

Infantry

A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM



JULY-AUGUST 1984

Infantry

A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM

A Department of the Army Publication

64th Year

Editor

Albert N. Garland

Deputy Editor

Marie B. Edgerton

Editorial Assistant

Mary H. Wolstenholm

Business Manager

M. Lena Biskup

Contributing Artists

Mary Ann Norton

Charles Willis

Jeanette Heller

Robert Hunter



July-August 1984

Volume 74, Number 4

ARTICLES

- 10 **HEAVY-LIGHT FORCES AND THE NATO MISSION**
Lieutenant General John R. Galvin
- 15 **HEAVY-LIGHT CONNECTION: DIVISION**
Major General Howard G. Crowell, Jr.
Lieutenant Colonel Jared L. Bates
- 19 **HEAVY-LIGHT CONNECTION: BRIGADE**
Lieutenant Colonel Jack B. Wood
- 23 **TANK HUNTING**
Brigadier Richard E. Simpkin, British Army (Retired)
- 28 **LIGHT INFANTRY IN PERSPECTIVE**
Steven L. Canby

FORUM AND FEATURES

- 5 **EXTENDED CROSS-ATTACHMENT**
Lieutenant Colonel William A. DePalo, Jr.
- 6 **ISRAELI M113s**
Captain Edwin L. Kennedy, Jr.
- 8 **MOBILE TRAINING TEAMS**
Major Robert Kilmer, Jr.

TRAINING NOTES

- 32 **PREVENTING HEAT INJURIES: A COMMANDER'S GUIDE**
Captain Charles D. Henry
- 34 **ITEP: WHAT IS IT?**
Major William R. Shirley
- 36 **WINNING AT THE NTC: DELIBERATE ATTACK**
Major Vernon W. Humphrey

DEPARTMENTS

- 2 **COMMANDANT'S NOTE**
- 3 **INFANTRY NEWS**
- 39 **ENLISTED CAREER NOTES**
- 42 **OFFICERS CAREER NOTES**
- 44 **BOOK REVIEWS**
- 48 **LETTERS**

FRONT COVER

The future tactical battle will be fought by a mix of heavy and light forces, and our leaders at all levels will have to be experts at handling all the variations of the mix.

USAIS

Commandant
MG John W. Foss

Assistant Commandant
BG Edwin H. Burba, Jr.

Deputy Assistant Commandant
COL Ronald O. Mullenix

Command Sergeant Major
CSM Albert J. Avila

STAFF

Secretary
LTC(P) Jimmy R. Moore

DEPARTMENTS

Combined Arms and Tactics
COL Robert S. Fiero

Ranger
COL Robert A. Turner

Weapons, Gunnery and Maintenance
COL Joseph S. Napier

DIRECTORATES

Combat Developments
COL Thomas K. Seybold

Evaluation and Standardization
COL Stanley E. Shaneyfelt

Training and Doctrine
LTC(P) James I. Daily

INFANTRY PROPONENCY OFFICE
COL William H. Gavan

THE SCHOOL BRIGADE
COL Edward G. Sills

NCO Academy
CSM John W. Propst



INFANTRY: Published bimonthly at the United States Army Infantry School, it provides current information on infantry organization, weapons, equipment, tactics, and techniques. It also includes relevant historical articles and serves as a forum for professional ideas. Unless otherwise stated, the views herein are those of the authors and not necessarily those of the Department of Defense or any element thereof. The use of funds for printing INFANTRY was approved 6 January 1984 by Headquarters, Department of the Army, The Honorable John O. Marsh, Jr., Secretary. Official distribution: three copies to each infantry and infantry related unit and to appropriate staff agencies and service schools.

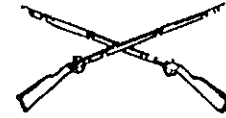
SUBSCRIPTIONS: One year, \$10.00, two years, \$19.00. Single copy, \$2.50. A foreign (non APO) subscriber must add \$3.00 per year for postage on each subscription. Payment must be made either by United States currency, by international money order, or by a check or draft drawn on a bank in the United States. One-year subscriptions are not refundable. Two-year subscriptions are refundable, but service and handling charges will be deducted. The expiration date of a subscription is shown in the first four digit number on the address label's first line (the first two digits indicate the month, the last two digits, the year). Please notify your postmaster and INFANTRY promptly of any change of address.

CORRESPONDENCE: Address all correspondence to Editor INFANTRY Magazine, Box 2005, Fort Benning, Georgia 31905. Please furnish complete return address. Queries are answered promptly. Manuscripts are acknowledged within 30 days. Telephones: Editorial Office: 404 544 4951 (AUTOVON 784 4951), Business Office - 404/545 5997 (AUTOVON 835 5997).

POSTMASTER: Second-class postage paid at Columbus, Georgia and at Pensacola, Florida. Send Form 3579 to Circulation Department, INFANTRY Magazine, Box 2005, Fort Benning, Georgia 31905. For forwarding to a member of the U.S. military services, see Section 158.4, Postal Service Manual. U.S. Postal Service Publication Number 370630. ISSN 0019 9532.



Commandant's NOTE



Major General John W. Foss

Chief of Infantry

Our Army has always sought leaders who are tough, flexible, resourceful, and competent. Especially today, our operations doctrine emphasizes the point that maneuver warfare will place a premium on small unit leadership, unit cohesion, and independent operations.

Accordingly, we recently modified our basic officer course by including in it a 7-day tactical leadership course — the “TLC” — as part of an intense and continuous 13-day FTX that focuses on squad and platoon training. The TLC moves leadership, BTMS, and tactical training out of the classroom and into a field environment as part of our continuing efforts to give our infantry units in the field better trained and tougher second lieutenants. Thus, the TLC’s major objectives are to teach our young lieutenants how to train, how to fight, how to lead, and how to build a team.

The TLC is based on 20 squad-level tactical drills that must be performed to standard within time limits and under increasing levels of stress. (The officers can go as much as three days and two nights without sleep.) The drills, which are dismantled ones, form the foundation for the light and mechanized infantry training that occurs during the follow-on FTXs. The drills include many of the tasks that an infantry squad is likely to encounter on a modern battlefield — knocking out bunkers, clearing trenchlines, acquiring targets, distributing and controlling fires, breaching wire obstacles, conducting dismantled assaults, reconnoitering woodlines, and thirteen other ARTEP-related collective tasks.

On two different occasions during the TLC, each lieutenant is placed in an evaluated leadership position. He is then required to put into actual practice the leadership principles and techniques he has been taught in his classroom instruction. The student is both trainer and leader of a squad of his peers, which must carry out one of the prescribed drills to the required standard. His rating depends on how well his squad does on that assignment.

To emphasize leadership — and to add an element of stress to the course — the 200-man basic officer company is “scrambled” into 20 ten-man squads. Each officer squad leader then has only about two hours to train his

squad for the assigned drill, rehearse it, and successfully carry it out. (All the lieutenants have received instruction on key tasks before the TLC, so the training in the drills is not as difficult as it might be otherwise.) The squads execute four drills daily, each under a different leader, and then go immediately into night combat patrolling.

Following these seven days of training, the basic officers are moved to a new training area for the light infantry FTX, which focuses on the light infantry tasks in which the officers were drilled to proficiency during the TLC. During the FTX, the officer-students execute platoon movement and fire-and-maneuver tasks, a deliberate daylight attack, a limited visibility attack, a deliberate dug-in defense against an opposing force, security and combat patrols, and withdrawals not under enemy pressure. All of this is followed by a tactical cross-country march of from five to twelve miles.

The TLC and the light infantry FTX set the stage for the mechanized infantry FTX that is held later in the course when the basic officers are challenged to put together all of their infantry skills in a demanding and fast-paced exercise.

The young lieutenants who have completed the TLC have all been positive in their remarks about it. They feel they have learned a lot about themselves, about how a unit comes together, and about how to train, lead, and fight. By the end of the TLC, they say, each “scrambled” squad had become a cohesive unit and felt it had performed well.

Because of their value, the 20 drills are being made a part of the training program for light infantry units. Training packets may also be developed for units in the field, both Active and Reserve Component. These packets would explain how a TLC can be laid out, what support requirements it would need, and how it might be conducted.

We feel this is an invaluable course for what it is designed to do — turn out tougher, better trained junior leaders. By doing this, the Infantry School again demonstrates its commitment to excellence and to preparing infantry leaders for any battlefield.

INFANTRY NEWS



FIELD MANUAL 23-30, Grenades and Pyrotechnics, and Field Manual 23-23, Antipersonnel Mine M18A1 and M18 (Claymore), are now being rewritten. Units are asked to make suggestions, comments, or recommendations for changes to these manuals by writing to the Director, Weapons, Gunnery, and Maintenance Department, ATTN: Weapons Division, USAIS, Fort Benning, GA 31905.

THE NATIONAL INFANTRY MUSEUM observed the 40th anniversary of the D-Day landings in Normandy by exhibiting a collection of military art done by the late Sergeant Rudy Wedow, and by showing video tapes of the D-Day operations in the Museum's theater. It also produced a series of "Moments in History" television tapes and made them available to the local television and cable stations. A special exhibit on the D-Day operations was also prepared for display at Infantry Hall.

A ceremony held in May to honor three-time Combat Infantry Badge holders was an impressive and memorable occasion, with several hundred people in attendance. More than half of the known triple badge holders attended.

A bust of General George S. Patton, Jr., was placed on an extended loan for display at the headquarters of the U.S. Army Infantry Training Center. The life-sized sculpture was done by a French artist, F.V. Cogne. The present USAITC headquarters building was General Patton's headquarters when he was at Fort Benning in the early 1940s with the 2d Armored Division.

Many Rangers have responded to the Museum's need for artifacts for its Ranger display. The exhibit is now

open, and it has captured the attention this distinguished group of Infantrymen deserves. Many visitors to the Museum have expressed their interest in and appreciation of the Ranger display.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is \$2.00 for a one-year membership, or \$10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, Georgia 31905, AUTOVON 835-2958, or commercial 404/545-2958.

THE FOLLOWING NEWS ITEMS were submitted by the Director, Combat Developments, USAIS:

- **Light forces.** The Directorate is actively applying Army of Excellence design criteria to all Active Army light forces. This effort has given birth to the infantry division (light), and the 7th Infantry Division will be the first to convert to this new organization.

More recently, design initiatives have focused on restructuring the 82d Airborne and 101st Airborne (Air Assault) Divisions. The goal is to reduce the strengths of these divisions without impairing their combat effectiveness.

The 82d Airborne Division is expected to be restructured with a reduced strength of about 13,000 soldiers, while the 101st Airborne (Air Assault) Division is expected to have about 15,000.

- **The Ranger Regiment.** It has been a long time since the Army and the Infantry have had a TOE Infantry

Ranger Regiment. Now, proponency for Ranger organizations has been returned to the Infantry along with the task of activating a third Ranger battalion and a Ranger regimental headquarters.

The Infantry School is now researching organizational concepts and operational designs for the regimental headquarters, which will become a reality later this year. As a tactical headquarters, it will be capable of deploying with and controlling its three Ranger Infantry battalions.

- **ACABUG.** Although computer simulations and wargames have supported the analytic process in the combat developments community for a number of years, these simulations and wargames have not portrayed military operations on urban terrain (MOUT) to any appreciable degree. Only recently has the American-Canadian-Australian-British Urban Game (ACABUG) become operational.

Housed at the TRADOC Systems Analysis Activity at White Sands Missile Range, New Mexico, ACABUG is a computer-assisted model with the game players fighting their battle on a three-dimensional game board. The game allows a modeling of the approach march to an urban area as well as the urban fight itself.

Although the model is functional, refinements are still being made to it to improve its usefulness. The Directorate expects ACABUG to be of great value in its future analytic efforts.

- **AN/PVS-7 Night Vision Goggles.** Much has been said in defense periodicals, newspapers, and other news media about the single-tube night vision goggle, AN/PVS-7. The time has come to set the record

straight on it.

Back in 1977, a desire to reduce the cost of night vision goggles led directly to a requirement for a single-tube goggle. The Infantry Board, in April and June 1978, compared prototypes of one-tube goggles with second generation image intensification tubes to the AN/PVS-5. Based on the favorable results of those tests, a letter of agreement was approved on 24 October 1979.

The initial development and operational tests of two prototypes were completed early in 1980. These tests demonstrated a potential for meeting the Infantry's requirements, and a required operational capability statement was submitted late in 1981 and approved in February 1982.

The AN/PVS-7 goggles are presently undergoing further development and operational testing. If they successfully pass this testing, they should be fielded in mid-1986. These goggles have a third generation image intensification tube with a life expectancy some three times longer than the second generation tubes. This, together with its being a one-tube instead of a two-tube goggle, is expected to provide a lower life cycle cost and to require less maintenance.

The development of these goggles has not been an overnight process. But the new goggles will allow Infantrymen to see at much lower night sky light levels than with either the AN/PVS-5 or any of the second generation goggles. They are designed for use at night by combat, combat support, and combat service support elements during all types of conflict. They can be used for command and control purposes, fire control (not firing), reconnaissance, close-in surveillance, terrain navigation, emergency medical aid, operating and maintaining vehicles, selecting positions, traffic control, rear area and critical area security, patrolling, combat engineer tasks, rearming, refueling, and other resupply activities.

It has been stated quite frequently that the goggles can be used by pilots while flying aircraft. But a single-tube goggle such as the AN/PVS-7 pro-

vides no depth perception, which is critical to a pilot. Too, there is now in production a very good aviator's night vision imaging system (ANVIS) designated the AN/AVS-6. This item has two third-generation image intensification tubes with a special visor guard. An excellent article on the ANVIS appeared in the May 1983 issue of AVIATION DIGEST. (That particular issue had a number of other interesting articles on night flying and night vision devices.)

Another common misconception is that the AN/PVS-7 can be used for firing weapons at night. The system can be used for that purpose, but only in conjunction with the AN/PAQ-4 infrared aiming light (IAL). But the IAL was developed solely for use by Ranger battalions.

In 1978 the Infantry Board tested the IAL and concluded that the IAL did provide sufficient accuracy and range for a typical rifleman or gunner wearing night vision goggles to achieve hits with the M16A1 rifle or M60 machinegun on stationary targets out to a range of 50 meters. The IAL did not improve a rifleman's or a machinegunner's hit performance against moving targets.

There are other reasons why we do not believe Infantrymen should be saddled with the IAL. Because it is an active infrared source, for instance, it can be detected from great distances. In addition, it cannot be used during the day, and there are some passive devices, such as a reflex-type sight, that can be used during daylight by themselves or at night with the AN/PVS-7.

The Infantry School is pursuing several other adaptations of the AN/PVS-7 — night vision binoculars, and a magnified snap-on afocal adapter for the front end of the AN/PVS-7. If these devices turn out to be workable, the Infantry community will see more about them in future issues of INFANTRY.

• **Robotic Ranger.** "Robot" is a word that is becoming increasingly popular. But it means different things to different people. To some, it means a "human-like android"; to

others it means the intelligent machine of the future dedicated to serving man.

We have had automatic machines for a long time — telephone systems, elevators, washer-dryers, and record players. With the improvements in computers and computer science, man has been able to add a new dimension to the automatic machine, and this he has called "artificial intelligence," or A/I.

Artificial intelligence is a branch of computer science that is devoted to programming machines to carry out tasks that, if they were done by humans, would require intelligence. The degree of autonomy that is achieved depends on the computer programming and the sensory control systems.

The objective of any military application of robotics A/I is to achieve a reduction in manpower and to improve reliability. In general, military applications can be placed in three categories: reconnaissance/surveillance, battlefield weapon systems, and materiel handling systems. The Infantry School and Center is keeping abreast of robotics A/I as it applies to the Infantry soldier.

The "Robotic Ranger," for example, is a full scale functional engineering model of a robotic vehicle. It was designed and developed by the Army's Ballistics Research Laboratory under a research and development contract with a civilian contractor. It is small, lightweight, and capable of operating beyond line of sight up to a range of 10 kilometers. It can carry and operate any weapon an Infantry soldier normally uses.

A great effort has been made to keep the potential production costs as low as possible by using off-the-shelf materials. This goes along with the idea that robotic weapons should be expendable aids to a fighting force.

Any future development of the Ranger should include day and night sensors for target detection and engagement, preprogrammed A/I, and futuristic weaponry, while keeping the cost and weight within acceptable limits.

FORUM & FEATURES



Extended Cross-Attachment

LIEUTENANT COLONEL WILLIAM A. DePALO, JR.

Combined arms operations are the bedrock of heavy maneuver force tactics. But if a maneuver unit commander is to maintain the tactical proficiency of a company team or a battalion task force, he needs to have both the infantry and the armor components consistently available for training. Unfortunately, this is not easily attained. Even within brigades, training priorities, budget limitations, scheduling conflicts, or competing activities often keep task forces from forming for specific training periods. As a consequence, infantrymen and tankers seldom gain the practical experience they need to employ attached combat elements effectively. Leaders, therefore, have to exploit any procedure that brings them closer to attaining this fundamental training objective.

One technique that has proved successful in solving this training problem is the extended cross-attachment of maneuver companies between infantry and tank battalions in the same brigade.

Over the past two years, the 1st Brigade of the 4th Infantry Division (Mechanized) has validated this concept, which entails the exchange of companies between infantry and tank battalions for a period of about six months. In effect, a tank company, for example, becomes an integral part of a mechanized infantry battalion, subject exclusively to that battalion's training directives, policies, and pro-

grams. (At the same time, a mechanized infantry company becomes an integral part of a tank battalion.) The tank company is integrated into the infantry battalion's master training plan, which virtually eliminates the competing activities that often thwart efforts to conduct solid combined arms training. Tank gunnery is the only part of the training program that may require the tank company to return temporarily to the operational control of its parent battalion. All its other needs, including supply and maintenance, are met by the infantry battalion.

Several factors must be considered, however, before a unit decides to implement an extended cross-attachment program: First, because it is a brigade-directed action, the brigade's staff must closely plan, support, and monitor it to resolve any unanticipated problems. If COHORT units are involved, company overseas rotation or deactivation dates must be taken into consideration. Cross-attachment is impractical if either of the battalions concerned is in the process of receiving and training a new COHORT company or deploying one to Germany.

Agreements must be reached, too, regarding the administration and logistics of this program. Such factors as UCMJ jurisdiction, efficiency report rating schemes, promotion authority, billeting arrangements, readiness reporting, and combat ser-

vice support requirements must be examined in detail and spelled out in writing.

In the 4th Division, some of these major planning issues were resolved in the following ways:

- Each battalion commander was given complete Article 15 authority over the personnel assigned to the attached company.
- All administrative actions except reenlistments and leaves were processed through the parent battalion's personnel administration center.
- Efficiency report rating schemes for all detached personnel were unaffected except for the company commanders — their rating chains were adjusted to add as the intermediate rater the commander of the battalion to which they were attached.
- The attached company continued to submit its SIDPERS transactions, unit status reports, and materiel condition status reports through its parent battalion. The commander of the battalion to which it was attached, however, received daily personnel status and deadline reports from the company and was responsible for the operational readiness of his attached company's equipment.

• The infantry battalion required some combat service support augmentation from the tank battalion to take care of hauling the extra fuel and ammunition and to meet the recovery needs imposed by the attachment of the tank company. The

dedication of a cargo GOER and a fuel GOER to the cross-attachment package satisfied these CSS shortages.

- Because the billets and orderly rooms were close enough within the brigade area, the affected companies stayed in their original facilities. But all vehicles and ancillary equipment belonging to each company were relocated to the appropriate battalion motor pool.

- A company's funds continued to be allocated by its parent battalion, with the battalion to which the company was attached being responsible for tracking the expenditures on a weekly basis.

- So that their employment would be more flexible, the two TOW

systems that were organic to the rifle company but consolidated in the anti-tank platoon of the combat support company participated in the cross-attachment.

The feasibility of such an extended cross-attachment program was demonstrated repeatedly throughout two six-month iterations, each of which included a successful rotation to the National Training Center. The habitual relationships that developed through these prolonged associations fostered a solid understanding of tank-infantry employment. These relationships also gave the infantry units a better appreciation for the problems inherent in a tank unit's sustainment operations.

Only through a long-term relationship of this nature can a battalion train habitually with an attached company and achieve a high degree of mission proficiency that makes the most of the abilities of both of these combat arms.



LIEUTENANT COLONEL WILLIAM A. DePALO, JR., developed the brigade's implementation plan for the extended cross-attachment concept, monitored its execution, and, as commander of the 1st Battalion (Mechanized), 10th Infantry, at Fort Carson, had a tank company attached to his battalion for five months.

Israeli M113s

CAPTAIN EDWIN L. KENNEDY, JR.

The experiences of the Israeli Army in the war in Lebanon have led a number of professional military men to criticize the use of mechanized infantry in its mounted role. Unfortunately, much of the criticism stems from a generalized view of the results without a careful analysis of the causes.

