beneficial effect on your military and personal development.

First, you will receive an initial functional area designation around your fifth year of service. Second, during the later stages of company command, a relatively small window of opportunity will open in which you may be considered for fully funded advanced civil schooling and a utilization assignment before your promotion to major. You must be prepared to make the most of the opportunities these two events present.

Preparation involves making sure three key documents are in your official records at PERSCOM:

- An official copy of transcripts for the highest college-level degree you have earned.
- Official documentation showing your Defense Language Aptitude Battery (DLAB) score or the presence of the score on your officer record brief (ORB).
- An official copy of valid Graduate Record Examination (GRE) scores that are no more than five years old.

The first two of these documents ensure that both branch and functional area assignment managers get you into a functional area that makes use of the unique skills you already have. The objective is to assign you a functional area

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that you will retain while on active duty. Furthermore, the training and job skills you gain from working in that functional area become powerful credentials when you decide to return to civilian life later. GRE test scores allow basic branch and functional area assignment managers to determine which officers should be considered for the limited number of fully funded advanced civil schooling quotas that are distributed annually among the basic branches and functional areas. Officers who have valid GRE scores in their records when this screening begins have a significant advantage over their counterparts who do not.

As the Army continues to downsize, you must actively manage your career. Key to that process is ensuring that your official records at the Total Army Personnel Command (PERSCOM) are accurate and updated with information that will improve your opportunities for success.

Make sure your records give you the edge, not a disadvantage, in achieving your career goals.

75th RANGER REGIMENT NEEDS INFANTRY OFFICERS

The 75th Ranger Regiment is always looking for quality infantry officers for assignment to its three battalions and the regimental headquarters.

Specifically, the regiment needs the following officers:

- Infantry lieutenants in year groups 1993 and 1994 (all must have platoon leader experience).
- Infantry captains in year groups 1988, 1989, and 1990 (all must be company command qualified).
- Infantry majors in year groups 1982, 1983, and 1984 (branch qualified majors preferred).

Each officer must submit a packet consisting of the following:

- Officer record brief (ORB).
- All officer evaluation reports (OERs) with senior-rater profiles.
- Official Department of the Army photo.
- Letters of recommendation from chain of command.
- Letter by applicant requesting assignment, addressed to the regimental commander.
- Photocopy of the approved DA Form 4187.
- Latest Army Physical Fitness Card.

To receive proper consideration for assignment, officers must send their packets approximately one year before reassignment (permanent change of station or return from overseas). The earlier the packet arrives, the better. Although partial packets will be accepted initially, a complete packet is required before the candidate selection process begins.

Send packets to Commander, 75th Ranger Regiment, ATTN: RS1, Fort Benning, GA 31905-5843. Direct questions to Major Bassett, Regimental Adjutant, at DSN 835-5669/5124 or commercial (706) 545-5669/5124.

SELF-DEVELOPMENT TEST HAS BEEN ELIMINATED

The Self-Development Test (SDT) was approved for elimination, effective 2 February 1995, after major command command sergeants major concluded that the Noncommissioned Officer Education System (NCOES) now measures soldier performance much better. The lessons learned from the SDT will remain a part of NCOES as well as the Noncommissioned Officer Development Program (NCODP) at unit levels, where it will allow commanders flexibility in tailoring unit training to fit their needs.

Soldiers who were tested before the SDT was eliminated will receive their results (individual soldier's report). No other results will be generated or distributed.

Training standards officers (TSOs) will maintain functional support to complete close-out processing of SDT and serve as interface for common task testing. TSOs also will make existing SDT materials available to units for use in individual or unit training programs such as NCODP until stocks are depleted.

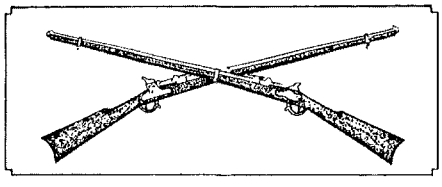
The U.S. Army Training and Doctrine Command will continue to develop, field, and maintain soldier training publications to support individual task-based training and self-development requirements.

Commanders and promotion boards will no longer use SDT results to determine promotion points, and raters will no longer use these results to complete Part IV of any NCO evaluation report or record them on the NCO-ER to support any bullet comments.