The heavy loss of M113 infantry personnel carriers in Lebanon has caused the Israelis to look again at their use of mechanized infantry. It has also caused critics of infantry fighting vehicles in general to claim that infantry AFVs are of no use on the modern battlefield. But to understand why the Israelis suffered such losses, it is important to consider the various factors that affect their employment of mechanized infantry and how their employment differs from that advocated by the U.S. Army.

The Israelis learned quickly during the 1973 Arab-Israeli War that armor

could not operate on the battlefield independently of infantry and combat engineers. Accordingly, they modified their organizations and equipment to meet the requirements of combined arms operations, and their mechanized infantry companies are now organic to their armor battalions.

The Israelis quickly filled their arsenals with American-made M113 armored personnel carriers for these mechanized infantry companies. This meant they had to modify the M113s, however, to fit their particular requirements dealing primarily with the terrain and the need to keep pace with fast-moving armored columns. Obviously, if the Israeli mechanized infantry was to move with and provide close-in mutual support for their tanks, the U.S. M113 personnel carrier had to be turned into a fighting vehicle — an important difference.

This change created a number of problems, some of which the Israelis solved by altering the vehicle's

structure:

- The troop seats were emplaced in the center of the carrier facing outward so they would be easier for the troops to stand on and fire from.

- Two swivel mounts with pintles were emplaced forward of and on each side of the cargo hatch for MAG 58s. (7.62mm light machineguns). (The MAG 58s can be dismounted for the infantry squad's use.)

- Cargo racks were put on the outside of the carriers to clear the tops for fighting.

- The communication junction boxes were supplemented and their locations changed to facilitate the control of fires while mounted.

In addition to the driver, the .50 caliber machinegunner (in the cupola), the two MAG 58 machinegunners, and the squad leader (located in the cargo hatch) were equipped with combat vehicle crewman helmets while mounted. With this arrangement, the squad leader could control

the major firepower as well as the driver of the vehicle.

Some of these structural changes have worked well for the Israelis because they were made with the local terrain in mind, but they would not necessarily work well in other types of terrain. For example, the center seating arrangement does not allow for the easy transportation of items on the floor of the carrier, and it causes problems when the squad mounts and dismounts, especially through the combat hatch. And the external cargo racks widen the carrier enough to cause trafficability problems in forests and in the narrow streets of older cities and towns. Although this is not necessarily a major problem, it is an important consideration.

At the same time, the Israelis also modified their tanks to make up for a shortage of infantry and often used their tanks to assault infantry objectives. They mounted two .30 caliber Browning machineguns next to the loader's and commander's hatches (there are no cupolas on Israeli tanks) to provide the needed firepower to suppress any enemy infantry when they swept over infantry objectives. (This particular trend is also found in Israeli mechanized infantry units where the infantrymen are supposed to provide the needed suppressive fire on the enemy's infantry so that the tankers can concentrate on using their main armament.)

Because of these modifications, Israeli training has changed too. The Israeli mechanized infantry undergoes thorough training in mounted assaults. The machinegunners, for example, get extensive training on live fire ranges while the M113 is moving. (The mounts for the MAG 58s provide excellent stability when the M113 is moving at low speeds or on smooth terrain.) The riflemen in the rear of the carrier are taught to provide suppressive fire to the flanks and rear and, when close enough to the enemy, to throw hand grenades from the carrier. (To prevent the troops inside the carrier from being wounded by grenade fragmentation, a warning is issued to everyone when a grenade has been prepared.)

When the carrier reaches the enemy position, all the weapons continue suppressive fire as long as they can as the vehicle passes over or through the position. Grenades are thrown from the carrier, and the driver either accelerates or performs evasive maneuvers. The soldiers inside the cargo hatch duck inside as their grenades detonate. The machinegunners maintain the general lay of their guns by holding a cord or wire attached to the stock to prevent the guns from traversing. During training exercises, fuel drums frequently serve as targets, and competition is keen to see who can throw a grenade inside a drum as the vehicles cross an "enemy" position.

Mounted battle drills, carried out as part of squad training, include ambush immediate action drills, air attack reaction drills, assault drills, and dismounting and remounting drills, among others.

TECHNIQUES

One technique the infantry squad uses when dismounting or remounting is for the driver to lower the ramp of the vehicle and then drive along the reverse slope of the position to be occupied by the dismounted infantrymen. The infantrymen are "tapped out" by the squad leader at intervals and take up their positions on the ground. In recovering the dismounted squad, the sequence is reversed. The driver moves along the rear of the squad's position with the ramp lowered. As the vehicle passes each position, the infantrymen move quickly to get on it.

These tactics and techniques are practiced at lower unit levels during dry runs and then as part of live fire battle drills to ensure the speed and precision of execution. The importance of mounted operations is stressed.

There are some problems, however, that are now becoming apparent from the Lebanon experience. While the Israeli M113s retain the characteristics of good cross-country mobility, they still cannot keep up with tanks,

especially the newer tanks with their improved mobility and power. In trying to keep pace with a fast-moving attack, the Israeli M113s sacrifice either speed or security, and this is where the crux of the Israelis' problems lies: Sacrificing security of cover to maintain momentum with the tanks, Israeli M113s must expose themselves more to enemy fires. As a result, they have suffered more casualties.

Before drawing conclusions from these results and applying them too liberally to our own use of AFVs, we need to look at certain basic differences in the way we use the M113.

Although the Israeli M113, as modified, is a quasi-fighting vehicle with its machinegun mounts and additional communications control equipment, its armor protection has not changed. It is still an APC, and the Israelis' employment tactics bring out some of the M113's weaknesses.

Israeli mechanized infantry in M113s moves *between* tanks when in the attack, something U.S. mechanized infantry never does — either in M113s or BIFVs. Generally, when they are available, our tanks lead in a mounted assault; our mechanized infantry attacks using one of three different methods — either on-line, in modified column, or by bounds, following the tanks closely but not in between them.

The Israelis' doctrine may be based upon the well-founded principles of speed and shock action, but a combination of their equipment and their tactics seems to limit their success in executing that doctrine. Therefore, analogies between U.S. and Israeli equipment and the failure or success of it can be made only with complete knowledge of the different ways in which that equipment is used.



CAPTAIN EDWIN L. KENNEDY, JR., a 1976 graduate of the United States Military Academy, is an ROTC instructor at Texas A and M University. He attended the Israeli Armor Corps Commander's Course in 1981 and has also completed the Infantry Officer Advanced Course.

Mobile Training Teams

MAJOR ROBERT KILMER, JR.

When an officer is informed that he is going to some foreign country as part of a mobile training team (MTT), it may come as something of a shock to him. He may not even know there is such a thing as an MTT, much less what it is supposed to do.

Nevertheless, the United States Army sends such teams all over the world to help the host countries set up training programs for their own armies. An MTT's mission is to analyze and help conduct the country's training and, ultimately, to leave the country with a trained cadre that can carry on the training program after the team returns home.

It is not easy to analyze and conduct training in a country with a different culture and language. It takes time. The team must first understand the training philosophy of the host country; it then must modify our own doctrine and tactics so that they are compatible with the host nation's needs.

The first step toward understanding the host country's training philosophy is to study its culture and its history. An officer selected to serve on an MTT should study both before the team is brought together for its orientation briefings. This will allow him to ask questions at the briefings that will give him a better understanding of the host country.

The culture of a country is important to know because it often affects the training schedule. Special religious periods, for instance, some that last only a day or two and others that last more than a month, can have a devastating effect if the training schedule is not planned around them.

A nation's history offers clues to the

peculiarities of its makeup — its early history sometimes as well as its more recent history. There is no way to tell in advance which will have the most effect on training. The period of history from which a nation draws its current traditions may turn out to be the most important. In a nation that has just "switched sides," for example, a working knowledge of the other side is beneficial. In a state that may have just won its independence from a colonial power, an understanding of that colonial power's methods and history can be quite useful.

PHILOSOPHY

Sometimes, the training philosophy of a country, as well as its history, is directly related to the influence of another country. The team members have to determine whether the host nation or another has the greater influence before deciding on a training strategy that will best accomplish the team's mission. If the major influence seems to be another nation, the team members should try to thoroughly understand that other nation's training philosophy and compare it with that of the host country. Such an analysis will give the team members a general training philosophy to use when they add the U.S. training philosophy to the equation. And they should never assume that a training method can be directly transferred from one system to another.

One of the most difficult aspects of serving on an MTT is having to work through interpreters; training interpreters can be a long and arduous pro-

cess. (Any time an MTT instructor can correctly use the native language, of course, he can speed up the teaching process.) In addition to being proficient in English, an interpreter must also thoroughly understand the training concepts that are to be taught so that he can transmit them properly to other trainers and to the soldiers.

As a general rule, hands-on training is the easiest to conduct because it requires considerably less explanation and translation than purely theoretical instruction. Although this kind of training may not shorten an interpreter's training period, it should speed up the process of presenting the material to the bulk of the soldiers. The hands-on technique also allows the soldiers more time to become familiar with their equipment and gives them a better knowledge of the equipment in a shorter time.

Sometimes it is difficult for an MTT to achieve its ultimate objective of leaving the host country with a trained cadre to carry on the training program after the team leaves. Many times, unfortunately, the host nation will want the MTT members to train the individual soldiers without conducting "train the trainer" training. Clearly, this will not help the host nation to continue with the program later.

How does all of this really work in practice? The experiences of an MTT that went to Somalia last year will illustrate.

This team, a tri-service training assistance team, was headed by a U.S. Army colonel, with a U.S. Air Force lieutenant colonel as its deputy. The other five team members were an Army lieutenant colonel (Armor), an

Air Force major, two Army captains (one Field Artillery, the other Infantry), and a Navy lieutenant.

This team's missions were to conduct an analysis of Somali military training in both the country's schools and its units, and then to conduct some training if there was time.

During the team's analysis, it was found that several Islamic holy days were going to affect scheduling. The period of Ramadan, which would last about a month, would be a time of slowed military activity, and a two-day period later in the year would also have to be taken into consideration. This meant that visits to units would have to be programmed around the dates of these religious observances.

Secular activities, too, presented certain training difficulties. Many units and organizations could be expected to stand down for up to a month so they could prepare for the 21st of October Revolution celebration and parade, a major event in Somalia.

In trying to reach a better understanding of the training system of Somalia's military services, the team conducted interviews with the heads of some of the directorates in the country's Ministry of Defense. These interviews were not limited to the directorate in charge of training but also included those that took care of enlisted and officer personnel matters and mobilization. Because the functions of each of these would affect training, they all had to be considered as a part of the training analysis process.

The team found from these interviews and from its own studies that Somalia's colonial and recent history were the most important periods relating to its military training. During the colonial period, the Somali people had been divided into five groups, the reunification of which had become a driving force in the country's foreign policy. This effort, therefore, had a direct effect on the country's military training philosophy and on the allocation of training resources.

Some Soviet influence was still present as well, left over from 1978 when the last of the Soviet advisors had left Somalia. When the MTT arrived, the Somalis were still using Soviet training philosophy as well as Soviet doctrine and tactics, virtually unchanged. Even though the team's members were familiar with the Soviet approach, their challenge was to blend that approach with the U.S. system to form a new system that would work for Somalia now. To accomplish this blend, the team worked together in small groups, brainstorming ideas. When some of these ideas did not work, the team improvised.

In conducting its training, the team had to prepare its own training aids and lesson plans. All training aids had to be locally fabricated, and charts had to be produced in both English and Somali.

The preparation of these charts took a considerable amount of time. Each chart first had to be designed and made in English and then tested, with rehearsals, by a U.S. instructor. That instructor then had to train the inter-

preters using the English language charts, after which the interpreters produced corresponding Somali charts for presentation to the Somali students.

The interpreters were also used as instructors, and as the training progressed, the Somali personnel took over more and more of the instruction. This gradual transfer of instructional responsibility from U.S. to Somali instructors enabled the MTT to fulfill its goal of leaving behind it a trained cadre that the Somalis could use in training its military personnel.

The scenario for a successful MTT seems a simple one: understand the country in which the team will be working; work with the assigned interpreters until they are subject matter experts; and leave the host country with a trained cadre to carry on its training program. But carrying out the scenario is not so simple, and therein lies the challenge for the MTT's members.

An officer who is selected to serve as a member of a mobile training team may first react with disbelief and apprehension. But after he gets into the job, he is likely to find it a challenging and rewarding experience.



MAJOR ROBERT KILMER, JR., was the Infantry captain on the Mobile Training Team to Somalia last year. He is now assigned to the Weapons, Gunnery, and Maintenance Department of the Infantry School, where he also served two previous tours of duty.



HEAVY—LIGHT

Forces and the NATO MISSION

LIEUTENANT GENERAL JOHN BAUM

EDITOR'S NOTE: This article was originally published in the *Journal of the American Military Association*, Volume 1, Number 1, Winter 1971-72.

Although the pace of modernization of the forces in Europe is unprecedented, the direction is the same direction as it has been for many years. The Army, Europe, remains a major force, capable of meeting the needs of the NATO mission that are based on the concept of the defense of the West. The new equipment, the M1 Abrams, the M2 Bradley, and the M109, are all being developed and produced in Europe.



modernization of the force (and of its reinforcing units in the continental United States) over the years has contributed to the time lag during which the U.S. ground units that are committed to the North Atlantic Treaty Organization (NATO) will have to fight without reinforcement.

The emergence of the new U.S. Army light division, however, gives us an opportunity to reconsider the question of the heavy-light mix in Europe and to ask: Would it be feasible to reinforce with light divisions in the early phases of a mobilization to meet an impending Warsaw Pact attack in Europe?

Good question. Hard to answer.

Every student of military history knows that commanders often have struggled to find the most appropriate mix of forces to accomplish their aims, and that the main ingredients have been contrasting elements — heavy and light. (In the interests of printing costs and the readers' patience I will forego an analysis of Hannibal's use of elephants and of other interesting historical examples; suffice it to say that the problem of the heavy-light mix is as old as armies and, of course, is still with us today.)

Europe is, for us, a special case. The time available for reinforcement may be very short. I have heard General John Vessey say that the National Guard artillery battalion of which he was a member during World War II fired its first rounds in North Africa *eleven months* after Pearl Harbor. But today, could we be sure of having *eleven days* before it might be necessary to fire?

Reinforcement times for NATO affect any study of the heavy-light mix, but there are other important factors. German *Bundeswehr* Major General Franz Uhle-Wettler, for example, has looked at this question in terms of European terrain and certain other aspects since reinforcement time does not constitute the primary problem for him. In his book *Gefechtsfeld Mitteleuropa (Battlefield Central Europe)*, he calls for additional light forces (see box).

Our experience during recent U.S. maneuver exercises involving a variety of heavy-light force mixes shows some promise. From these exercises a rudimentary idea of how a modern heavy-light mix might be employed has evolved. (This training is taking place under the U.S. Forces Command CORTRAIN concept. See "Heavy-Light," *Armed Forces Journal*, July 1982, and a response to that article in *Armed Forces Journal*, May 1983.)

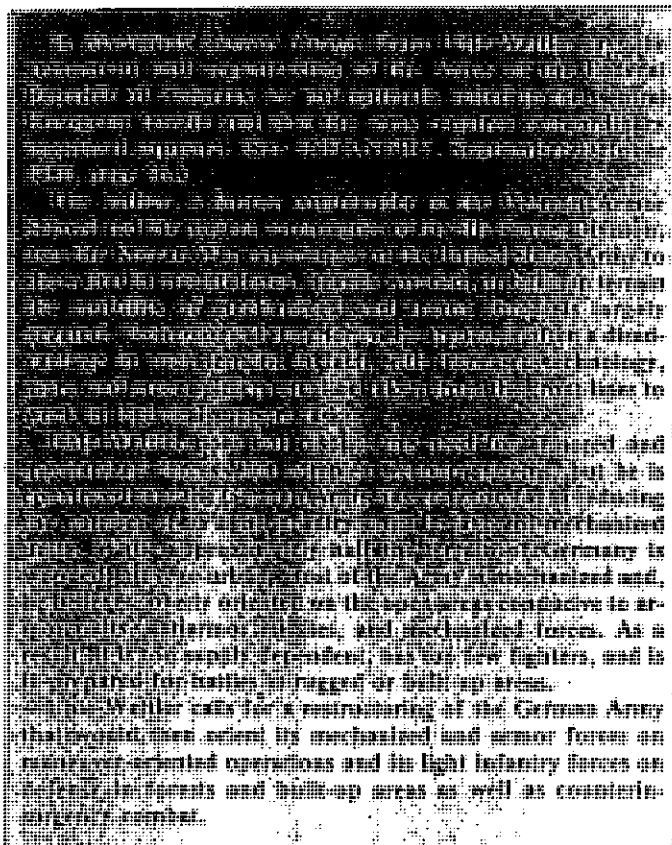
BEEFING UP LIGHT FORCES

The differences between light and heavy divisions is not primarily in antiarmor firepower but rather in tactical mobility and armored protection. Firepower differentials can be rectified in a number of ways, including artillery and air support, or in cross-reinforcing light and heavy units to provide the light units with the advantages offered by the rapid flat trajectory cannon fire of the Abrams, the Bradley, and other weapon systems.

Light units can make up for their lack of armored protection by "terrain reinforcements" — digging in, laying mines, building obstacles. And they can seek to operate in terrain in which the enemy cannot use his mobility advantage—rugged hills, thick forests, boggy areas, and towns. As Uhle-Wettler points out, such "no-go" areas amount to as much as half of the Federal Republic of Germany.

American soldiers tend to be independent, proud of their self-sufficiency, and accustomed to operating in homogeneous units. But NATO is a coalition, and NATO operations are not only joint-combined; they also involve the close coordination of local territorial command forces and paramilitary organizations (policemen and border guards, for example). Light units, therefore, must be specially trained and prepared to achieve high levels of interoperability in order to pick up additional mobility and logistical support. Heavy engineer equipment, for instance, may be available through host nation support arrangements, and it may be vital to the terrain reinforcement that will be necessary for a light unit to fight a defensive battle.

The corps commander can also help overcome the lack of mobility of his light forces by using his combat power (and that of the Air Force) to decrease the enemy's mobility potential. It is *relative* mobility that counts; slowing down the enemy and inhibiting his mobility is as important, in fact, as improving our own mobility. The light units will have to become expert in countermobility actions, and recent innovative improvements in the methods of employing mines should be a great help. The enemy force may be well-trained in approaching and



breaching minefields, but our capacity to deliver mines from airborne platforms will present a new situation in which enemy forces find themselves suddenly in the center of a new minefield—surrounded, in effect, by anti-

foot-mobile Infantry; in order to see these scenarios with new eyes and to gain additional insights, the reader can substitute air assault, airborne, high-technology (motorized), or Ranger units in the place of the foot Infantry, or can assume that through host nation support or other means the light force has acquired vehicles and engineer equipment.

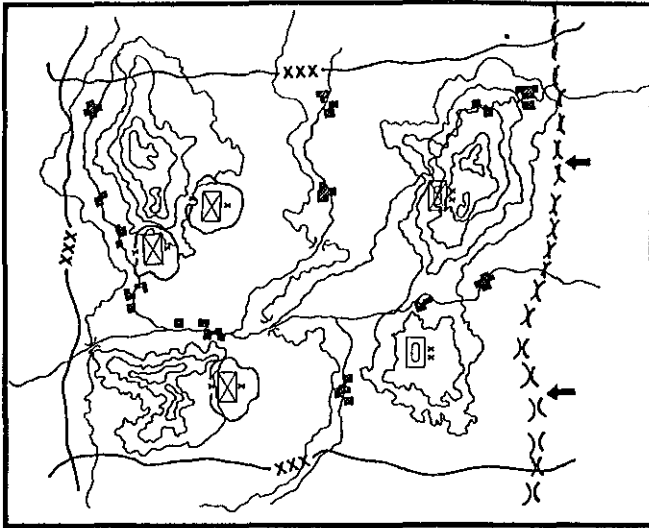


FIGURE 1.

armor and antipersonnel mines. Additional ways of cutting down enemy mobility are available, and these should become a familiar part of the light force's tactical repertoire.

AUGMENTATION, NOT SUBSTITUTION

What follows here is a series of brief scenarios that attempt to apply the experiences of the recent heavy-light exercises to the potential battlefield of Western Europe and to look at the feasibility of sending strategically mobile light divisions to be committed as part of the NATO forces in the event of war in Europe. It should be noted that these light divisions could not be a *substitution* for heavy divisions (thus saving money by ridding ourselves of the need to raise and support heavy divisions). A simple count of the Warsaw Pact's heavy forces will show that there is a need for enough heavy divisions within NATO to provide a reasonably balanced ratio for a defending force. The fast-arriving light divisions, however, can be a vitally important *augmentation* that improves the possibility of conducting a conventional defense of Western Europe without having to resort to nuclear weapons.

The assumption for these scenarios is that the corps commander is given operational command of a light division, meaning that he can either employ it as a complete entity or break it into smaller units. (The terrain used in these scenarios is an imaginary composite of the variations that can be found anywhere in the southern part of the Federal Republic—in the V or VII Corps sectors, for example.)

Among other things, the accompanying sketches show a high speed approach, an area of "no go" terrain and some "slow go" avenues, along with cities, towns, and the usual natural and man-made features. The light divisions that serve here as examples are for the most part

REAR BATTLE

The simplest example of the employment of a light division in the NATO environment is a rear battle situation. (In a yet unpublished manuscript, Colonel C. Hines discusses our need to rid ourselves of the tactical idea of "rear area protection" and to understand full-up *rear battle* as an important aspect of the AirLand battle.) The rear portends to be a far more intense battlefield than we have seen in previous conflicts, and it may not be uncommon to have a brigade or even, as in this case, a full division employed in the corps rear.

In the situation illustrated in Figure 1, the light division remains "pure" and spreads its brigades over a wide area in anticipation of enemy battalion- or brigade-sized airborne or airmobile assaults. In such a situation, a light division augmented with artillery, aviation, and other support would be in a widely dispersed defensive posture, tied in to the corps intelligence collectors, watching the situation, and ready to concentrate its battalions in response to enemy action. If the light division is motorized, it can use its mobility to close on enemy forces and contain them in the vicinity of their landing areas while additional artillery, air, and other support are moved up to assist.

The Soviet airborne divisions have a long-range capability that can threaten the whole rear area of a corps and, indeed, of an army or army group. Theoretically, it would be possible for one of these airborne divisions to attack anywhere on the European continent, although normally those divisions can be expected to limit their penetration distance to allow their own ground forces to accomplish an early link-up.

The Rhine River in the Frankfurt-Mannheim-Karlsruhe area, though, is only 200 kilometers from the potential jumping-off points of a Warsaw Pact attack, making this area an excellent target for airborne or air assault operations. The sector to be overwatched is so large that a friendly airborne or air assault force, which has the mobility to react to enemy airborne assaults, may be the best response. Since it has the same air mobility advantages, it can pick up the enemy attack while it is under way and react rapidly, either parachuting or air landing forces into a position to attack.

If during the AirLand battle the corps commander expects a significant rear battle, he may want to keep a strong reserve that is a mix of heavy and light forces. This will be hard to do if he is also heavily opposed in the close-in and deep battles, but he cannot afford to ignore the threat to his rear. One way to use his light division in

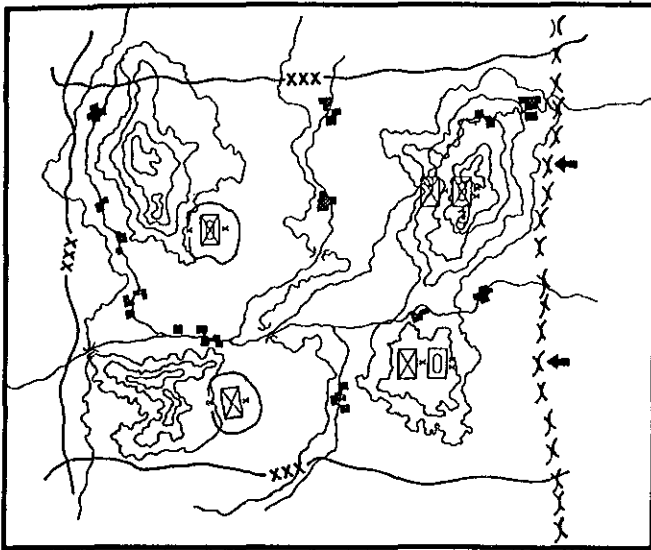


FIGURE 2.

such a situation is to place one of the light brigades under the operational control of each of the heavy divisions, then to provide the light division commander with one heavy brigade (Figure 2).

CLOSE-IN BATTLE

As we move from the rear battle scenarios and consider the close-in aspect of the AirLand battle, the likelihood of fighting enemy light forces diminishes, and the corps commander, given the other factors (mission, enemy, weather, time, troops available), must ensure that his mix of forces is correctly positioned to meet the threat forces on the terrain that provides the greatest advantage. He can then tailor his forces to make the best use of his combat power. By cross-reinforcing at the corps level—that is, exchanging brigades between heavy and light divisions—he can allow his subordinate commanders to cover the tank approaches with heavy forces and to use light forces in forests, built-up areas, and abrupt terrain.

Straight cross-attachment on such a large scale serves to underscore the need for standardization, which, as earlier experiences have shown, becomes even more acute when heavy and light units are mixed. Communication codes, recognition signals, reporting formats, logistical procedures,—in fact, all facets of combat operations are potential problem areas if the different units do things in different ways. Exercises in which heavy and light forces are mixed will provide opportunities for commanders to work out the areas where standardization needs more emphasis—in SOPs, CEOs, and drills, for example.

If the terrain and other conditions permit it, the light division can be used “up front” in the defense, either with or without reinforcement by or cross-attachment with heavy forces. There are scores of places in the defensive sectors where a defense by the light division would be appropriate. One such employment of light units might be in an infiltration scenario.

There are indications that under some circumstances the enemy may employ infiltration tactics in the initial attacks, especially if he is convinced that we are defending

strongly in our forward positions at the sacrifice of the depth of our defense in sector. He may hope thus to break through our thin crust and then reorganize into larger formations in our rear. If we lack light forces, especially in close terrain (forests, cities, rough areas), we could be vulnerable to this kind of infiltration. In such a situation it would pay to move a light division forward, either as a “pure” unit or as one cross-reinforced with one of the heavy divisions (Figure 3). The corps reserve in this case might be its combat aviation units.

Defending in rough terrain, a light division can serve as a “pivot.” The concept of the pivot in its essence means that the presence of the dug-in light forces provides a static situation around which a series of mobile strike plans can be built. The existence of a number of pivots increases the flexibility of planning and makes the defense more unpredictable.

In well-fortified positions, light units add depth to the battlefield and contribute directly to the potential for increased mobility on the part of the heavy units. In order to take the best advantage of the terrain, light forces have to know how to work with engineers in a well planned and executed terrain reinforcement. In this manner the light division can hold terrain and wear down a heavy assault, allowing heavy divisions to take advantage of their mobility to complete the destruction of the attacking enemy forces.

An excellent example of this is the battle of El Alamein, during which General Montgomery allowed General Rommel to attack and penetrate to a strongpoint at Alam Halfa. The German attack was worn down and blunted against this strong defensive position and then counterattacked successfully by mobile British forces.

Strongpoints held by light forces can assist in “shap-

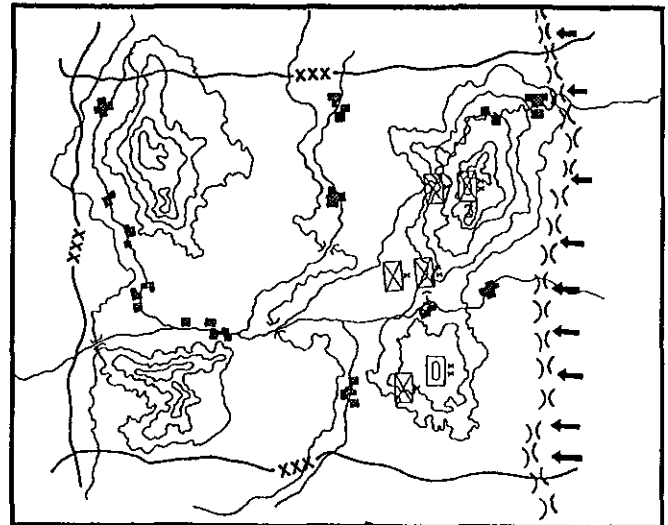


FIGURE 3.

ing” an enemy penetration—that is, assuring as far as possible that the enemy’s attack follows closely along the lines of an “assumed penetration” calculated by the defender. Light forces in good blocking positions can “blunt the nose of a penetration and stop it, giving the defender’s reserve force an opportunity to launch an attack against a vulnerable flank.

The construction and defense of strongpoints requires extensive training in order to achieve a detailed understanding of the principles of terrain reinforcement and their application to the ground the defender has selected. Light units must become "terrain users," with consummate skill at digging in, camouflage and counter-mobility; seeking engagement with the enemy in the "close fighting terrain" of villages, woods, and rough ground; fighting at night and in periods of limited visibility; using tactics of infiltration, ambush, and raid. Leaders must be oriented to these kinds of combat situations, willing to take the necessary calculated risks, and the soldiers of these light units must be equally adept.

Given the right terrain, a light division can move up into defensive terrain behind a heavy division opposed by a fixing force or a holding attack. The heavy division can then be employed elsewhere on the battlefield (Figure 4).

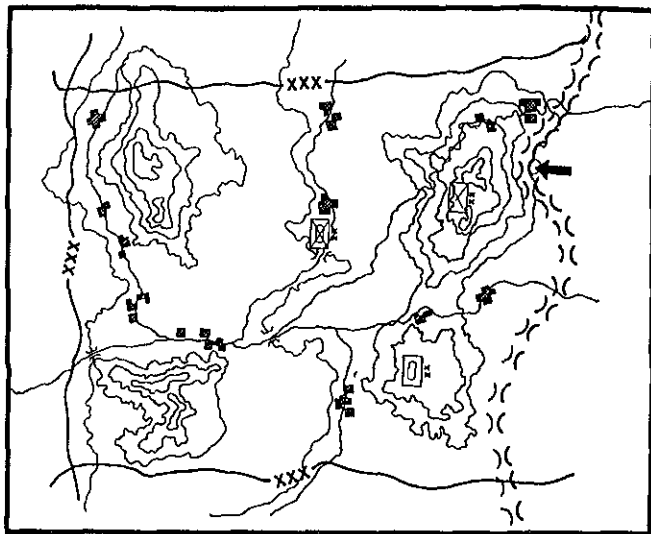


FIGURE 4.

Such an operation is complex; its chance of succeeding would have to be carefully weighed against the risks of concentrating and thus creating a tempting target, or of being attacked while executing the relief. Cross-reinforcement would make such a relief easier.

The question may arise, "Can a light division be expected to defend against the attack of heavy forces?" It certainly can, given proper defensive positions and support. Light brigades can take the place of heavy brigades in many current NATO defensive configurations, allowing the commander to move his heavy forces to places where they can be better employed in the tactical structure of the defense.

Although these scenarios all employ the light division in the defense, given the NATO mission, there are also offensive missions in which a heavy-light mix has advantages.

Exercises have shown that light forces, if augmented with an air assault capability, can increase the effectiveness of heavy units, especially in the attack. Air-mobile light forces in the enemy's rear, for example, can tie down reserves, cut lines of communication, and strike command posts, artillery positions, and logistical ac-

tivities. The mere presence of light units operating—especially by night—against these installations causes the enemy to react to the threat, which has the effect of slowing down the pace of his overall effort. In fact, there have been several examples during recent exercises in which "enemy" reserves were able to carry out counterattack missions because of delays caused by encounters with relatively small friendly air assault forces.

In the kind of terrain and industrialization that exists in most of Europe, the versatile light division can augment a sustained offense. Supported by airlift, it can seize key terrain in rough or mountainous areas or strike deep and hold ground for a link-up with attacking heavy forces. The light forces, well trained in fighting in built-up areas, can reduce strongpoints and drive enemy defenders out of cities and towns.

Cross attached to meet the requirements of the terrain and other factors, the light division has an even greater capability. As in the defense, the success of a light division will be determined to a great extent by the amount of additional fire and maneuver support the corps can offer. Light forces will certainly benefit from the high-technology capabilities inherent in the equipment, techniques, and tactics being developed by the 9th Infantry Division (Motorized) at Fort Lewis. Light divisions present an enemy force with a threat that in some ways is very new, because they can use a variety of maneuver means, they have a strong capability for night operations, and they can be augmented by various corps units.

The future tactical battle will present a definite challenge to our leaders. It will be fought by a mix of forces, and our leaders will have to be experts at handling all the variations of the mix. Since the mixing can occur at *any* level, depending on the factors of METT-T, the leaders from squad and section all the way to the highest tactical echelons will be called on to make decisions that demand a knowledge of both heavy and light forces. This means that there will be a continuing requirement for a full understanding of the doctrine and tactics of both types of forces. With cross-reinforcement a common occurrence, every leader can expect to find himself in command of both heavy and light elements. The same applies to staff officers, who will have to be ready to plan and coordinate the operations of a mixed force. (For these reasons, the "two-track" concept, in which Infantrymen are prepared at the Infantry School to go out to either heavy or light infantry units, is probably not the best training philosophy.)

In the event NATO goes to war, the new U.S. Army light division, with its geo-strategic advantages, will be excellent candidate for early deployment. Committed in the right situations and employed with skill, it can accomplish the kinds of missions suggested here.

LIEUTENANT GENERAL JOHN R. GALVIN is commander of the VII U S Corps in Germany

HEAVY→LIGHT

Connection: DIVISION

MAJOR GENERAL HOWARD G. CROWELL, JR.
LIEUTENANT COLONEL JARED L. BATES

A light brigade clearly can be integrated into a heavy division if three conditions are met: First, the combat support systems of the heavy division must be linked to the light force. This means thinking through the "normal" coordination for an attachment and also ensuring that the technology of the two forces is compatible. (A good example is meshing a TACFIRE-equipped heavy division artillery with a light force that brings with it FIST teams that do not have digital message devices.) If the artillery, engineer, air defense artillery, intelligence, Air Force, attack helicopter, and signal assets of a heavy division can be linked to the light forces, then those forces not only can operate with a heavy division, they can actually magnify its capability.

The second condition is that the light force must be supported logistically. The heavy division's forward support battalions must be able to expand to handle the additional requirements for supplies and services with emphasis on ammunition and barrier material. The heavy division must also be able to solve the medical evacuation problem for a light force, especially when it arrives without any vehicular capability.

Finally, a heavy division must be able to overcome the mobility differential between the forces mounted in M1 Abrams tanks and M2/M3 Bradleys and those who are



“foot-mounted.” This will require the imaginative use of the full range of the heavy division’s assets, including the Bradley Infantry Fighting Vehicle. In fact, the marriage of heavy-light forces will require imagination, more than any other quality, from the commander and the staff officers of both elements.

Let’s begin that process by imagining a scenario in which European-based forces at some time in the future must execute their deployment plans in response to a threat, in force, to the international border.

Fortunately, by this time, the modernization effort begun in the early 1980s has gained considerable momentum, and U.S. heavy divisions moving toward their general defensive positions are equipped with both the Abrams and the Bradley, as well as the other systems that support this lethal combination. In the scenario, we will follow one of these heavy divisions.

The terrain in the division’s sector can best be described as “typically German.” Although parts of the division’s sector are flat or gently rolling, with excellent long-range visibility, almost half of the area is either wooded, steeply contoured, or dotted with cities and villages that have begun to sprawl into the adjoining farmland (see Figure 1).

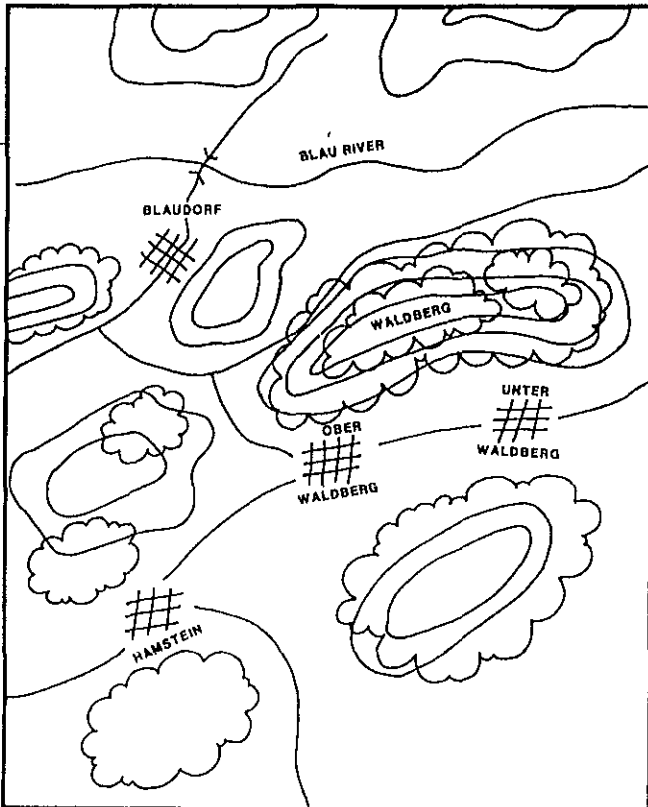


Figure 1

Almost immediately, the corps commander takes a three-battalion brigade away from the division. That brigade consists of one tank and two mechanized infantry battalions. But in its place, the corps commander gives the division a three-battalion light infantry brigade, the 60th Infantry Brigade, which is now being flown in from the States.

Although the division commander hates to lose a

brigade, he knows that the light brigade will offer him some real advantages. First, it should be better suited to deal with some of the terrain in the sector, especially the Waldberg. The Infantrymen, if they have done their homework, can use the towns and woods to better advantage than heavy forces could, especially if they are used in conjunction with heavy counterattack forces.

The division staff develops a plan (Figure 2) that calls for placing the light brigade forward on the Waldberg and task organizing it with its own three battalions and one tank heavy task force. The heavy force will work in

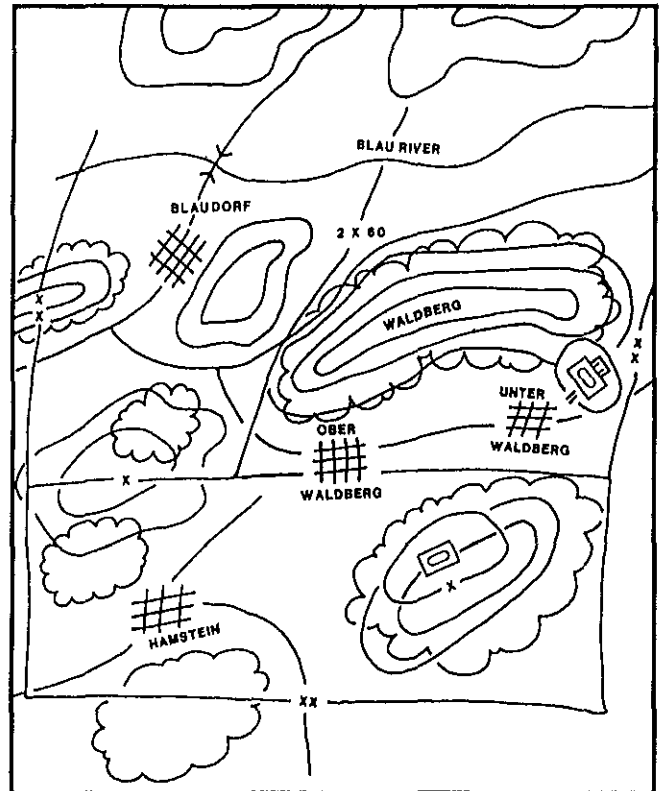


Figure 2

the brigade’s covering force area and will provide some counterattack punch when its covering force mission has been completed.

The division’s 2d Brigade will hold the left sector, based on Blaudorf, while the division reserve will be a three-task-force heavy brigade, which will provide mortars, antitank weapons, and some heavy medical evacuation support to the light brigade. The light brigade’s heavy task force will receive logistic support from the reserve brigade’s fire support battery, and the G-4 has developed a plan for caching supplies on the Waldberg.

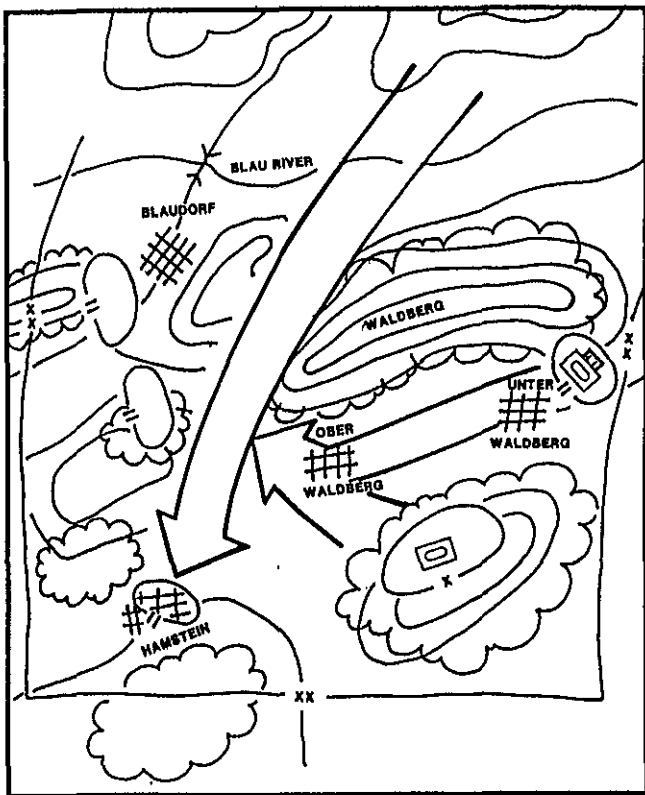
During the following 24 hours, the light brigade arrives in the theater. The light brigade’s commanders and staff officers are met by liaison officers and key staff officers from the division and are flown to a joint planning session at the division headquarters. Meanwhile, the light units themselves are being transported by host nation vehicles into a forward assembly area. Although the ominous signs of an imminent attack are still there, the division’s luck holds out, and it is able to continue its

preparations without enemy action.