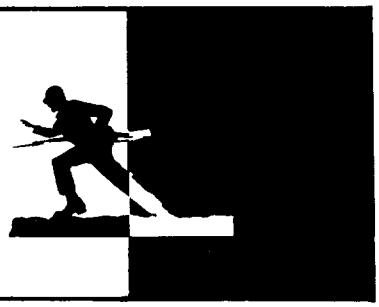
HEIGHT/WEIGHT STANDARDS FOR NCOES COURSES

Army Reservists are reminded that they must meet the height and weight standards spelled out in Army Regulation 600-9 to enroll in the Noncommissioned Officer Education System (NCOES).

Soldiers who do not meet the screening weight and who exceed the allowable percentage of body fat will be denied enrollment. In addition, soldiers must pass the Army Physical Fitness Test (APFT) upon reporting for the course. Those with temporary profiles are not allowed to attend NCOES courses.



BOOK REVIEWS



D-Day, June 6, 1944: The Climactic Battle of World War II. **By Stephen E. Ambrose. Simon and Schuster, 1994. 656 Pages. $30.00.** Reviewed by Lieutenant Colonel Albert N. Garland, United States Army, Retired.

Stephen Ambrose—a professor of history at the University of New Orleans, and Director of the Eisenhower Center and President of the National D-Day Museum in New Orleans—does what no other acknowledged military historian (to my knowledge, at least) has ever done: He heaps praise on the World War II United States infantryman. For this he has been roundly criticized by several reviewers.

True, in putting together this intensely personal story of the events of June 6, 1944, Ambrose does go overboard in his praise in spots (pages 262 and 360, for example). But the men who fought in Normandy—U.S., British, Canadian, and French soldiers, sailors, and coastguardsmen; fighter pilots and bomber crewmen—deserve Ambrose's praise and probably more. This is their story, told in their own words, a story that Ambrose ties together into a coherent whole.

Although Ambrose's main concentration is on the events of D-Day itself, including German actions and reactions at several levels, he does include several preparatory chapters in which he discusses the opposing forces, their commanders, and the planning and preparation phase of one of the great battles of the war. He also injects himself into the Montgomery controversy, which lingers to the present day.

Unfortunately, there are a number of errors in his narrative that simply should not be there:

- There were four, not two, U.S. divisions in England in early June 1944 that had seen combat—the two not mentioned were the 9th Infantry and 2d Armored Divisions (page 48).
- His brief discussion of the Sicily campaign (page 60) is inaccurate as it pertains to the number of divisions involved on both sides.
- The 16th Infantry Regiment (page 140) belonged to the 1st Infantry Division and had seen action in North Africa and again in Sicily. It moved with the division to England from Sicily early in 1944; it was far from being a johnny-come-lately regiment.
- The discussion of black units in World War I (page 147) is inaccurate.
- Colonel George Taylor commanded the 16th Infantry Regiment, not the 116th (page 404).
- The commander of the 1st Infantry Division was Major General, not Lieutenant General, Clarence Huebner (page 405).
- It was the Orne, not the Oran, Canal in the British sector (page 549).

Despite these errors, this book should be required reading at all levels of the Army's service school system, and at the higher level schools as well. If jointness is the name of the game today, there is no better publication than this one to point out the need for our services to work together for the common good. There are other lessons in its pages, particularly in the matter of leadership and the need on a battlefield to pick up the pieces and get on with the mission when things don't go right. The U.S. assault forces that landed on Omaha Beach suffered heavy losses; the assault forces of the 3d Canadian Division Juno Beach lost almost as heavily. But the survivors pressed on and, as a result, Stephen Ambrose had a great story to tell.

(EDITOR'S NOTE: Audio tapes of this book, read by the author, are also available from Simon and Schuster. Six hours, four cassettes, $25.00.)

Abandoned by Lincoln: A Military Biography of General John Pope. **By Wallace J. Schutz and Walter N. Trenerry. University of Illinois Press, 1990. 243 Pages. $32.50.** Reviewed by Major Don Rightmyer, U.S. Air Force, Retired.

The authors of this book claim Union General John Pope as the only commanding general of a major Union army who has not had a biography written about him. Although this is not true, it is a small inaccuracy in an otherwise good Civil War history.