Planning and coordination continue at a rapid pace as the division's two heavy forces deploy into their final defensive positions. The light units are moved at night by corps and division aviation assets, using nap-of-the-earth techniques, to a series of landing zones behind the forward line of troops. They then conduct a forced march onto the Waldberg and begin preparing their defenses, supported by heavy engineer forces.

As these preparations near completion, the enemy, now staged and ready, strikes across the international border. Some of the situations the division might face are outlined below:

The division commander goes to the division's tactical operations center where he is given a quick update: Both forward brigades are receiving moderate pressure, and covering forces are being withdrawn. The heavy task



force working for the 60th Brigade has done a good job out front and appears to have confused the enemy forces as to what they're up against. The 60th apparently has been able to pass the covering force through to the rear without too much difficulty and has positioned it in an assembly area behind the Waldberg. The light units are beginning to get some pressure on the base of the Waldberg, but they're in good positions, well inside the wood line, and it appears that the enemy is unwilling to expend the combat power to go in and try to root them out. TOW-Cobras have been provided to work for the light forces forward of their positions.

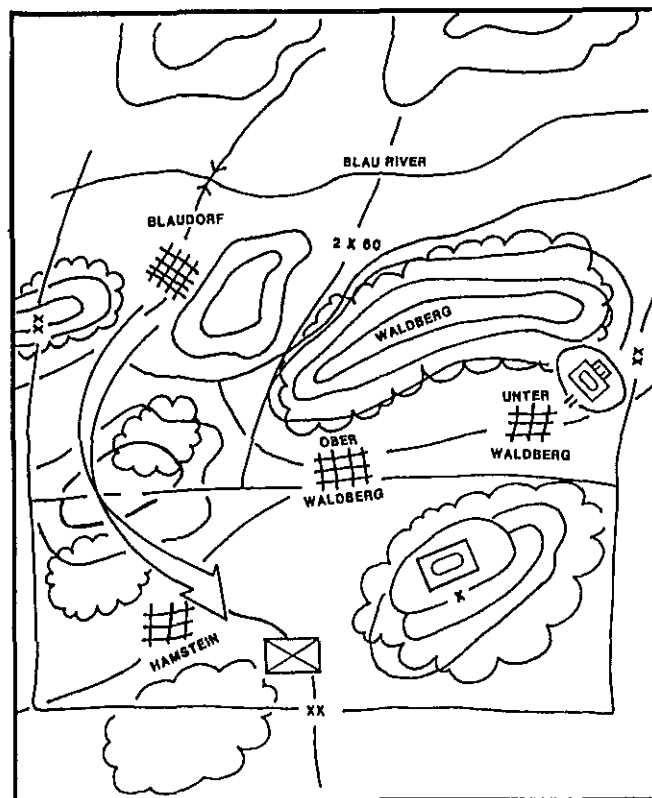
Reports from the 60th and from the division's 2d Brigade indicate the enemy may be attempting to slide

around the west side of the Waldberg and drive toward Hamstein.

The division commander believes the light forces on the Waldberg can give the division a good pivot point for a counterattack if the enemy tries to slip the center seam and head for Hamstein. So he orders the reserve brigade to put a task force into a blocking position in the vicinity of Hamstein, and he wants the 2d Brigade to fold back on its right to open the door. He also wants a counterattack plan that will call for the reserve to pick up the heavy task force from the light brigade and attack with it in the direction of Oberwaldberg to Blaudorf (Figure 3). The 60th will continue to hold its shoulder.

The G-4 tells the commander that he has established several caches on the back side of the Waldberg, that the 60th Brigade is still in good shape logistically, and that a contingency plan has been worked up to sling load additional ammunition after dark, if necessary. Personnel carriers from the reserve brigade evacuation sections are working with the light medics and have moved their wounded back very quickly.

As the division proceeds with preparations to block an enemy thrust along its center boundary, the corps G-3 passes a message that puts a string on the division's reserve brigade. The corps commander apparently is concerned about the pressure building against the next division on the right and is looking at counterattack options. He wants the



reserve brigade to be available if he needs it. He also sees the Waldberg as a strong shoulder for a counterthrust out to the right. Unfortunately, the "string" limits the division's plans on the left unless it really gets into trouble.

Faced with having to stiffen the defense in the 2d Brigade, the division commander decides to take one of the light battalions out of the 6th and let the 2d Brigade use it in the built-up area around Blaudorf. He tells the 60th to plan a foot march to a link-up point near the brigade boundary. The 2d Brigade is ordered to cross-attach ITVs (Improved TOW Vehicles) to the light battalion and to develop a movement plan that will send a team of Bradleys to ferry the foot soldiers into position.

Later, just as the pressure across the division's sector seems to slacken, the DISCOM reports an enemy airmobile force landing on the main supply route where it crosses the division's rear boundary.

The division commander tells the combat aviation brigade (CAB) to send a company of attack helicopters to work against the insertion, and orders the 2d Brigade to prepare to send its attached light battalion to work with the CAB. The CAB is to arrange to pick up the light battalion; contact is light enough in the 2d Brigade's area to allow the light battalion to be lifted out. A towed-artillery battalion that has been used in the corps' rear is requested to support the division's contact (Figure 4).

As the battle continues and as the corps situation changes, the corps commander begins to look at the possibility either of having to move the division to the rear or of getting it positioned to use as a counterattack force. In either event, the division staff must plan for a major move.

The division commander feels that the light-heavy mix has worked well so far but is concerned about being able to reposition his light brigade, especially if the 60th is in contact on the Waldberg. If the division has to withdraw to a new defensive line behind its current rear boundaries, he wants the Bradley-mounted elements of the reserve force to move first. They would drop their infantry in the new location to begin preparing positions and then send their Bradleys back to work for the 60th, where they could provide transportation and overwatch. The commander of the 60th Brigade would keep the heavy task force during his repositioning and would develop counterattack options for that task force in the event the brigade was in contact when the execution order came and needed help to back the enemy off. The division commander plans to thin the light brigade's lines, link up truck transport with those first elements behind the Waldberg, and then have the brigade use a combination of Bradleys and Black Hawks to move the rest of its force.

The authors of this article recognize that a scenario and a set of simple situations such as these are easy to write but far more difficult to execute. The main purpose of these situations is to create in the reader's mind the long list of things that any commander or staff officer would have to consider before employing a heavy-light force at division level.

There is no doubt that such a marriage of heavy and light forces will require a good deal of imagination from commanders and staff officers, but beyond the internal requirements for planning, coordination, and imagination is a set of larger issues. The first is that a Division 86 heavy division needs more foot soldiers. In a mechanized division

that has five infantry battalions, only slightly more than 1,000 soldiers will hit the ground when the ramps of all their Bradleys open. A *strategically* deployable light force can provide these soldiers.

The second issue is the need to standardize our basic procedures. We must move toward a "common language" across the complete spectrum of command and staff functions. We will not have the time to go through the drill of "I know what the Army says, but we do it this way in the Brand X division." This requires the Army to decide on a way of doing things and then see to it that everyone signs up for it.

The third issue is the need to exercise the heavy-light concept on a recurring basis, not only in the United States, but by deploying light forces routinely to Europe. There is no substitute for putting a team together on the ground.

Finally, the use of light units with heavy units reinforces the need for certain "battle-linked" training tasks for the light forces. Terrain reinforcement, the use of artillery, and the ability to fight at night will be the keys to success. Light forces must also be able to move *rapidly* on foot. Forced marching is an onerous, unglamorous task; it is, however, going to be essential to a light force that is introduced into a European scenario. The veterans of the 3d Infantry Division during World War II talk of the "Truscott Trot," a speed marching technique that called for routinely covering 30 miles in 8 hours. Light forces must be able to duplicate this performance, particularly if the trucks, aircraft, and fighting vehicles from the heavy force do not arrive.

Traditionally, the idea of combined arms has meant the coordinated effort of infantry, armor, and artillery units on the battlefield. Those of us who will serve in the Army of the 1980s and 1990s will train and fight with such systems as the Bradley Fighting Vehicle, the Abrams tank, the Division 86 heavy organization, and the restructured light infantry division. This will require us to think of combined arms, both in the traditional sense and in terms of heavy and light forces. If we do this skillfully, we can increase the capabilities of a heavy-light force to levels far beyond the separate capability of either a heavy or a light force.

MAJOR GENERAL HOWARD G. CROWELL, JR., commands the 3d Infantry Division (Mechanized). He has considerable experience in both heavy and light forces. He previously commanded a brigade in the 3d Infantry Division and has also commanded at platoon, company, and battalion level in airborne and airmobile divisions.

LIEUTENANT COLONEL JARED L. BATES is Assistant Chief of Staff, G-3, of the 3d Infantry division. He previously commanded airborne units at the platoon and company levels, served for three years as executive officer, 2d Battalion (Ranger), 75th Infantry, and commanded a mechanized infantry battalion in the 3d Infantry Division.

HEAVY—LIGHT

Connection: BRIGADE

Maneuver, mobile armored warfare, offensive action, synchronization, concentration, integration — all of these terms describe the way our armored brigades are planning and training to fight in Europe. At the brigade level we want to channel an attacking enemy, strike his flanks and rear, sweep through his artillery units and command and control elements, and disrupt and disorganize the continuity of his attack. We will hit him, move, and hit him again and again until the enemy commander's will is broken and he can no longer continue. In short, we intend to outmaneuver our adversary.

At first glance the thought of giving a footmobile light infantry battalion to a highly mobile armor brigade to use in its defensive sector seems to contradict the very essence of mobile armored warfare. How can a light battalion, highly vulnerable and capable of moving at only three miles an hour, possibly contribute to the swirling tank battles we expect in Europe? Could this battalion help an armor brigade defeat Warsaw Pact armored columns, or would it be nothing more than a ball and chain hanging on the brigade's tow pintle?

Light infantry battalions are not designed to fight in Europe. They can get there quickly, though, and they do have a significant close-in antiarmor capability. (There



will also be plenty of them.) In a short-warning scenario, therefore, it makes sense to plan to fly those battalions or divisions to Europe to add their firepower to the NATO defense. But if this is done, how should these units be employed once they get on the ground?

Under corps control, and as alluded to by General Galvin earlier in this issue, light divisions can guard key installations, establish a defensive line through which armor divisions can withdraw to prepare for offensive action, or perhaps conduct either an air assault or a parachute jump behind enemy lines as part of a corps attack. A light brigade under the control of an armor or mechanized infantry division can perform many of the same missions and, perhaps, if the terrain supports light infantry, assume a defensive sector to free an armor brigade for offensive action.

There are, of course, a number of other ways light infantry units can be employed under corps or division control. Some have been tried on various REFORGER exercises with moderate to considerable success; others still need to be analyzed and tested. One option available to a division commander who receives a light infantry battalion, and the one to be addressed here, is to attach that light battalion to one of his heavy brigades.

An armor or a mechanized infantry brigade commander should not be given a light battalion unless the terrain in his general defense plan (GDP) sector favored its employment and he could use it to good advantage to execute maneuver warfare within his sector. Protecting rear areas is not the best way to use this battalion. Although the light battalion could be employed to guard trains areas, tactical operations centers, or bridges, it would be badly fragmented in doing so and would be incapable of coordinated action. It would not have the mobility to concentrate to counter an enemy rear area threat or to keep up with any mobile units it was guarding. The battalion's command and control structure would be stretched to the limit and its cohesiveness as a maneuver unit lost.

There are a number of advantages to keeping the battalion intact as a fighting force. Preserving the mobility of the brigade's armor task forces, for example, is a major consideration. A brigade commander maneuvers battalions. He would rarely want to cross-attach a light infantry company to an armor or mechanized infantry battalion because this would tie that battalion to a specific piece of terrain. Without a change in task organization, he could not maneuver that battalion about the battlefield or make it available to another armor or mechanized infantry brigade.

Some might like the idea of dispersing a light infantry battalion among several armor task forces and having its soldiers hitch rides on the armored vehicles. Although many tankers would love having a few infantrymen around for local security, the brigade commander would lose much of the effectiveness of that light battalion as a fighting force. If the terrain favors defense by light dismounted infantry, it is best to keep the battalion under its

own chain of command, augmented as necessary, but fighting as one unit.

Light infantry fights best in forests, mountains, ravines, and built-up areas. It fights in depth and at close range, using mutually supporting dug-in positions and limited, local ground attacks. It survives enemy artillery fires by digging deep, dispersing, and preparing positions in depth. It must fight armored vehicles in places where those vehicles must travel in single file and where they can be jammed up and killed from the flanks at close range. Enemy infantrymen can be killed as they dismount, or when they are hung up in antipersonnel obstacles after dismounting.

An enemy must be forced, channeled, or drawn into the light infantry's defensive area. In that area, bypass routes should be blocked by natural or manmade obstacles or by strong defensive positions. Thus, the bottled-up enemy must clear the area inch by inch. But all the while, his closed up formations will offer lucrative targets for artillery and air attacks or for offensive action by mobile armor battalions. Not all brigade GDP sectors have a piece of terrain that favors defense by a light infantry battalion, but when it does, a light battalion can be used quite effectively. In fact, a brigade commander can structure his whole plan around such a strong defensive position. If the enemy force can be channeled down the desired approach and held up in front of the light infantry's positions with no way to bypass them, that force is right where the brigade commander wants it, and it can be defeated by fire and movement. The light infantry, then, becomes the cork in the bottle.

The main reason why a brigade commander would want to dig in a light infantry battalion in his sector would be to free his mechanized or armor forces either for use in another area or to carry out an offensive action. It is true that mechanized infantry units can defend virtually anywhere light infantry units can defend. But if a light infantry unit can defend a critical area that otherwise would have to be defended by a mechanized infantry battalion, then it is certainly a wise move for the brigade commander to defend the area with his light infantry and use his mechanized unit elsewhere in a way that will best take advantage of its mobility and firepower.

Military history from Hannibal to modern times is filled with examples of combining mobile and static forces at all levels of command to defeat an attacking enemy. The tactics in these examples are the same: Draw the enemy in, fix him with the foot soldier, and move on his flanks and rear with horse- or vehicle-mounted forces. The static position becomes the anchor, the pivot point around which mobile forces maneuver. *Panzergrenadier* battalions in the German *Bundeswehr* use the same plan at battalion level in their defensive sectors. Their infantrymen dismount and defend deep in sector. Their Marders — German infantry fighting vehicles — pick up the battle early and, using the infantry positions as pivot points, maneuver against the enemy's flanks. If the terrain is right, the same concept can be used today in a U.S.

brigade sector in Europe.

Let's look at an example. Figure 1 illustrates a brigade sector and a defensive plan. This brigade has two tank battalions and two mechanized infantry battalions, augmented with a light infantry battalion. The sector is astride a major enemy regimental or divisional avenue of approach, which, deep in sector, passes through defiles, villages, and rough terrain. The brigade commander has decided that he wants to defeat the enemy's first echelon regiments forward and then the second deeper in sector.

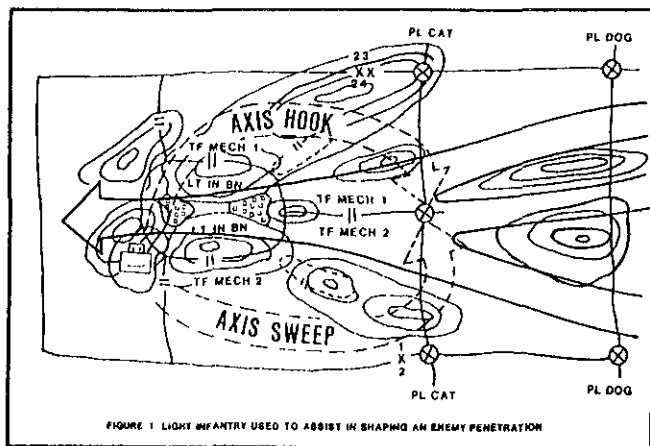


FIGURE 1 LIGHT INFANTRY USED TO ASSIST IN SHAPING AN ENEMY PENETRATION

He knows exactly where he wants to fight.

The commander uses an armor task force in the covering force area between Phase Lines CAT and DOG. He expects this task force to fight a stiff covering force battle using aggressive maneuver, coordinated firepower, and carefully selected obstacles. He does not want the covering force to become decisively engaged, but he does expect to hurt the enemy, causing him to fully deploy and spend time getting to Phase Line CAT. At Phase Line CAT, the battle passes to the main battle area task forces as the covering force moves through them to a rearming and refitting area to prepare for further commitment or to revert to division control.

The two mechanized task forces on Phase Line CAT also fight a stiff battle, but again do not become decisively engaged. The brigade commander wants these task forces to stay on the enemy's flanks, using obstacles and fire to invite him down his path of least resistance through the center of the brigade sector. These task forces take every opportunity to attack the enemy's flanks, but they allow him to continue his advance toward the light infantry position while they also secure the shoulders of the penetration. By this time, the enemy is probably committing the second echelon battalions of his leading regiments.

If the light infantry's defensive area is well prepared, the funnel is sealed. As the enemy stacks up before that area, he is engaged by attack helicopters, air strikes, artillery fires, and more flank attacks by the mechanized task forces. At the right time, the brigade commander launches an attack by his reserve armor task force on one of several axes deep into the enemy's rear, and then gets set to launch a second attack, with the rearmed covering

task force, if it is available. Thus, with the help of a light infantry battalion and with skillful maneuver by its armor and mechanized infantry forces, this brigade should be able to defeat an OPFOR division and then continue the battle as a fully capable maneuver force.

A second example illustrates another use of a light infantry battalion. Figure 2 depicts a brigade sector that contains a fairly large area of rugged, mountainous terrain. A secondary, but dangerous, enemy avenue of approach cuts through this mountainous area, requiring that the area be defended by more than just screening forces. With his two armor battalions and one mechanized infantry battalion, the brigade commander would normally defend with a covering force battalion and two task forces on line in the main battle area. The addition of a light infantry battalion, however, enables him to fight a different kind of battle. By moving the forward edge of the main battle area, Phase Line BLUE, back to the mountains, the brigade commander can defend his northern sector in the mountains with the light infantry battalion. This allows him to hold a fresh armor task force to maneuver against the enemy.

In this example, the brigade again fights a strong covering force battle between Phase Lines RED and BLUE with an armor task force. The brigade commander has decided he wants to fight the enemy in the south, in front of and within the mechanized infantry task force's sector. He devises his obstacle and fire plans to channel the enemy force in that direction. The light infantry battalion defends the routes through the mountain passes with mines and dug-in infantry, but still must be regarded

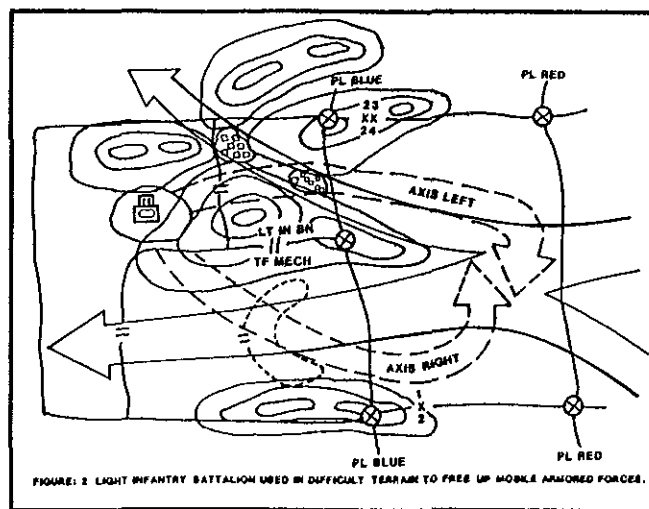
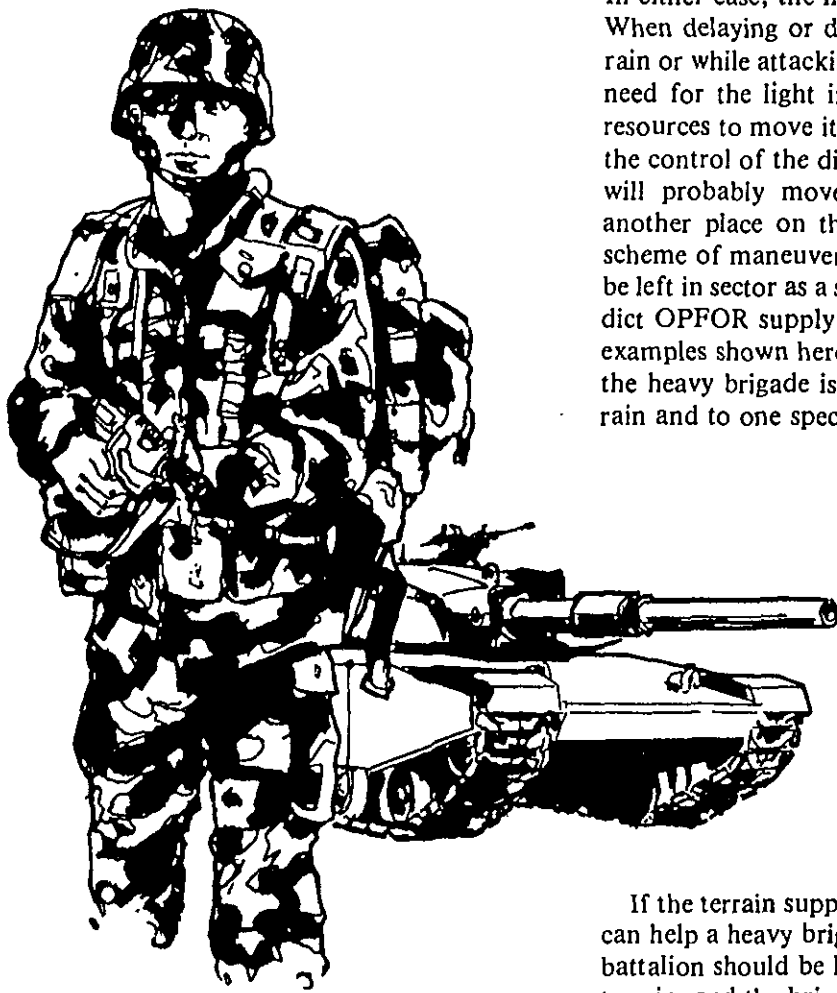


FIGURE 2 LIGHT INFANTRY BATTALION USED IN DIFFICULT TERRAIN TO FREE UP MOBILE ARMORED FORCES.

as operating in an economy of force role.