John Pope, a graduate in the 1842 class at West Point, spent most of his pre-Civil War Army career on the frontiers of the Army's enterprises. Commissioned as a topographical engineer, Pope participated in numerous explorations of the West as well as the active combat experiences of the Mexican War. Interestingly, the young officer had a bad habit of writing rather outspoken letters to high level civilian and military leaders outside his normal chain of command, which earned him unwanted attention on more than one occasion.

The Civil War saw Pope's first noteworthy success at the battle of Island No. 10 in the Mississippi River. Highlighted as an apparently successful general in an otherwise lackluster line of Northern military leaders, Pope was brought east to take up the fight in that theater. This Pope biography provides insights into the amazing role the political and strong personal affiliations of Northern military leaders played in the Civil War. For example, when many of General George McClellan's Army of the Potomac troops were taken from him on the Virginia Peninsula and sent to Pope's Army of Virginia, some of the subordinate leaders essentially refused to fight for Pope.

This book covers the eastern battles of Cedar Mountain, Groveton, and Second Manassas in which Pope led Union troops. After his failure in the East, Pope was sent back into the western theater where he spent the rest of the war and the rest of his 44-year Army career.

The book is supplemented by two appendixes—one on Fitz-John Porter's courts-martial for his refusal to fight under Pope at Second Manassas and the other on Pope's generalship.

Abandoned by Lincoln is a very worthwhile, compact biography on one of the succession of generals who fought in the Virginia theater of operations before Lincoln finally identified Grant as the man for the job. Pope's life story offers an interesting perspective into the Civil War as well as nearly half a century of the Army's history on America's frontiers.

Imperial Warrior: The Life and Times of Field-Marshal Viscount Allenby. **By Lawrence James. Weidenfeld and**

Americans, whose "defeat" in Southeast Asia he assesses in rather simplistic terms. More than two dozen interesting photographs illustrate the text, but the sole map is inadequate and poorly drawn.

The experiences of Cross, one of the few British soldiers in Indochina after the end of World War II and probably the very last to leave the region three decades later, make interesting and thought-provoking reading. This well-written book is highly recommended.

***DESERT STORM: The Gulf War and What We Learned.* By Michael J. Mazarr, Don M. Snider, and James A. Blackwell, Jr. Westview Press, 1993. 207 Pages. $33.00.** Reviewed by Lieutenant Colonel Albert N. Garland, United States Army, Retired.

The authors, all with the Center for Stategic and International Studies, state that their goal in writing this book is "to examine the lessons of the Gulf War from a high-level, strategic defense perspective." In general, they have met their goal. (One of the authors, James Blackwell, had already examined the war from a lower level in his 1991 book titled *Thunder in the Desert: The Strategy and Tactics of the Persian Gulf War,* which was reviewed in INFANTRY's May-June 1992 issue, page 49.)

They do subject a reader to a rather lengthy discussion of deterrent theory, after which they point out how the United States "bungled deterrence in classic fashion." They also devote a number of pages to a discussion of U.S. foreign policy, the debate in this country over the war, and "the failure of compellence."

Eventually, the authors do present their thoughts on the war itself and the lessons we learned from it. They discuss U.S. efforts to assemble a coalition of forces to drive Iraq from Kuwait; the air campaign; and the ground campaign. They conclude with a discussion of "the Gulf war and military strategy." Along the way, they point out lessons the U.S. learned as it went about the business of preparing for and then fighting the war. Among those lessons are the following:

- "There are real limits on what can be expected of guard and reserve forces.... Guard and reserve forces cannot be expected to be as deployable as active duty forces, and including them as part of rapid-deployment forces is a mistake."
- "The United States will be unable to perform any major contingency operation without a substantial degree of assisttance from other nations."
- "This war confirmed that the United States is the world's preeminent military power, politically and economically, however, it remains dependent on allies for legitimacy and assistance."

Considering the authors' goal, perhaps the most important chapter in their book is the last one, in which they list 10 "guiding principles for future U.S. defense policy." It alone may be worth the price of the book.

I have only one minor criticism to offer. The authors wrote this book sometime in 1992 and therefore used what I consider less than fully documented figures to determine losses inflicted on the Iraqis, particularly by coalition air forces. For example, they credit the air forces with "destroying 100 to 150 Iraqi tanks per day before the ground war started" (page 107) and destroying, overall, in six weeks, "thousands of tanks, armored personnel carriers, and artillery pieces" and killing "perhaps tens of thousands of Iraqi soldiers" (page 99). I don't believe these figures would hold up under closer scrutiny.