At the right time, as the enemy force is drawn into the mechanized infantry battalion's sector, the brigade commander launches his armor task force on a coordinated attack along Axis LEFT using the light infantry battalion to secure the line of departure and to guide the task force to Phase Line BLUE. The light infantry's positions, therefore, not only serve as the secure shoulder on which the attack can be hinged; they also provide a secure area to which the armored attack force can withdraw to



In either case, the light infantry unit will be left behind. When delaying or defending on a different piece of terrain or while attacking, the brigade will probably have no need for the light infantry battalion, and little time or resources to move it. The battalion will have to revert to the control of the division or its own parent brigade and will probably move by foot, helicopter, or truck to another place on the battlefield where the terrain and scheme of maneuver will best support its use. Or it may be left in sector as a stay-behind force to harass and interdict OPFOR supply lines. The main point is that in the examples shown here the light infantry battalion's use to the heavy brigade is limited to one specific piece of terrain and to one specific defensive plan.

regroup for a second attack.

If the enemy makes a determined push on the northern avenue of approach, the light infantry can bottle up the lead elements in the narrow defiles. At the right time, then, the brigade commander can launch his attack on Axis RIGHT into the rear of the enemy formations. In this instance, the mechanized infantry battalion secures the line of departure and provides the hinge point for the attack.

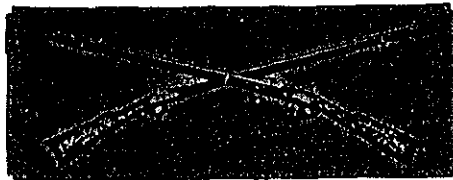
In either case, the brigade's attacks are violent and supported by all available fire support. Again, the target is artillery positions, command and control installations, and logistical elements. If these can be destroyed, the forward OPFOR combat units will wither on the vine.

Now, in either of these examples, what will the situation be if the brigade is ordered to withdraw out of sector, or perhaps to attack in some unexpected direction?

If the terrain supports its use, a light infantry battalion can help a heavy brigade fight a battle of maneuver. The battalion should be kept intact and employed in infantry terrain, and the brigade's scheme of maneuver should be built around the light battalion's defensive positions. The light battalions can hold the nose or shoulder of an enemy penetration, or it can replace mobile forces in difficult terrain as an economy of force element. Because of the rapid deployability of our light forces, when war seems likely, they might well be the first CONUS-based units to arrive in Europe. We therefore need to look now at where and how they can best be employed.



LIEUTENANT COLONEL JACK B. WOOD, a 1967 graduate of the United States Military Academy, is now commander of the 1st Battalion, 52d Infantry, 1st Armored Division. He formerly served as a battalion and brigade executive officer with the 1st Armored Division and as a company commander in the 82d Airborne Division, the 101st Airborne Division (in Vietnam), and the 3d Infantry (The Old Guard).





TANK HUNTING

BRIGADIER RICHARD E. SIMPKIN,
British Army (Retired)

Last March, I had the privilege of visiting Fort Benning for the first time. My visit was concerned mainly with the infantry's armored and mechanized roles, but what in fact impressed me most was the resolve shown by both staff and students to regard the West's supreme asset as the educated, independent-minded, resilient American soldier. All at Benning seemed determined to maintain the principle that the infantry, at least, still is and always will be concerned with men on their feet and with "equipping the man" as opposed to "manning the equipment."

My recent and continuing studies, for what they are worth, have led me to believe with mounting conviction that the actual future of armed conflict lies with types of forces ranging from light infantry (as exemplified by the experimental organization of the 7th Infantry Division) through dedicated helitroops and paratroops to the more specialized functions of rangers. Almost every day this view is reinforced by events.

In this article I want to address one aspect of the light force theme — action by men on their feet against mechanized forces in general and against tanks in particular. Many of the same arguments probably apply —

and may soon have to apply — to "men against choppers." But the fields nearer home need some additional hoeing before we can break new ground.

If we are to think positively about pitting men against armored machines, we must first clear our minds of their load of conventional and unnecessary ideas. First, there is a need not so much to eliminate "tank terror" by putting infantrymen through passive confrontations with tanks as to think in terms of inculcating "infantry terror" in tankers. More on this later.

Then we have to overcome the views of those soldiers, defense analysts, and others who insist that the proper way to make war is for like to fight like. I for one have never thought this notion made much sense; and one beneficial product of the recent and continuing increases in the effectiveness of indirect fire in general — and of the overhead attack of armor in particular — must surely be to put paid to the idea once and for all.

Sure, at first sight it seems neither ethical nor effective to pit men against large armored machines by choice. But when the problem is put into perspective, an infantryman with the weaponry he can carry as an individual or as a

member of a team, backed up by supporting artillery and air, can make life very difficult for the tanker — certainly slow him right down and possibly drive him from the battlefield. This is the right attitude with which to approach tank hunting.

As an ardent proponent of maneuver theory, I do not feel that quasi-guerrilla tactics conflict with the principles of Field Manual 100-5. Far from it. In conjunction with air-delivered and artillery fire, these tactics may well offer a long-haul solution to the mobility gap between the heavy tracks of the holding force and the rotors of an air-mechanized mobile force. By dispersing the holding force into a network covering the entire operational zone, and by giving it the requisite strength by the massing of fire as opposed to the movement of troops, one may be able to provide a holding force that is at once static and also available wherever the mobile force requires it to be.

ROLES

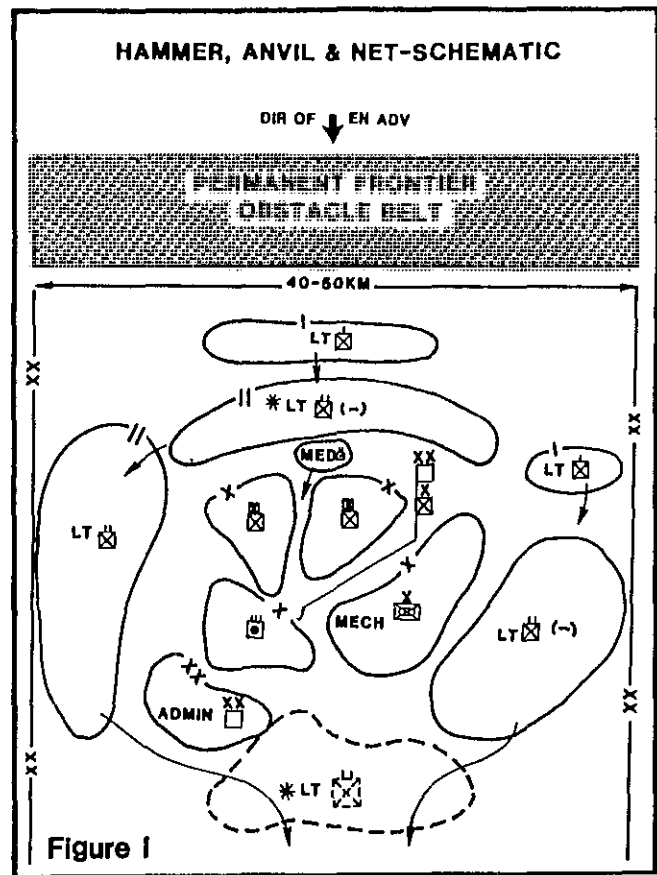
In examining the roles that call for tank hunting and the like, we need to distinguish between the situations in which these tactics are deliberately preferred and those in which there is no choice. Accordingly, let us look first at the NATO center, where the principal maneuver forces on both sides are mechanized and, to an increasing extent, air-mechanized. Here, there are probably three distinct roles for tank hunting:

- The first of these roles is as a “net” (Figure 1), at about five and certainly no more than ten percent of normal infantry density, to exploit hindering terrain astride Warsaw Pact thrust lines. The aim is to provide a level of threat that forces the attacker, through blocking action rather than attrition, to bring up and dismount large numbers of infantry and to clear through the belt of hindering terrain. The devastating effect of this on the tempo of the advance needs little stressing.

- The second role, again as a “net,” is to cover the flanks of defending mechanized forces and to provide a tripwire and immediate defensive response in those sectors where mechanized movement by the attacker is physically possible though improbable.

- The third role for tank hunters is to conduct offensive actions at medium and low tactical levels, particularly at night and in severely reduced visibility. Generally speaking, the tactical risk involved in the insertion and extrication of well-trained infantry at medium to low density is significantly lower than that of an in-and-about attack with armor.

If the trend toward using indirect fire as the main element in the antitank defense continues as expected, the “net” concept may well replace the lattice of strong-points as the static or holding element in the main defense in certain types of terrain. The North German Plain provides an excellent example of the kind of ground on which a deep net, with the ability to call down an anvil of fire and operating in conjunction with a tracked or rotary-winged hammer, may well offer the best chance of



containing the Pact's main thrust.

In intervention operations outside the NATO sphere of interest, the intervening force, initially at least, will be operating at the end of long air lines. Especially in North Africa and the Middle East, a non-mechanized or light mechanized force may have to conduct defensive operations, or even an advance to contact culminating in a meeting engagement, against substantial defensive operations, or even an advance to contact culminating in a meeting engagement, against substantial heavy mechanized forces — albeit second-rate ones.

I do not wish to get involved here with questions on the use of dedicated helitroops, heliborne infantry, and “hi-tech” light forces (as in the 9th Infantry Division project). But however troops are deployed, much of the fighting is going to be done by men on their feet. If these men hold ground at high density and try to stem an advance by a heavy mechanized force with Soviet-type artillery support, they are rather likely to be destroyed without accomplishing their mission. The need is to overcome the inevitable weakness in positional defense by aggressive action at the tactical level.

In true desert terrain such as the Sinai Desert or the Yemen littoral, defensive action by dismounted troops is hard to envision. Here, operations against a mechanized enemy would have to be conducted by local, aggressive actions of mobile detachments inserted and extricated by wheeled vehicles, rotary or fixed-wing aircraft, and, where feasible, boats. Soviet teaching on *desanty* is highly relevant here.

There is, though, a range of terrain types between flat

desert and weak terrain like the North German Plain that lend themselves to a defense based on the "net" and "anvil of fire" concepts in conjunction with a rotary-wing hammer. Large areas of such terrain are to be found in North Africa, the Middle East, Central and South America, and other possible theaters of operation. It goes without saying that intervention operations of either of these types can be developed only from a conventional, firm base at the airhead.

EQUIPMENT

The first principle in equipping tank-hunting forces is to provide them with hardware that is genuinely man-portable or that breaks down into reasonable manpack loads. If the infantryman is hampered by an awkward burden, he will almost certainly disclose his presence and be dealt with before he can achieve anything. The exception to this principle is explosive stores, which can be inserted by helicopter or vehicle close to the point where they are to be used.

Antitank weapon systems can produce either lethal pinpoint fires or nonlethal (suppressive) area fires, but not, so far, lethal area fires. By the same token, man-portable and crew-served weapons may not always be able to produce lethal attack against the more heavily armored vehicles; but they can deliver nonlethal suppressive fires that will enable tank hunters to deal with a target more or less at leisure. I am thinking here mainly of obscuring a vehicle's vision system with a soot and oil mixture or the like. One other possibility is flash blinding with lasers, and there may well be others, too.

It is arguable whether part of the manpack load should be given over to dedicated nonlethal weapons, but I am fairly certain that all light antiarmor weapon systems should contain a soot or oil capsule or something similar as a backup in case the primary attack fails. This could be done without much detriment to the tank hunter's performance and would enormously increase his chances of surviving.

Aside from machine carbines and automatic rifles, the tank-hunting force needs three categories of weapon system: grenade/limpet mine, rocket launcher, and ATGMs.

There is probably a need for an antitank grenade that combines a suitability for lobbing the Soviet RKG series of grenades with the principle of the limpet mine. Given recent and continuing advances in shaped charge, Miznay-Chardin, and self-forging fragment (SFF) attack, it should be possible to develop a really handy weapon of this kind. Oddly enough it is often safer, as well as more certain, for an infantryman to work his way right up to a tank, or even climb onto it as the German *Panzergrenadiers* were trained to do in World War II, than to fire at it from short range.

A weapon system in the rocket launcher category is essential not only for a short or medium range attack on armor but for target indication, too. The antitank round

should be a good, multipurpose one. In my view, this versatility is more important than the ability to defeat all aspects of the heaviest armored targets.

I remain convinced that the terrorist's favorite toy, the Soviet RPG-7V, is the best so far fielded by any army. For serious dismounted action, its combination of handiness and versatility make it superior to its two successors in the Soviet Army (which make good sense in the mechanized setting, though). Nonetheless, the tank hunter will stand a much better chance of living to fight another day if, like Macavity the Mystery Cat, he's "not there."

In World War II, many experienced soldiers in several armies equipped their Bazookas with an automatic firing kit of the *fougasse* type. This is very easy to devise; even the fishing kit in a survival pack will do the trick, and a dedicated kit could easily be carried in a combat dress pocket. A variant on this that sundry terrorists have taught us is wire or radio remote control. In a tank-hunting context, a versatile rocket launcher is probably more cost and weight effective than a Miznay-Chardin mine or a massive high explosive charge.

As for ATGMs, the most suitable one so far fielded is probably the Soviet SAGGER (AT-2). This suffers, though, from being a two-man system and from the weight and bulk of the missiles. If it proves technically feasible, the new United States Army requirement for a medium antitank weapon (MAW) would fill the gap in a way that might put tank hunting fairly and squarely on the map. This requirement postulates a truly manportable system accurate out to 2,000 meters and capable of defeating all aspects of the main battle tank. I would prefer to see rigorous restrictions on weight and bulk upheld at some cost in lethality, particularly if a backup nonlethal attack could be incorporated.

There is no space here to discuss explosive stores in detail, though we will glance at them under the heading of training. One item that the tank-hunting patrol itself could well carry is the "minelet" — both track cutting and lethal.

FIRE SUPPORT

For the kind of concept I am putting forward, it is axiomatic that individual patrols should be able to call on artillery and air support. This requires both spoken and visual means of target indication and, above all, electronic-warfare-proof communications both within the tank-hunting force and in the sources of its fire support. This communication system ideally should be entirely manpacked, but a heavier station may have to be used for the long-range link and then, if necessary, abandoned.

Even if all commanders down to patrol leaders are trained in some elementary form of fire correction, a forward observation party will be needed at platoon as opposed to company level. This may well involve the gunners in some new thinking by way of delegating full

responsibility for control of fire to noncommissioned officers. (The same, incidentally, will apply to any engineer support provided.)

To keep the number of men and radio channels, and thus the risk of detection, to a minimum, these platoon-level forward observation parties must be trained and equipped to request and control fixed and rotary-wing air support as well as artillery and maybe mortar fire. Otherwise, there would appear to be no special problems about the provision of artillery and air support.

With the escalating importance of mortars in the anti-tank defense, and because of the communication problem, it is very tempting to include mortar subunits within the tank-hunting force itself. There are two objections to this, though. With small parties of men scattered all over the place, indirect fire accuracy is essential. This can now be achieved with safety distances that are acceptable even in close country, but it does require surveyed positions.

The risk of using mortars from unsurveyed positions would be on the high side, especially in the kind of broken country in which tank hunters might operate. More important, any hardware that cannot readily be manpacked imposes both a physical and a psychological constraint on small unit tactical commanders. Even if a soldier is told he may destroy and abandon this equipment, he will be hesitant to do this — and he may hesitate just too long.

If ever any military activity called for “bottoms up” thinking, it is tank hunting. From observing various sizes of infantry units in action, and from studying and discussing the questions, I think that the best battle strength for a tank-hunting patrol is three men. A fourth man, unless he is a specialist with a good reason for being there (a sapper, for example), increases the risk of detection without contributing very much. A three-man team can split two and one, either with two men covering a stalker forward or with one man in a long-range position and two concealed to a flank.

There is one specific reason why the team should have this ability to split. One armored vehicle immobilized in a physical defile — such as on a narrow trail between trees, banks, or walls — presents the attacker with a tedious rather than difficult exercise in route clearance. But if another vehicle that closes up behind it to have a look or to retrieve it can also be knocked out, the attacker has a problem on his hands. And if the blockage can be covered with mankilling automatic fire or with observed fire, he is in real trouble.

Thus, the basic tactic of tank hunting should be a planned micro-operation aimed at producing a two-vehicle block, although there will be numerous occasions, particularly at night, when individual stalking against single targets, or a group stalk by a squad or even a platoon against a deployed enemy, will be called for.

The types of hindering terrain that are suitable for the “net” concept in general and for tank hunting in particular tend to have a pattern of communication that includes a few key nodes. These will require somewhat

more deliberate treatment and may well yield correspondingly more enemy casualties. For example, two-thirds of a platoon's strength might be deployed in tank hunting as such, while the rest of the soldiers might be concentrated into some form of ambush.

This ambush position would have priority for “professional” fire planning and mobility denial. Exactly how the ambush operated would depend on the ground, but the principle should be to establish a concealed defensive position (tactically equivalent to a reverse slope position) on a minimal scale, with infantry covering an obstacle and with artillery defensive fires planned on and astride this obstacle. Occasionally, it may be possible to use a split ambush to block both ends of a defile simultaneously and thus to bottle up a complete enemy subunit, which can then be dealt with in a more deliberate way.

One question that affects all minor tactics of this type is determining the best angle from which to approach and engage a tank. The normal teaching is to try and get behind it, but I am not convinced that this is in fact, the best way, because an attack on the rear may well leave the crew in a position to retaliate.

Side attacks are always somewhat uncertain because of the added protection afforded by the tank's running gear, and because the hit chance is reduced if the target is moving. Despite the evident risks, it may be best to take the vehicle from within its frontal arc by getting above or below it so as to get a shot at its thinly armored roof or



the lower nose plate. If the attack contains some means of blinding the target and anything just behind it, this frontal approach becomes a better bet still. The answer lies not in laying down a lot of detail but in training, in thoroughly familiarizing the resourceful soldier with the characteristics of the target and the capabilities of his weapon system.

ORGANIZATION

Tank hunting and similar quasi-guerrilla activities are essentially a platoon battle; the platoon, therefore, must be made into a tactically self-contained subunit. A platoon sector will typically be two to three kilometers wide and as much as seven kilometers deep to allow the best use of terrain and freedom of maneuver. Since there is little point in having a tactical reserve, a battalion can thus cover a frontage of 25 to 30 kilometers.

To my mind, it is very important that if there must be different types of battalions, their overall strengths should be as nearly the same as possible. In the case of a light battalion specifically organized for tank hunting, any additional strength needed in the combat platoons can be provided by personnel who would otherwise be manning support weapons.

The platoon will need three squads with a battle strength of nine each so that the platoon can form three tank-hunting patrols. In addition to the normal headquarters personnel, the platoon will need an additional fire team to act either as escort to the forward observation party or to boost the strength and scope of an ambush position, and an engineer detachment.

The forward observation party will need enough men to manpack communications for at least two and probably three nets, even if it can communicate with some kind of fire control relay center.

The engineer detachment must be commanded by a skilled, experienced and responsible NCO, almost certainly a sergeant, and should consist of perhaps six other men. Typically, one might see the detachment commander and four men working on an ambush position or the like, while the other two went out with the commanders of the two squads deployed for tank hunting. But this, like everything else in the quasi-guerrilla game, depends almost entirely on the ground.

As for training these tank-hunting units, taking the more mundane aspects first, every man must be brought to "marksman" or an equivalent standard in all squad weapons, and to a higher than normal standard of fieldcraft and physical fitness. Each must also be able to read a map to near-orienteeing standards. All this suggests a need for ranger-type training. Additionally, but along the same lines, every soldier must be taught basic mobility denial techniques that can be carried out with lightweight stores — for instance, bringing down trees across a trail with instantaneous-detonating fuzes.

As stressed at the beginning of this article, all these soldiers must be thoroughly familiar with armored

vehicles and must have instilled in them a positive and aggressive attitude toward armor. There would appear to be a case for providing the Infantry School and other major training centers with a number of obsolete tanks and IFVs or APCs — or better still, with Soviet vehicles — and for devoting time and money to give the soldiers a few hours of elementary training and crew experience on these vehicles. Only by knowing the view from the cupola and the driver's periscope can they work out how best to tackle a target in a given situation.

What could be a more difficult problem is the production of the required number of patrol leaders. Every squad needs one actual and two potential squad commanders, and the potential ones need to be brought up quickly to a fairly high standard both in the basic skills and in leadership and initiative. This again calls for ranger-type training.

The most difficult task of all, though, is likely to be overcoming the conventional thinking of middlegrade and junior officers and senior NCOs, because any serious move toward quasi-guerrilla tactics would demand that the infantry give up its fundamental concept of holding ground and replace it with the concept of *controlling* ground, in the same way that armor, and now air-mechanized, forces do. This switch in attitude, however, along with the physical ability of small, highly dispersed forces to deal with a mechanized onslaught, is both feasible and necessary in face of the rapidly increasing effectiveness of the artillery firepower available to both NATO and the Warsaw Pact, as well as to the Soviet Union's Third World clients.

For mechanized and dismounted forces alike, the days of high-density deployment are passing. Improved artillery firepower and the related capability for massing fires are bringing the Soviet principle of interchangeability of shell and bayonet home to roost. At the same time, the West is coming to realize that its key asset is not technology but the qualities of the combat soldier, who, as Major General George S. Patton puts it, "retains a solid grasp on his position as the foremost instrument of war."

If there was any doubt about the need to shift the mass center of infantry training toward the ranger end of the spectrum, it should be dispelled by the way the Soviets, despite their lower grade of soldier and restrictive command techniques, are striving in their Airborne Forces at least, to bring every man to *Spetznaz* standards.



BRIGADIER RICHARD E. SIMPKIN, British Army (Retired), writes and lectures and runs a language consultancy in Scotland. He joined the Royal Tank Regiment in 1940, serving in the Middle East, and combined a normal regimental career with specialization in equipment policy. He has had four books published on mechanized warfare, has a fifth, *Red Armour*, about to come out, and has a sixth in the planning stage. In addition, he translated from the German General von Senger's *Tanks of the World*, which he mentions in the article.



Light Infantry

in perspective

Light infantry can refer to two distinctly different types of troops. In the United States the term is commonly applied to standard infantry units that have been made lighter through reduced equipment and support. Such formations do have improved strategic mobility, but in most other respects they are identical to regular infantry, including the tactics they use and the quality of their soldiers. Although this type of infantry is often called "elite," that title is merely a name if its tactics and the quality of its troops are essentially like the tactics and the troops of regular infantry units.

In Europe, however, the term "elite" has different connotations. Generally, it is applied to *high quality*, non-mechanized infantry units. In the Germanic coun-

tries it implies a true elite, with specially selected and trained men, lighter formations than more "conventional" light infantry has, a demanding operational method, and a tactical repertoire keyed to surprise and to fighting in close terrain. Though it lacks heavy support weapons, this type of light infantry unit, paradoxically, has been equipped traditionally with a high proportion of mortars and light machineguns. Thus, it has much greater firepower than either regular or "conventional" light infantry. The principal characteristics of European, or classical, light infantry and of standard infantry made light by removing heavy weapons and equipment are shown in the accompanying chart.

The origins of this modern day light infantry are

German. Unlike its neighbors — France and the low countries — Germany has little open terrain, except in the North German Plain. Southern Germany, Austria, and Switzerland are extensively forested and often mountainous. Because these areas are less suitable for formal tactics than open areas, it was natural for a special, more irregular infantry to develop in them. At the same time, it was recognized that the individuals in these units had to be more independent and aggressive than those in the more traditional units. Accordingly, these soldiers were drawn from a higher social class and were mainly reservists.

Historically, standing armies have been recruited from the available manpower — the lower classes and the idle aristocracy. These were shaped into fighting units by drill. The classic example is the Prussian Army. Under Frederick the Great, this army was virtually a labor gang; yet through rigorous training and discipline, it was capable of clockwork precision and could outdrill and outvolley all other armies of the period. Indeed, its close-order line tactics became the model for many other armies.

Every system, however, has its antithesis and for Frederick's close-order drill tactics, the antithesis was irregular infantry. Even Frederick reluctantly recognized this reality and organized some irregular infantry units of his own. Because of their source of recruitment, though, his *Jaeger* units remained special units and were not integrated into the main forces. Thus, they had no significant effect on warfare until World War I.

The antithesis of 18th century close-order European line infantry tactics actually came from America, and American light tactics led to a new synthesis, commonly known as Napoleonic tactics. Over the next century, these tactics (because of firepower) became line tactics again, but this time took the form of extended (dispersed) or open-order linear deployments. On a battlefield that was dominated by firepower — where firepower itself proved inadequate in restoring movement and indeed was much of the problem — the breakdown of these linear

tactics led to a new tactical synthesis and this synthesis produced a new irregularity: Ludendorff's elastic defense and *Hutier* attack tactics. These were consolidated and merged into the Moltkean operational framework during the 1920s to form a synthesis known as *Blitzkrieg*.

The German doctrinal innovations of World War I (the elastic defense and *Hutier* infiltration tactics) were essentially identical to classical *Jaeger* tactics (though not derived from them). Erwin Rommel, in his *Infantry Attacks*, demonstrated his employment of *Hutier*-like tactics in France in 1914 and later throughout the war. As a Captain in the Wurtemberg *Gebirgsjaeger* Battalion, Rommel commanded the lead companies in the 1917 Caporetto offensive, which nearly knocked Italy out of the war.

Jaeger tactics were far from being in the mainstream of German military thought and had little or no influence on the development of *Hutier* tactics, but the point is moot. What is important is the manner in which the *Jaegers* had become the cutting edge of the main force infantry in close terrain (as at Caporetto and in the Carpathians). Conversely, in open terrain, where no *Jaegers* were deployed, special thrust troops (*Stosstruppen*) were formed as special cutting edge elements and the army as a whole became infused with the micro-tactics of the *Jaeger*.

LITTLE CHANGE

Although the German conceptual approach to war has undergone remarkably little change in this century, the implementation of that approach has changed in two important aspects: The extension of the concepts of *Schwerpunkt* (center of gravity) and *Auftragstaktik* (mission-type orders) to lower and lower command levels; and the need to create flanks, or discover gaps, in extended linear deployments, instead of searching for open flanks that no longer existed. Thus, the classical German encirclement, while still an ultimate goal of an

<u>Characteristic</u>	<u>European Light</u>	<u>Standard Light</u>
Defensive tactics	Does not hold ground.	Holds ground.
Offensive tactics	Seeks, on its own, targets of opportunity within the scope of a given mission. Stalks the enemy.	Unit usually employed at the direction of a higher commander against a prescribed target.
Command and Control	Decentralized decisions made by small unit leaders.	Centralized; fights en masse.
Organization	Integrates different weapons within small units.	Individual units employ large numbers of similar weapons.
Discipline	Demands initiative.	Demands obedience.
Quality of Personnel	Intelligent, capable of independent thought. Highly skilled in field craft and stalking.	Obedient.
Method of Operation	Fluid in ever-changing situations.	Setpiece with accustomed drill.

operation, had to be preceded by a search for soft spots (*Die Lucken und Flachentaktik*) through which a penetration could be effected.

All armies other than Germany's viewed the new potentials and capabilities of radio and telephone communications as a means of strengthening control over dispersed forces, and those of transport as a means of concentrating and prestocking artillery ammunition for breakthroughs. Only the Germans realized during World War I that the new conditions of spatial dispersment and dominating firepower required the opposite of centralization — command from the bottom up. This meant that junior officers on the spot had to make immediate tactical decisions. At the same time, improved radio equipment could be used to monitor the activities of smaller units, to help sense developing opportunities, and to reorient assigned tasks to conform to changing circumstances.

A unit's plans could be less formal and rigid and therefore less vulnerable to complete disruption in the face of the unexpected; indeed, a unit might even convert the unexpected to its own advantage. Removing the need for rigid plans; elaborate, pre-conceived movements; and detailed coordination had the effect of also removing the inconsistency in the German command and control system between local initiative and preconceived maneuver. In addition, there was now less need for the local buildups of men and material that often made surprise impossible.

These changes also meant that all the infantry units in the *Reichsheer*, in effect, had to adopt *Jaeger* micro-tactics. All infantry tactics — delay, defense, and attack — became ways of setting up a "smashing" blow. Today, German foot infantry still occupies positions in delay and defense, but in the *Jaeger* scheme this is less for defense itself than for drawing an enemy force into firepockets and exposing its vulnerable rear and flanks to thrusting counterstrokes (hammer and anvil tactics). In the attack, reconnaissance elements search for gaps and soft spots in the enemy's line across a broad front. If gaps cannot be found, penetrations are then made in the softest spots on a very narrow front accompanied by surprise, which is achieved through stealth and deception and through the use of suppressing firepower. Frontal assaults are avoided, and openings are exploited by reserves echeloned in depth and trailing in the wake of the wedging-in force. These reserves have the dual mission of rolling up the enemy's immediate flanks and penetrating deeper into his defensive system.

For *Jaegers*, a successful attack depends on maintaining high-tempo operations. Without that tempo a small force operating in the midst of a larger enemy force can be either exposed to superior firepower or pinned in place and subsequently destroyed in detail. A high-tempo operation fractures an opponent, preempts and avoids his reactions, and thereby grants security to a small force. Through high-tempo operations, small units can begin the disintegration of an enemy formation and neutralize

its actions until the main force arrives.

Jaeger-like combat strives for stealth and stalking, the tactic of the big-game hunter; the Germans have simply extended the concept from individual hunters to groups of hunters in forests, and, finally, to warfare in general. The greatest problems are in finding suitable techniques.

In woods, mountains, and other close terrain, the techniques are those of the hunter and tracker; the problem there is in how to instill the requisite levels of skill and self-confidence in the individual and the small unit.

Techniques for open terrain are far more difficult to devise and implement. In World War I, the German tactics of 1916-1918 provided one answer. In defense, regular infantry could create a reasonable facsimile of stealth and stalking tactics on a large scale through the elastic defense (based on rear slope positions), enfilading fire from mutually supporting machinegun posts, and



lightly-held outposts designed to draw in the attacker to the ground chosen for the counterstroke by reserve forces. (Indeed, the familiar American tactic of area defense was largely copied in form from the German system.)

Thus the German tradition that some identify as maneuver warfare, which took new form between the two world wars, can be conveniently summarized as a combination of stealth and stalking micro-tactics and high-tempo operations. The former leads to localized battlefield successes; the latter is a means of converting tactical success into operational success by acting faster than the enemy can react (a phenomenon currently referred to in U.S. literature as the "Boyd Cycle").

But tempo is more than mere speed of movement.

Movement itself is often associated with, and mistaken for, true maneuver, but it is not necessarily a condition for maneuver. Often, the enemy's own movements will set the scene for the smashing counterstroke while friendly movements subsequently follow through and exploit any tactical advantage.

The closest U.S. analogy to this type of light infantry unit would be a reinforced Ranger battalion, sometimes grouped with other Ranger battalions into larger elements. The Swedes, Finns, and Austrians have, in addition to their main light infantry units, many special battalions trained to operate independently behind enemy lines within assigned "rooms," a practice called *Jagdkampf* (or raid tactics). These troops resort to partisan-style hit-and-run tactics, including ambushes against the enemy's soft rear echelons, and they also provide intelligence and target acquisition data for the main forces. While U.S. Rangers have some of the characteristics of European light infantry units, they are oriented more toward one specialized aspect of those tactics — such as a combat patrol or a raid and return — and not toward the entire operational method.

Firepower has dominated the battlefield for more than a century. Infantry has, in fact, survived several centuries of warfare only by adapting to that firepower, mainly by reducing the number of ranks it used and extending the frontage of its formations. The limit to further adaptation in this manner was reached in World War I when, to protect itself from the devastation of artillery fires, infantry had to disperse *spatially* instead of *linearly*. Accordingly, the main body of troops was moved back from the forward positions to shield the soldiers from artillery observers. The forward areas, in turn, became a covering zone occupied by mutually supporting small outposts.

Spatial dispersion did protect the defender from the opponent's firepower; by contrast, it fully exposed the attacker to both direct and indirect fires as he advanced over open terrain with recourse only to hasty cover. Regardless of the volume and duration of its artillery support, the attacking infantry units, using standard methods, could not overcome this disparity in protection to break the defender's line. At best, they could push it back, although at great cost to themselves. The attacker's firepower could not overcome the defender, but the defender could sweep the open battlefield with artillery and machinegun fire. Maneuver was impossible — there were no open flanks to turn, and no penetrations could be effected for creating new flanks.

In the end, although firepower could not break the defense, its antithesis, stealth and stalking, could. At best, these achieved decisive surprise; at worst, they gave the defender elusive targets, because in the process of reducing its vulnerability to artillery through spatial dispersion, defending infantry had created a new set of vulnerabilities. The defense could handle *overt* attacks by smashing them with artillery and machineguns. *Covert* attacks, on the other hand, gave the defender no distinct targets. As a result, attackers often succeeded in under-

mining the structure of the defense before their significance could be recognized. Small, infiltrating battle groups succeeded where massed artillery and wave assaults failed. Less artillery was required in the attack, and artillery was much less effective in the defense.

This phenomenon is analogous to the breakdown of Prussian linear drill tactics by the new skirmishing and column tactics of the French revolutionary armies. Dispersed and elusive (high quality) light infantry units, by disrupting the ordered ranks of regular infantry units, created the conditions for columns of ordinary infantry to penetrate lines that were over-extended. This time, however, instead of being supplanted and eventually merged into the line to take the form of extended linear tactics, the light infantry itself became the basis for infantry tactics.

Today, firepower still dominates the modern battlefield, but infantry continues to survive against it by subverting its effects through dispersion and elusiveness and can now overcome it by deception and surprise. Dispersion is possible because small units can now protect themselves; they can generate considerable firepower with their own weapons and can tap electronically into various fire support systems. Dispersion protects the infantry by reducing its detectability and target size, thereby contributing to elusiveness and ambiguity. This makes targeting difficult, except by area saturation fires, which are often impractical because of the large amount of ammunition needed. Indeed, the attempt to counter elusiveness by weight of firepower alone soon leads to exhaustion.

Operationally, elusiveness and ambiguity lead to deception and surprise. These conditions, in turn, set the conditions for attacking and counterattacking on the modern battlefield. Attackers who cannot create deception and surprise will pay a high price in breaking through the enemy's front.

Among European countries, light infantry has now replaced conventional infantry because the latter is suited neither to modern warfare nor to contingency warfare. Infantry can no longer survive through the mere expedient of digging-in, because known static positions can be smashed by heavy artillery. Positional infantry can be outflanked in open terrain by armor and in close terrain by light infantry. In static combat, even on its own terms, regular infantry is no longer practical; whether in open or close terrain, it can be infiltrated, its units wedged apart, and the whole defeated in detail.

In short, then, non-mechanized infantry on the modern battlefield can survive and attack only through dispersion, elusiveness, and ambiguity — conditions that require light infantry.

STEVEN L. CANBY is now a Fellow at the Wilson Center, Smithsonian Institution, Washington, D.C. He is a graduate of the United States Military Academy and served six years on active duty. Among other assignments, he taught small unit tactics in the Ranger Department of the Infantry School and wrote a field manual on the subject. He holds a PhD from Harvard and has written extensively on military strategy and tactics.

TRAINING NOTES



Preventing Heat Injuries:

A Commander's Guide

CAPTAIN CHARLES D. HENRY

Much has been written about heat injury and its prevention, including the symptoms of each category of injury and what to do about salt and water replacement. But heat injury is more subtle and has an even greater effect on troops than previously realized.

Because of this subtlety, and because some of the ideas about heat injury and its symptoms have been shown to be inaccurate, commanders need a detailed prescription to go by. They need help in understanding and implementing programs to prevent heat injuries in their units; they need detailed guidance on what to do, why, when, how often, how much, and when *not* to do something. They also need to know which references or Army Regulations are applicable.

The following actual case histories graphically illustrate some incidences of unrecognized heat injury:

- A patrol was moving through the jungles of Vietnam when a soldier suddenly grabbed his head and began screaming. When his buddies tried to help him he fought them with convulsive strength. After he was knocked out and sent to a hospital, it was found that his body temperature was

107°F before he died.

- In the seventh week of basic training at Fort Jackson, a number of apparently healthy trainees were standing in line for breakfast when one of them fainted. He was taken to the hospital, where he died two hours later.

- A mechanic who had been at the National Training Center (NTC) at Fort Irwin for four days was walking to the motor pool when he doubled over in pain. He was sent to the hospital as a suspected appendicitis case, but all symptoms disappeared when the water level in his body was brought back to normal.

- Another soldier at the NTC was referred to a psychologist after a week of apparent dereliction of duty, such as sleeping on guard mount and in formations (although he had never been in trouble in two years of service). He complained of chronic fatigue and sleepiness. The psychologist, on a hunch (and with medical supervision), had the soldier drink three liters of water, and in a few hours he felt awake and energetic for the first time in more than a week. He was returned to duty and had no subsequent medical or disciplinary problems.

One important observation from these examples is that fatal heatstroke can occur even when a soldier is sweating, not dry, as many people believe he must be. Another observation is how heat stress can subtly debilitate entire units and affect their performance by weakening them physically and dulling their thought processes:

- A Marine battalion was training at Twentynine Palms, California, and because of transportation difficulties had only a third of the water it needed. The shortage not only dehydrated the Marines, lowering their resistance, but also helped cause a sanitation problem in the battalion mess. In an eight-hour period nearly every member of the battalion ended up on the sick list with a combination of dehydration and food poisoning. It was three days before enough Marines were considered fit enough for the battalion to begin functioning as a unit again.

- A study of two U.S. Army armor battalions in training at the NTC showed that when one battalion had problems supplying its troops with food and water it had three times as many casualties as the other battalion. Not only were there more injuries and illnesses, but the cases were more

severe, calling for medical evacuation, hospitalization, and, in some cases, surgery.

The factors leading to heat injury can be any one or a combination of the following:

- High temperature.
- Heavy physical work load (even when the temperature is around 70°F).
- Dehydration caused by sleep loss, drinking alcohol or drinks with caffeine, not drinking enough water to replace sweat loss, low humidity, dry and/or high winds, and too much salt relative to water intake.
- High humidity, which reduces heat loss through sweating.
- Pre-existing illnesses (cold, "flu," and the like).

Because the physical processes leading to heat injury are simple, a commander can easily institute simple programs to prevent or reduce the effects of heat on his unit. The commander of a mechanized infantry battalion training at the NTC, for example, reduced his unit's sick call by 30 percent by having several classes given on the nature and prevention of heat injuries.

FIVE WAYS

There are essentially five ways in which a commander can influence the effect of heat on his unit. The first is to educate all members of the unit on the nature and prevention of heat injuries. The commander can use his medical platoon to give the classes and to monitor the troops in training and on operations. In cases where dehydration and heat stress are threats, he and his medical personnel can refer to the field manuals on desert, jungle, and mountain operations, as well as TB MED 175 and FM 10-52-1, for guidance.

During active operations, a commander must consider three items: rest, food, and water. Both training and combat disturb the normal opportunities for rest. As troops become fatigued, they begin to dehydrate and use up to three times the normal amount of energy to do the same work. Rest allows their bodies to

recover from exhaustion and to get rid of the excess heat built up by work. Unit leaders, by monitoring the level of fatigue and heat stress so the troops can get as much rest as the situation will allow, can help preserve the unit's mental and physical capabilities.

Hard-driving troops use up a lot of energy in work and sweat. Those soldiers who do not get enough to eat will quickly become exhausted and, therefore, prone to heat injuries; those who do not get enough salt in their diet will develop heat cramps. Observations indicate that the body is very sensitive to its salt needs and will adjust its own salt intake accordingly if allowed to do so. Both "C" and "LRRP" rations provide excess salt because it is used to preserve the food. The "MRE" ration may also provide too much, and additional salt is included with all these packaged rations. The "A" rations, on the other hand, will not provide enough salt in the food itself, and extra salt should be available with them.