RECENT AND RECOMMENDED

***Military Intelligence, 1870-1991: A Research Guide.* By Jonathan M. House. Greenwood Press, 1993. 184 Pages. $55.00.**

***Leading the Way: How Vietnam Veterans Rebuilt the U.S. Military: An Oral History.* By Al Santoli. Ballantine, 1993. 448 Pages. $23.00.**

***The Air War in Southeast Asia: Case Studies of Selected Campaigns.* By Herman L. Gilster. Air University Press, 1993. 138 Pages.**

***Mantle of Heroism: Tarawa and the Struggle for the Gilberts, November 1943.* By Michael B. Graham. Presidio Press, 1993. 376 Pages. $24.95.**

***Between Mutiny and Obedience: The Case of the French Fifth Infantry Division during World War I.* By Leonard V. Smith. Princeton University Press, 1994. 274 Pages. $35.00.**

***Crusade: The Untold Story of the Persian Gulf War.* By Rick Atkinson. Houghton-Mifflin, 1993. 595 Pages. $24.95.**

***The Persian Gulf After the Cold War.* Edited by M.E. Ahrari and James H. Noyes. Praeger Publishers, 1993. 264 Pages. $57.95.**

***The 1,000 Hour War: Communication in the Gulf.* Edited by Thomas A. McCain and Leonard Shyles. Greenwood press, 1993. Contributions in Military Studies, No. 148. 232 Pages. $49.95.**

***No Bugles, No Drums: An Oral History of the Korean War.* By Rudi Tomedi. Wiley, 1993. 259 Pages. $24.95.**

***Riding the Tiger: The Middle East Challenge After the Cold War.* Edited by Phebe Marr and William Lewis. Westview Press, 1993. 253 Pages. $16.95, Softbound.**

***American National Security: Policy and Process.* Fourth Edition. By Amos A. Jordan, William J. Taylor, Jr., and Lawrence J. Korb. Originally published in 1981. Johns Hopkins University Press, 1993. $21.95, Softbound.**

***Security Studies for the 1990s.* Edited by Richard Shultz, Roy Godson, and Ted Greenwood. Brassey's (US), 1993. 528 Pages. $50.00.**

***Joint Military Operations: A Short History.* By Roger A. Beaumont. Contributions in Military Studies, No. 139. Greenwood Press, 1993. 264 Pages. $55.00.**

***Gray Area Phenomena: Confronting the New World Disorder.* Edited by Max G. Manwaring. Westview Press, 1993. 198 Pages. $37.50, Softbound.**

***Sieges: A Comparative Study.* By Bruce Allen Watson. Praeger Publishers, 1993. 192 Pages. $49.95.**

***For Country, Cause & Leader: The Civil War Journal of Charles B. Haydon.* By Stephen W. Sears. Tichnor & Fields, 1993. 371 Pages. $25.00.**

***The Missiles of October: The Declassified Story of John F. Kennedy and the Cuban Missile Crisis.* By Robert Smith Thompson. Simon & Schuster, 1993. 344 Pages. $14.00, Softbound.**

***How to Make War: Third Edition: A Comprehensive Guide to Modern Warfare in the Post-Cold War Era.* By James F. Dunnigan. William Morrow, 1993. 622 Pages. $15.00, Softbound.**

***The Root: The Marines in Beirut, August 1982-February 1984.* By Eric Hammel. A reprint of the 1985 hardcover edition. Pacifica Press, 1993. 448 Pages. $17.95, Softbound.**

***The Military and the Media: Why the Press Cannot Be Trusted to Cover a War.* By William V. Kennedy. Praeger Publishers, 1993. 184 Pages. $45.00.**

***Feeding Mars: Logistics in Western Warfare From the Middle Ages to the Present.* By John A. Lynn. Westview Press, 1993. 326 Pages. $44.50.**

***Voices from Captivity: Interpreting the American POW Narrative.* By Robert C. Doyle. University Press of Kansas, 1994. 370 Pages.**

***They Had a Dream: The Story of African-American Astronauts.* By J. Alfred Phelps. Presidio Press, 1994. 304 Pages. $24.95.**