Troops who are allowed to salt their food to their personal tastes and to eat their three meals a day do not get heat cramps. Using too much salt at meals, however, or gobbling salt pills "to prevent heat injury," can actually dehydrate the body and lead to a higher number of heat injuries and illnesses than if the extra salt had not been taken.

WEAPON

Water is the main weapon to use against heat injuries. It is essential to remember that the thirst drive induces a person to take in only two-thirds of the water he loses in sweat. This explains why apparently fit troops will suddenly drop from heat exhaustion or heat stroke although they have been able to quench their thirst at will.

At the NTC, a three-part pattern developed with troops who went there for training:

- The troops who quenched their thirst with beer and soda pop collapsed with heat injuries after three days (those drinks only dehydrated them and made them feel dull).

- The troops in the field who drank only enough water to quench their thirst collapsed on either the sixth night or the seventh morning.

- The troops in garrison who drank only water, and then only to quench their thirst, collapsed on the eighth night or ninth morning.

Once this pattern was recognized, an education program was created for the rotating units and the pattern all but disappeared.

Whenever a unit is exposed to heat stress, its commander must emphasize the importance of an adequate supply and intake of water. A soldier can lose more than a liter of water an hour in sweat when he is working hard. This means that logistics planning in hot environments should include three or more gallons of drinking water per man per day. While this may seem like a lot, observers of the workers building the Hoover Dam in its desert canyon found that each worker was drinking *six and a half* gallons of water per day on his own.

A commander must remember, too, that he and his other leaders are also subject to heat stress and injuries. Because heat and fatigue first affect the thought processes, unit leaders must take care of themselves as well as their soldiers. All too often in exercises, the people in leadership and staff positions stay on the go around the clock during the first days until they are exhausted. This leaves the unit without effective command and control systems in the final days of the exercise. In combat, this can reduce the unit's ability to respond to and defeat the opposing forces.

Heat injury is an insidious and lethal enemy. But commanders can implement simple programs to reduce or eliminate its effects. All they need to do is to recognize the enemy and to attack it before it can get to their soldiers.

CAPTAIN CHARLES D. HENRY, a U.S. Army Reserve Infantry officer, is assigned to the 2d Special Forces Battalion, 12th Special Forces Group (Airborne), at San Diego, California.

ITEP: What Is It?

MAJOR WILLIAM R. SHIRLEY

The Army's old SQT (Skill Qualification Test) program has undergone some changes, but an SQT is still a part of the Army's new Individual Training and Evaluation Program (ITEP).

The primary goal of all Army training is to turn out combat-ready units whose soldiers can perform their assigned tasks to the prescribed standards. The ITEP uses three methods of evaluating this proficiency and integrates individual training and evaluation with unit training in a way that is simpler, more flexible, and more responsive to the needs of unit commanders.

These three methods are hands-on common task tests (CTTs), commanders' evaluations, and written SQTs.

In short, the ITEP is a formal system through which the Army evaluates the effectiveness of its soldiers' individual training by measuring their performance against Soldier's Manual and ARTEP (Army Training and Evaluation Program) standards.

These training evaluations, conducted following training at all levels, are a critical part of the Army's training process because they help identify an individual soldier's weaknesses and strengths. They also provide valuable diagnostic information that is essential to the effective management of training programs and to the development of effective training methods and literature.

The ITEP is designed to improve a unit's combat readiness by:

- Evaluating each individual soldier's proficiency.

- Standardizing individual training.

- Improving unit cohesiveness through the evaluation of the individual tasks that support a unit's mission.

- Providing information to commanders and MOS proponents on the effectiveness of individual training programs.

- Providing objective indicators on the MOS task proficiency of soldiers for use in making career management decisions.

The program does all this by focusing on common tasks, on MOS-specific tasks that are considered critical to a unit's collective mission, and on tasks for which soldiers in a particular MOS are responsible but which are not necessarily critical to a specific unit mission.

CTT

The program's common task test is used to determine a soldier's ability to perform the basic combat survival tasks that soldiers in all MOSs have to perform. All Active Army soldiers in Skill Levels 1 through 4 (private through sergeant first class) must take the CTT every fiscal year. Reserve Component soldiers in those same skill levels must take the test only once every two years but may be required to take it more often if their unit commanders choose to give it.

The test can be administered by unit commanders at any time during a fiscal year. A hands-on CTT is preferred, but commanders have the option of using a written CTT if they

first get the approval of a commander in the rank of lieutenant colonel or above.

For the hands-on CTT, the training objectives and the information needed to conduct the test can be found in the Soldier's Manual of Common Tasks (SMCT). The procedures and test questions for the written CTT are in a written test booklet that is controlled and distributed by the local Training Standards Officer (TSO).

The CTT may be integrated with other types of training, such as stations in a military stakes competition, drill or training exercise evaluations, ARTEPs, or other collective training activities. This kind of integrated training usually means a unit is making the best possible use of its training resources and, at the same time, is achieving multiple training objectives.

A CTT notice that lists the tasks to be tested is published and distributed each year by the Training and Doctrine Command (TRADOC). Although it is not mandatory that soldiers receive a written CTT notice before they are tested, it should be in the hands of soldiers who are to be tested at least 60 days before the CTT is to be given.

After the results have been processed through the Army Training Support Center at Fort Eustis, the unit commanders are given summary reports. Individual soldier's reports (ISRs) for the CTT are not provided, because the test is scored locally and the results made immediately available to those tested.

Unit commanders in the Active Army are encouraged to use the test

results in preparing enlisted evaluation reports, in making recommendations to local promotion boards, and in other similar career management decisions at the local level. CTT results are not used by the enlisted personnel management system (EPMS) for making career management decisions.

In the Reserve Component units, CTT results can be used to stimulate training and to help commanders at all levels evaluate the overall effectiveness of their unit training. The Reserve Components do not formally use the results for making either personnel management or individual career decisions.

COMMANDER'S EVALUATIONS

The commander's evaluation portion of the ITEP is designed to enable the commander to determine the proficiency of his soldiers on the MOS-specific and common tasks that are critical to the unit's mission. There are various techniques a commander can and should use as part of these evaluations within his unit:

- Conduct evaluations concurrently with individual skill training.
- Integrate an internal evaluation with team, crew, and other collective training.
- Use supervisors to evaluate the individual skills of their subordinates on the job.
- Use a battlefield scenario (FTX, CPX) to evaluate individual skills.
- Employ a series of test stations (as in the EIB test) to evaluate individual skills.

During these evaluations, commanders and supervisors should record their soldiers' proficiency in job books. These books supplement the MOS-specific soldier's manuals for Skill Levels 1 and 2, and list by task number and title the common, shared, and MOS-specific tasks in which a Skill Level 1 and 2 soldier should be proficient. They should be used as a means of transferring training information from unit to unit. Since a commander's evaluation is in-

formal, he can develop and refine a system, and a method of recording results, that is tailored to his unit.

SQT

The third ITEP evaluation method, the written SQT, is the most complex and formal. The SQT is used to determine a soldier's proficiency on tasks that are critical to his MOS. The SQT promotes unit readiness by giving the commander a way of evaluating and comparing soldiers in the same MOS and at the same skill level Army-wide; a proficiency indicator for use in EPMS decisions in the Active Army; an overall Army indicator of soldier proficiency; and a source of objective information on the strengths and weaknesses of his soldiers.

The SQT, each developed by the appropriate MOS proponent, is designed to evaluate a representative sample of critical tasks for every MOS and skill level not exempted by the Department of the Army. The test evaluates tasks found in the MOS soldier's manuals through multiple choice questions. An SQT is designed to be equitable, simple to administer, performance oriented, and representative of soldiers' critical task domain; it is also designed to focus on MOS and skill level tasks and to provide rapid feedback.

The SQT is scheduled on a fiscal year cycle, which is announced in a DA circular. The Active Army test is administered during a three-month test window, ideally at the same time each year, while Army National Guard and Reserve units are tested during a six-month period.

As with the CTT, all Active Army soldiers in Skill Levels 1 through 4 are tested in their primary MOS annually; ARNG and USAR soldiers in the same skill levels are tested every two years using an SQT that corresponds to their duty MOSs, with commanders, again, having the option of administering the test annually if they want to.

(Several exceptions and deferments from SQT testing are covered in

detail in AR 350-37, Army Individual Training Evaluation Program. This regulation and the SQT TSO should be consulted in specific and unique cases for answers regarding the testing.)

After the DA circular announcing the test period is distributed, TRADOC publishes an SQT notice containing a list of soldier's manual tasks that may be tested on the upcoming SQT. This notice is distributed through the TSO about 60 days before the test period. (One notice is published and distributed for every three soldiers.)

Even though it is not mandatory that a soldier receive a written SQT notice before being tested, commanders and supervisors should see that their soldiers are notified as soon as possible and that they have access to the training materials they need well in advance of the actual test. All the questions and tasks used in the SQT are based on the soldier's manual for the appropriate MOS and skill level. (Soldiers who miss a test date because of administrative error must be rescheduled for testing as soon as possible.)

Answers to the SQT are recorded on special mark-sense forms, which the TSO is responsible for checking and forwarding to be scored. (The goal is to have these forms in the mail within five days after the test.) All SQTs are scored centrally at the Army Training Support Center, but the Skill Level 1 SQT can also be scored manually at the local level to provide immediate feedback to the soldier, the trainer, and the training manager.

An Individual Soldier's Report (ISR) is provided to the soldiers in Skill Levels 1 through 4 about 30 days after they have taken the SQT. The ISR, which is distributed through the TSO to the soldier's commander, contains the soldier's interim SQT score for training purposes — it identifies all the tasks on which the soldier has shown a training weakness. Within 90 days after the close of the Active Army SQT period, a USAEREC Form 10A showing the

soldier's official SQT score is forwarded to him through the chain of command. This form, the official record of the Active Army soldier's performance, is used for EPMS purposes.

In addition to the ISR, a summary report giving the consolidated results of the SQT task performances within a unit is distributed to unit commanders at division level and below. This report can be used to evaluate the effectiveness of a unit's training program and as a basis for improve-

ment in those areas that are identified as being weak.

Attaining and sustaining the proficiency of soldiers in their individual and collective tasks is vital to the combat readiness of a unit. And an effective program through which to evaluate that proficiency is essential to a commander in determining the effectiveness of his unit's training methods and techniques.

ITEP provides the Army and unit commanders with a valuable system of evaluation and feedback that they

can use in effectively managing their training. To use the program properly, commanders, supervisors, and trainers at all levels must fully understand it and promote its use.



MAJOR WILLIAM R. SHIRLEY is Chief of the Manuals and Test Branch, Directorate of Training and Doctrine, at the Infantry School. He has served in numerous infantry assignments in the 1st and 2d Infantry Divisions and holds a master's degree from Pepperdine University.

Winning at the NTC: Deliberate Attack

MAJOR VERNON W. HUMPHREY

The Valley of Death at the National Training Center is about 17 kilometers long, running from west to east. (See accompanying map.) The western end of the valley, about two kilometers wide, terminates in an escarpment known as "The Shelf." At its eastern end, the valley opens into a bowl-like depression about 10 kilometers wide. The western two-thirds of the valley is narrow, with Tiefert Mountain in the north and a lower range of hills in the south. Tiefert Mountain is impassable to vehicle traffic, and the southern hills are trafficable only with difficulty through narrow, tortuous passes.

The key terrain features in the western part of the valley are The Shelf, Hill 692, and the passes in the southern hills. In the east the flat, open nature of the ground lends some tactical importance to five seemingly insignificant hills — The Whale, Casey, Tony, Hill 466, and Bone.

Gullies and dry stream beds offer excellent cover, while the width of the

bowl allows attacking forces to bypass the key terrain features without coming within range of the defender's weapons. The prevailing wind is from the northwest.

PLAN

The U.S. task force that took part in this particular operation was ordered to conduct a deliberate attack from an assembly area in the vicinity of The Shelf to seize Tony. (Tony is actually a series of low hills about 10 to 20 meters high that lie astride the main road running through the valley.) The order specified that the task force's units could not move forward of Phase Line Apple (about 1,000 meters west of The Whale) before the specified time. The task force commander did request and receive permission to send patrols east of The Whale. The TF had both helicopter and fixed wing aircraft available for the operation.

The TF commander's scheme of maneuver called for Team Alpha to attack on the right (south) and for Team Bravo to attack on the left (north). These two teams would sweep to the north of the objective where they would make a 90-degree turn to the south to hit the north end of the objective. Team Charlie, with the AT platoon attached, was to follow the task force, seize The Whale, then push on to Casey. A north-south boundary line was drawn through the task force objective to designate the team objectives.

Helicopters were ordered to reconnoiter the dry stream beds and other likely danger areas before the task force moved out.

A deliberate attack is supposed to be made by a unit that has detailed knowledge of the opposing force and enough time for detailed planning. This task force had time for planning and had been told about the terrain and the weather, but it knew nothing of the OPFOR's strengths and dispo-

sitions. Its scout platoon did not locate the enemy and, despite receiving permission to patrol east of The Whale, the task force did not actually send any patrols beyond that terrain feature. The helicopter reconnaissance was the sole effective intelligence gathering effort, and it was used only to search the gullies running into the valley in advance of the task force's approach.

As the task force emerged into the bowl, it came under long range OPFOR fire. Near Hill 466, the task force commander's vehicle was disabled. He passed control to the S-3, who was in the task force's tactical operations center near The Shelf about 14 kilometers away. The S-3, unable to control the action, passed control to the Air Battle Captain. By the time the task force commander could commandeer another vehicle and get back into the battle, no one had a clear picture of what was happening.

Team Charlie reached The Whale, but without the AT platoon, which had become separated and lost. (It was not found again, in fact, until after the battle was over.) Although Team Charlie remained near The Whale and did not push on to Casey, the task force commander did not know this.

Teams Alpha and Bravo massed in the vicinity of Hill 466 and established a thin but stationary smoke screen. The two teams then advanced abreast

through the smoke, heading for the objective — Tony — in a massed charge. Neither team established a base of fire; each apparently planned to push all three of its platoons onto its part of Tony at the same time.

The teams did not make it. Most of their vehicles were destroyed in a 300-meter circle about 1,000 meters north of the objective. One mixed force of three vehicles did reach an antitank ditch on the north edge of the objective; about 10 dismounted infantrymen managed to cross it but they were "killed" by an OPFOR counterattack.

ANALYSIS

The TF's reconnaissance effort was totally inadequate. It failed to learn anything about the OPFOR and did not prevent the OPFOR from observing the task force's movement as it advanced. It turned out, for example, that the OPFOR had had a five-man OP on The Whale, and these men had kept their commander fully informed of the task force's dispositions and progress. The OP withdrew unscathed when Team Charlie came up.

This lack of intelligence led to a weak plan. The task force did not assign specific company objectives, and the companies did not assign specific platoon objectives. Company commanders and other key leaders did not conduct personal recon-

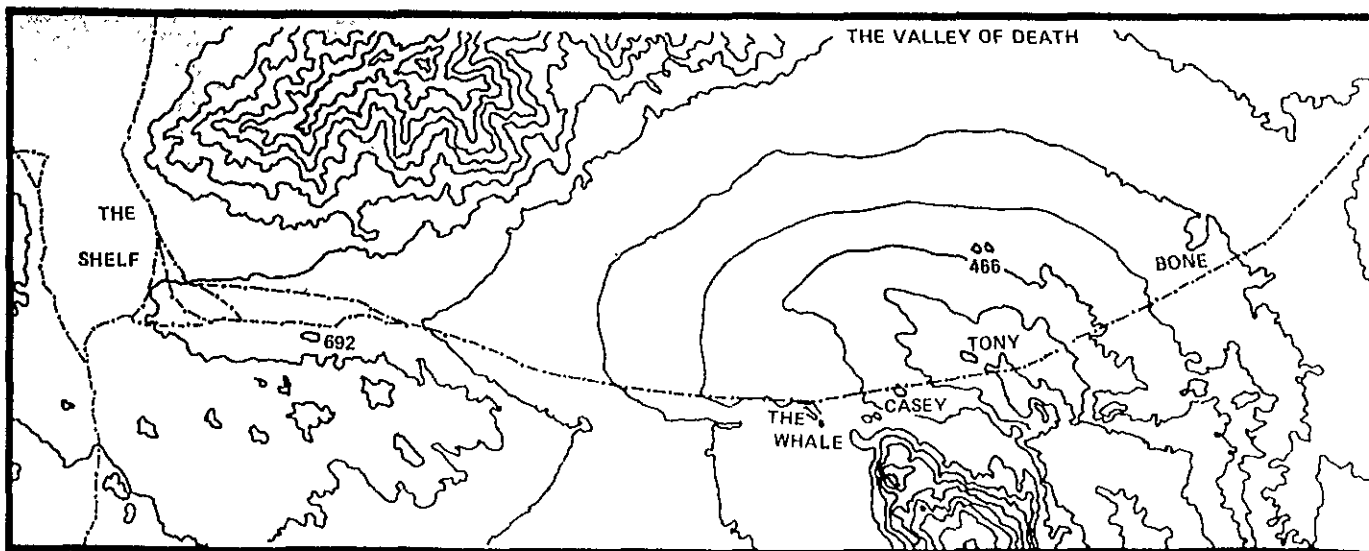
naissances, and this was a key factor in the AT platoon's getting lost and in the failure of Team Charlie to push on to Casey.

Command and control was weak at the start and finally collapsed altogether. The TOC was ineffective and, in the confusion that resulted from the control of the battle being passed from the task force commander to the S-3 to the air battle commander and back to the task force commander, vital information about Team Charlie and the AT platoon was lost.

There was no fire support of any kind. The fire support teams did not call in missions, and there was no battalion base of fire because Team Charlie did not get to Casey with the AT platoon. This error was compounded when the company commanders failed to establish company bases of fire.

The use of smoke was also faulty. The attacking companies took almost no casualties until they passed through the thin, stationary smoke screen. Then they became easy targets for the OPFOR gunners who were able to shoot without being distracted by return fire.

An alternative scheme of maneuver that could have been used is quite similar to the one the task force actually adopted. But in the alternative plan, the first step would have been to establish an OP on The Whale. From this OP the scout platoon could have



observed the objective and the surrounding area at the same time it kept the OPFOR from observing the approach of the task force.

Team Charlie should have *led* the task force instead of trailing. This would have improved command and control because the task force commander would have been on the spot to see that the base of fire was established. The occupation of Casey and the establishment of a base of fire was crucial to the success of this operation and had to be done before any further progress could be made.

The TOC should have moved just behind the maneuver force, setting up communications and leap-frogging forward to stay near the battle. This would have further improved the TF's command and control efforts and would have kept the alternate command post near the scene of the action.

The sweep to the north did succeed in bringing the task force onto the flank of the objective, but it could just as easily have brought the TF to the rear of the objective instead. In the alternative scheme, Hill 466 would have been assigned to Team Alpha as an objective. From that point Team Alpha would have served as a near base of fire to complement the far base established on Casey by Team Charlie. The OPFOR would then have been forced to fight in two directions.

Team Bravo would have continued past Hill 466 and then turned to attack the south half of Tony. This move would have put the OPFOR at a serious disadvantage: if it faced Team Bravo, it would have had Charlie in its rear and Alpha on its flank. Team Charlie's TOW fires would have been highly effective in isolating the OPFOR on the south half of Tony from their friends on the north half.

Team Bravo would have attacked the south half behind a *moving* smoke screen that would have stayed with them all the way into the objective. This would have allowed the effective use of smoke without interfering with the effective employment of the base of fire.

With the south half of Tony secured, Team Bravo would have assumed the role of near base of fire, firing on the north half from close range while Alpha launched its assault. Then, to defend against Alpha's attack from the north, the OPFOR's rear would have been exposed to Bravo's fire from the south half of Tony and its left flank to Charlie's fire from Casey.

In this scheme, the principles of suppress, isolate, and destroy would have been used to concentrate overwhelming combat power on a portion of the OPFOR.

LESSONS LEARNED

Again, several lessons can be learned from the task force's experience:

- A TF cannot conduct a deliberate attack without intelligence. If it does not have hard intelligence, it must go out and get some.

- A good reconnaissance effort can pay double in terms of denying observation to the enemy. The occupation of The Whale in this operation illustrates this point.

- Commanders and leaders cannot skimp on or ignore their personal reconnaissances.

- Commanders should routinely assume that they will be taken out of action at the most critical point and plan for that eventuality. The delegation of command should be worked out before the battle, and the designated backup commander must always be in position to take charge of the battle.

- As a unit closes with its enemy, the intensity of combat increases to the disadvantage of the attacker. An attacker can offset this disadvantage only by increasing his use of artillery fires and air support, and by establishing bases of fire.