***Commanding an Air Force Squadron.* By Colonel Timothy T. Timmons, USAF. Air University Press, 1993. 126 Pages.**

***Convoy! Drama in Arctic Waters.* By Paul Kemp. Sterling, 1994. 256 Pages. $24.95.**

***Sky Battles!: Dramatic Air Warfare Actions.* By Alfred Price. Sterling, 1994. 176 Pages. $24.95.**

***The War in the Mediterranean, 1940-1943.* By Bernard Ireland. Sterling, 1994. 224 Pages. $24.95.**

***The First World War.* Eyewitness History Series. Facts On File, 1992. $40.00.**

***The Vietnam War.* Eyewitness History Series. Facts On File, 1992. $40.00.**

***American Daughter Gone to War: On the Front Lines with an Army Nurse in Vietnam.* By Winnie Smith. Pocket Books, 1994. 352 Pages. $12.00.**

***1794: America, Its Army, and the Birth of the Nation.* By Dave R. Palmer. Presidio Press, 1994. 312 Pages. $24.95.**

***Let the Tiger Turn Tail.* By Russell Spurr. Mainstream, 1993 (distributed by Trafalgar Square, North Pomfret, VT 05053). 203 Pages. $34.95.**

***Soldiers of Misfortune: The Cold War Betrayal and Sacrifice of American POWs.* By James D. Sanders, Mark Sauter, and R. Cort Kirkwood. Avon Books, 1994. $5.50.**

***Voices from Captivity: Interpreting the American POW Narrative.* By Robert C. Doyle. University Press of Kansas, 1994. 386 Pages. $35.00.**

From The Editor

GETTING THE RIGHT WORD OUT

Information travels fast in our business, but the problem is that it may not always be accurate. Unfounded rumor and unsupported speculation are often readily accepted as gospel simply because they are more interesting and tend to reinforce what we want to believe anyway. The problem with this approach is that we learn little from it, and that only when it is often too late. Before America entered World War II, Axis leaders wanted to believe that she lacked the will to mobilize her people and her industrial base in response to their aggression. Their propaganda seized upon that theme, and it soon became widely accepted, a miscalculation with catastrophic consequences. Our own underestimation of the North Koreans' capabilities before their invasion of South Korea in June 1950 led to disastrous losses—losses that shocked an America that had so recently emerged victorious from a world war.

In the early stages of our involvement in Vietnam, similar underestimation of the tenacity and tactical skills of Viet Cong and North Vietnamese Army units was soon replaced by the realization that the tactics of earlier wars were not always the answer. One reason for this underestimation has always been a reluctance to take an honest look at what the enemy has to offer, and to admit that he is a force to be reckoned with. Somehow, we tend to equate this with praising the enemy, which could not be farther from the truth. If we admit an enemy's strengths, they then become *our* strengths, because we have learned from them. And learning is what it is all about.

Today, when we have troops either deployed or awaiting deployment to hot spots around the world, leaders need accurate, timely information they can use to get the job done without unacceptably heavy losses in men and materiel, and that's where INFANTRY comes in. You will still see articles and thought pieces generated by the Battle Lab and the Infantry Force XXI working group that provide a foretaste of what lies in the immediate future and beyond. But you will also see pieces on tactics, training, and equipment that will affect how we fight now, as well as relevant historical articles on how the Army has fought in earlier wars.

At INFANTRY, we cannot afford to waste time with subject matter that is irrelevant to the professional development needs of our readers; instead, INFANTRY will continue to offer practical solutions to the real-world challenges that will confront our infantry leaders and soldiers. Property accountability is one example. Mention of the subject may not bring you to your feet cheering, but lost property has cost many a commander the satisfaction of a successful tour of duty. We ran a piece on that subject last year and had more than 40 requests for the information packet that supported the article. Reader response to articles on Somalia, the Gulf War, and preparation for the combat training centers tell us that we're on track, and we need your continued input to keep us there.

You can also contribute by sharing your own specialized expertise. An example: I need an article on how units—heavy and light—refuel on the move. This is an important factor in maintaining the momentum of operations, and I know the technique is well-known to some of you. If you've done it, write or give me a call, and we'll talk about it. I realize that my feedback on some of your draft articles is not as fast as I'd like it to be, but I'm working through the stack, and I'll get word to you as soon as possible.

As I mentioned, bad information has wings; it travels far and fast. But with your help we can continue to get good information out where it needs to be—in the hands of our leaders and soldiers.

RAE

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