- Each echelon — task force, company, platoon — must establish its own base of fire. Trying to sweep onto an objective with all maneuver forces but without bases of fire is to repeat the mistake the Light Brigade made in 1854. ("It is magnificent, but it is not war.")

- Multiple bases of fire that subject an enemy force to fires from different directions are extremely effective because they force the enemy to fight several battles at once.

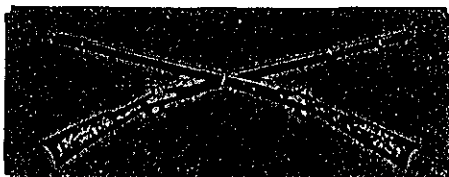
- The assignment of specific company objectives improves command and control and makes planning easier for the company commanders.

- If possible, TF objectives should be taken in sequence with the aim being first to isolate the objective under attack and then to concentrate the TF's full combat power on it.

- Smoke is effective only if it keeps up with the maneuvering elements. But the smoke must not screen the OPFOR from the TF's base of fire.

Units that learn these lessons and apply them to their training at the NTC will stand a better chance of winning against the OPFOR.

MAJOR VERNON W. HUMPHREY is assigned to the U.S. Army Training Board at Fort Eustis, Virginia. Commissioned through OCS in 1963, he commanded two companies in Vietnam. He holds two graduate degrees from Georgia State University and has had several articles published in various military journals.



ENLISTED CAREER NOTES



OFFICIAL PHOTOGRAPHS

As of 2 April 1984, official photographs are no longer a part of the microfiche official military personnel files for enlisted personnel.

Official photographs for enlisted personnel are still required, however, and they should be forwarded to the local MILPO for subsequent forwarding to Fort Benjamin Harrison, Indiana. Two prints are now required instead of one. Fort Harrison will forward one print to the soldier's branch at MILPERCEN for inclusion in his career management individual file. The official photograph in its hard copy form then will be used by career managers and centralized selection boards.

In view of the decision to stop putting photos on microfiche for enlisted personnel, it is vital that each soldier strictly adhere to AR 640-30, paragraph 7, in submitting his official photo.

EXCEPTIONAL FAMILY MEMBERS

Enrollment procedures for the Exceptional Family Member Program (EFMP) changed effective 1 March 1984. Service members who want to enroll in the program should contact their servicing medical treatment facility. Soldiers may request evaluations, or they may be referred to the medical facility by the local Military Personnel Office (MILPO) as a part of their standard outprocessing procedures.

Under the revised plan, the Army Medical Department will identify and code the special educational and health needs of exceptional family members. Special coding teams at specifically designated Army medical centers will consider enrollment

requests. The servicing center will report the service member's enrollment and appropriate codes to MILPERCEN. MILPERCEN will use the information to help in assigning soldiers with family members who have special needs.

Every attempt will be made to assign these service members to locations where there are appropriate support facilities to meet their families' specific needs. Service members will be given copies of their enrollments and will be advised of completion of the coding process by the medical treatment facility where they enrolled.

Because these new procedures significantly change the program, soldiers may experience some initial delays at their servicing medical facilities. Priority will be given to service members who already have overseas orders or are expecting to get them. Soldiers who enroll in the EFMP after they have received official assignment instructions need to be aware that their enrollments may not affect their upcoming assignments.

PROMOTION BOARD PROCEDURES

Promotion selection boards play a vital role in the lives of all soldiers, but the selection process remains a mystery to most of them. With a better understanding of how selections are made, a soldier may be able to see what he can do to improve his chances for promotion.

Selections for promotions to the ranks of SFC/PSG through SGM/CSM are made through the Department of the Army Centralized Selection Board process. This system relies completely on information from the soldier's Official Military Personnel File (OMPF) and his Per-

sonnel Qualification Record (DA Form 2A and 2-1), also known as the PQR. A soldier must therefore review his file periodically to make sure these items are up to date and accurate.

Enlisted selection boards are convened by Headquarters, Department of the Army and held at the U.S. Army Enlisted Records and Evaluation Center (EREC) at Fort Benjamin Harrison, Indiana. Before a board meets, EREC must take several steps to prepare for it.

About four months before a selection board is to convene, the Department of the Army announces primary and secondary zones of consideration for soldiers eligible for promotion. These zones include date of rank, basic service date, and any special requirements necessary for eligibility. When EREC receives the message announcing the zones of consideration, preparations for the upcoming selection board begin.

From the Enlisted Master File (EMF), EREC produces an initial computer list of names of eligible soldiers. This computer list is checked for accuracy against several other sources: the OMPF, the Joint Uniform Military Pay System (JUMPS) files, the list of deserters provided by the U.S. Army Deserter Information Point at EREC, the separation records that EREC maintains, and the Board Edit File, which contains the names of soldiers already selected by previous boards for promotion or schooling.

EREC also checks soldiers' files to determine if any official photos or Senior Enlisted Evaluation Reports are missing. Messages are then sent to all major commands (MACOMs) and Military Personnel Offices (MILPOs). These messages list the soldiers in each command who are eligible for promotion consideration and request PQRs, EERs, or official

photos for files that are not up to date.

Two months before the board meets, EREC again checks the list of eligible soldiers against the JUMPS, deserter, and separated soldiers files. MACOMs and MILPOs receive two more messages reminding them to submit missing PQRs, EERs, photos, and height and weight data.

The final deadline for documentation from all agencies to reach EREC is normally 10 days before the board is to convene. Up to the day before the board convenes, any documents received before the last cutoff date are added to the soldier's file in hard copy form. After this cutoff date, EREC will process anything it receives from the field but will not place it in the soldier's file for review by the board.

Five days before the board meets, the EREC commander and division chiefs screen about 400 records, selected at random, to determine any problem areas and to verify the general condition of the files.

A typical selection board is presided over by a major general, with nine brigadier generals as panel chiefs. Each panel concentrates on one career management field (or more) and consists of three members in addition to the general officer chief — a colonel, a lieutenant colonel, and a senior noncommissioned officer.

If a panel will be reviewing and voting on an unusually large number of records, it may have more than three members. Each panel also has a nonvoting NCO as panel recorder.

When the board members arrive, they are briefed on the requirements and duties of the selection board, and they familiarize themselves with the selection procedures and conduct practice votes.

Within the large board room, heavy partitions separate the panels from each other. Panel members are seated together, and each has a work table with a microfiche reader to use in reviewing the soldiers' records.

Entry into the board's work area is restricted to all but board members and selected EREC staff. Board members generally wear civilian clothes during the proceedings. Thus, they

can perform their deliberations anonymously and maintain the necessary security.

During board deliberations, each soldier competes with all other soldiers in his zone of consideration by primary and progression MOS only.

The board reviews three items from each soldier's file: the performance portion (P-fiche) of the OMPF, the PQR, and all hard copy documents not on the OMPF. The first item a panel member sees is normally the hard copy official military photo of the NCO being considered. The soldier's appearance in the photo gives them a very important first impression of him. If the soldier in that photo looks sloppy or overweight, or if he is wearing unauthorized awards or decorations, his chances for selection are reduced. A missing or outdated photo can give the impression that the soldier is trying to hide something or that he simply doesn't care.

At this point, board members generally take a quick look at the History Data Report, which gives the NCO's EER scores during the previous 60 rated months. (This report shows such trends as consistently high or low EER scores and improved or erratic scores.) Then the board evaluates the PQR (DA Forms 2A and 2-1). (Form 2A is a computer printout that repeats some of the information found on the 2-1, but in a condensed format.)

Both forms are examined closely for any discrepancies in the items shown on the Form 2A, which include the soldier's present duty assignment, education, date of photograph, and physical profile. The board member also checks to see whether the soldier has signed the last page of the Form 2-1, verifying that he has reviewed the information, and that he has entered his correct height and weight.

Now the board member returns to the P-fiche of the OMPF, paying careful attention to the narrative sections of the EER. Although the numerical scores give a general picture of the NCO's performance, written comments from his rater and indorser tell the story of how he performs his duties. Most important are the Duty Description (Part II) and the

VOTING/SCORING SYSTEM

Score	Sample Description
1	Substandard soldier, recommend for Qualitative Management Program (QMP)
2	Poor to fair, retain in service
3	Good soldier, weak prospect
4	Excellent soldier, moderate prospect
5	Superior soldier, strong prospect
6	Outstanding soldier, definite select

Evaluation of Potential (Part IV) blocks.

Based on the three items reviewed (P-fiche, PQR, and hard copy documents), each board member votes on the soldier's record, using a number from 1 to 6. The numerical scoring system and the importance of each is shown in the accompanying chart.

A "+" or a "-" is sometimes added to these scores to give further weight to a vote. Each member writes the number of points he awards a soldier's record on a score card; the other two voting panel members do not see that score until they have voted.

Once the vote on the record is made, the panel recorder checks the scores. If there is a variance of two or more points among the three voting panel members, the record goes back to each for another review. The third voting member may have found something the other two overlooked, or vice versa. Records are rotated among the panel members so that a voting pattern will not be established by having the same members vote on the same records.

Based on the scores given by the voting members, an order of merit list is compiled of all the soldiers who have been considered. Soldiers who receive the highest scores are generally "best qualified" for promotion.

The selection board also recommends for promotion "outstandingly qualified" soldiers from the secondary zone and determines which soldiers should enter the Qualitative Management Program (QMP). The QMP screens soldiers whose overall records merit a bar to reenlistment.

After the board adjourns, the list of NCOs recommended for promotion is

again compared against JUMPS, deserter, and separation files. This procedure takes about two weeks. During this time, the board recorder verifies the final results of the selection board, prepares lists of the individual soldiers selected or not selected, and compares them against the order of merit list. When this action is complete, the final standings are forwarded to MILPERCEN. EREC then adds to the Board Edit Files the names of the NCOs who have been selected for promotion or schooling.

Before a selection board convenes, the Office of the Deputy Chief of Staff for Personnel determines the number of soldiers to be promoted for each MOS and each zone based on the number of soldiers in that specialty and grade compared to the number authorized Army-wide. For this reason, the number of promotions in "overage" MOSs is generally lower than that for "shortage" ones.

In the past, promotions were based on overall shortages in a career management field, but this method had its drawbacks since even a shortage field will have overage MOSs in it. Promotion by this method meant that soldiers in overage specialties were promoted as easily as those in shortage ones. This created an even greater disparity in the overage MOSs. Overstrength MOSs now receive the minimum number of promotion recommendations.

Restrictions are imposed on the promotion of soldiers in an overage MOS. Under these restrictions, selection boards can recommend for promotion only those soldiers who are "the best of the best." Soldiers do have other options to consider. Currently, for example, the selection boards screen the records of soldiers in overstrength MOSs with the intention of promoting them in other MOSs.

Reclassification is not involuntary, however. An NCO selected for reclassification can decline the promotion and try to get selected in his primary MOS the following year. NCOs are not selected for or reclassified into MOSs for which they are not qualified. The selection board

must check the records against MOS prerequisites and training to ensure that both are met. When a soldier is considered for promotion in a secondary or other MOS, his experience in that skill is judged to determine whether he is qualified.

Because the Army seeks to increase the quality and professionalism of its soldiers, the competition for promotion is tougher than ever before. Soldiers owe it to themselves to see that their records are as accurate and up to date as possible. The rest is up to selection board members.

EIGHT-YEAR OBLIGATION

Soldiers who reenlist after 1 June 1984 incur an eight-year military obligation, a two-year increase that is expected to strengthen the Individual Ready Reserve (IRR) eventually.

The new policy increases the time soldiers remain "on call" with the IRR after they leave active-duty or Reserve units. IRR rosters provide the Nation's primary source of additional trained personnel available during emergency mobilization.

The new obligation is not retroactive and does not lengthen the IRR time for any service member who enlisted before 1 June 1984.

DRILL SERGEANT COURSE

The Drill Sergeant Course was recently restructured, and one of the main changes was that drill sergeants will now train and teach within their respective branches. In other words, in one-station unit training (OSUT), Infantry sergeants will train Infantrymen, Artillery sergeants will train Artillerymen, and Armor sergeants will train tankers.

The main points of the restructuring are:

- Fifty percent of the drill sergeants assigned to basic training companies will be from Infantry MOSs; 20 percent will come from other combat arms MOSs; 30 percent will come from combat support or combat service support MOSs.

- At installations that conduct basic training for women, each basic training company will be authorized two female drill sergeants.

- In advanced individual training companies, 70 percent of the drill sergeants will be from the MOS series being taught. The remaining 30 percent will be from the combat arms MOSs.

- In OSUT companies or batteries, 85 percent of the drill sergeants will be from the combat MOSs being taught. The other 15 percent will be from combat support or combat service support MOSs.

IRR REFRESHER

The Individual Ready Reserve (IRR) is being updated. The program, called Skill Level 1 Refresher Training, is designed to refresh a soldier in the critical combat task proficiency and survival skills for IRR soldiers in the ranks of PV1 through SP4. This group makes up 84 percent of the enlisted IRR force.

A 14-day pilot course has been conducted, and this Skill Level 1 training will be expanded this year. Starting in September, the 91st and 104th Divisions (USAR), will train 150 infantrymen each at Fort Ord, California, and Fort Lewis, Washington. The 100th Division will train 200 Armor soldiers at Fort Knox, Kentucky.

In fiscal year 1985, the program is projected to expand further with refresher training planned for MOSs 11B, 12B, 13B, 19D, 19E, 63B, 64C, and 95B, involving 1,000 Reservists.



OFFICERS CAREER NOTES



BRANCH CHIEF'S NOTES

After a year as Branch Chief, I would like to offer, before leaving, some of my perceptions concerning the way day-to-day business is conducted at "Mother MILPERCEN" and the attitude that prevails in Infantry Branch.

As most of you know, Infantry Branch is responsible for identifying, selecting, and assigning more than 12,000 officers, second lieutenants through lieutenant colonels, in accordance with Army priorities. Inherent in the assignment process is the assignment officers' responsibility for monitoring the professional growth of each officer and for maintaining the proper balance among requirements, priorities, professional development, and personal preferences. I am truly impressed with the way the assignment officers here have demonstrated that they are equally concerned with both.

Infantry Branch is a busy place. On a typical day 12 assignment officers answer more than 500 phone calls, conduct 15 interviews, put 25 officers on orders, process an additional 100 personnel actions, and respond to 30 pieces of mail. And amid all this, they manage Infantry officers not by grade and specialty but as people and tested professionals (although from the field it may not appear that they do).

To the many installation and divisional AGs, G-1s, and assignment officers at all levels, I also say thanks for your understanding, loyalty, and support. I know that at times it appears that Army priorities are contrary to unit needs and requirements, but I can assure all of you that Infantry Branch exists to serve the Army in the field. It makes every effort to support local commanders: More than 90

percent of all requests from the field are favorably considered.

To Infantry officers throughout the world, I encourage you to keep in touch with Infantry Branch. But please be sensitive to the timeliness of your calls and letters. A large number of calls are made too far in advance for assignment officers to provide a definitive answer, and vague or generalized responses to your requests do not help.

Remember that before assignments can be completed, assignment officers must have a valid requirement. Stateside requirements are not available until five months before the projected reporting date, while overseas requirements are available nine months before. Calls or letters concerning assignments before those availability dates simply cannot be answered.

I leave Infantry Branch, proud of its dedication and commitment to the Infantry. The work of the Branch's professional civilians and officers often goes unnoticed and seldom receives the recognition it deserves.

There is no doubt in my mind that the Infantry is well represented and supported by our MILPERCEN team. There is a "P" in personnel, and the "P" is for people — people *are* important, things are not.

LTC BRYAN A. SUTHERLAND

RA INTEGRATION

Officers who have between two and eight years of active federal commissioned service may apply for integration into the Regular Army. A selection board is held once a year, in the spring, to select qualified officers for integration.

Individual officers who want RA

appointments should apply in accordance with AR 601-100. Applications should arrive no later than 31 January each year. Although they are not required, strong recommendations by members of an officer's chain of command improve his chances for selection. Applicants are notified by letter as to the board's results.

ASSIGNMENT PROCESS

One of the questions most frequently asked an assignment officer is just what, specifically, is the classification of a particular assignment. It's easy to understand the confusion over this subject in light of the terms used by assignment officers at Infantry Branch and by personnel managers in the field.

First, there are only four basic classifications of assignment: IN-SPEC (initial specialty) with troops, INSPEC without troops, ADSPEC (additional specialty) with troops, and ADSPEC without troops.

To define those terms — an officer's INSPEC is his initial specialty, which for Infantry officers is 11. An ADSPEC is his designated additional specialty, normally designated during his eighth year of service.

Thus, it can be said that all his assignments will be either in his IN-SPEC or his ADSPEC — except, of course, that there are variations that make a specialty designation immaterial to a particular assignment (U.S. Military Academy instructor, Assistant Professor of Military Science, for example). Infantry officers have a large number of these branch immaterial requirements to meet in such commands as USAREC and ROTC.

An officer may also be assigned a

job in a third specialty because he has better qualifications for a mission-essential duty than anyone else available. As a rule, however, assignment officers try to limit those instances, keeping assignments within an officer's designated specialties as much as possible.

Most infantry officers want to serve with soldiers in Infantry units all the time and, while there are some who do not, most aspire to battalion command and its subsequent challenges. Because of this, many officers view any assignment away from troops as detrimental to their career progression, but as something they must do as part of "paying their dues." The facts are that repetitive assignments to Infantry units are the exception rather than the rule.

In this regard, it is important to understand the assignment officer's role in the system. First of all, he meets Army requirements, as established in MTOEs and TDAs; he does not create them. Secondly, he fills requirements that are established in the priority designated on the DA Master Priority List and other appropriate documents that he receives in the form of valid requisitions against the Officer Distribution Plan (ODP). The ODP is established independently of assignment officers, and it allocates resources against requirements. As a result, there is likely to be a shortage of captains or majors in the units at a particular installation, according to the MTOE. Many officers, knowing of this shortage, call to request assignment to one of those units. But if the assignment officer has no valid requirement to fill, he can't make that assignment.

One of the unpleasant facts we have to deal with is that Infantry officers in the rank of major have little more than a 20 percent chance of serv-

ing at battalion or brigade level. There are 190 such positions and more than 2,100 Infantry majors. For captains, there are 2,500 positions coded as 11 (many without troops) and nearly 4,500 officers to be assigned.

This means that most Infantry officers won't be battalion S-3s or XO's, or brigade staff officers either. And Infantry Branch has little control over who gets to fill those positions, because assignment officers, in the vast majority of cases, make assignments to installations or major commands, not to pinpoint assignments below that level. Their strategy is to send officers in either their INSPEC or ADSPEC to those installations where there are troop units and to leave it to the commanders and the chains of command to determine what job they get.

As can be plainly seen from the numbers shown above, most Infantry officers will spend a great deal of time away from troops, with half or more of their assignments in their ADSPECs. The Army is structured in such a way that most company grade assignments are INSPEC jobs, while most field grade assignments are ADSPEC.

Another serious point of confusion is the term "nominative assignment." In the past that term has been used almost synonymously with duties in the Recruiting Command, ROTC, and the Reserve Components. In an eagerness to get back to troops, many have tried to equate service school instructor duty, joint service assignments, or similar assignments with these "three Rs" and have protested when told they were going to one of those assignments.

But it is time to clear up this misconception. Nominative assignments are those to which an officer must be nominated because the gaining com-

mand can refuse to accept him. Some assignments to USAREC are nominative; many are not. Many, but not all, ROTC assignments require nominations. So do some DA staff jobs and some at DA field operating agencies, NATO, SHAPE, and similar headquarters. The point is that nominative assignments are found everywhere, at all levels of responsibility, at all grades. We try not to assign anyone to repetitive nominative tours, but may have to.

But success does not lie in the job description. The way to success is — as each officer has heard many times — in the way he performs each job.

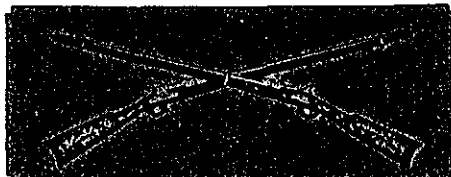
DEPENDENT PROGRAM

The Exceptional (Gifted/Talented) Program is designed to function in much the same way as the Handicapped Dependent Program. A service member may request that the Army be aware of and consider any special talent one of his dependent children may have.

The service member must include an appropriate evaluation from school or other authorities to support his request. Among acceptable documents are achievement test scores, intelligence test results, creativity tests, nominations or recommendations of teachers or schools, and documentation from experts in a given field (art, music, drama, sports).

The governing regulation is AR 614-203, and requests should be submitted to Department of the Army, USA MILPERCEN, ATTN: DAPC-OPE-P, 200 Stovall Street, Alexandria, VA 22332.

Processing time is about three days.



BOOK REVIEWS



The U.S. Superintendent of Documents recently sent us a copy of his most recent catalog of publications; it contains a number of books of interest to the military professional. He also sent us an announcement concerning a new publication: **SOVIET MILITARY POWER**, 1984, 3d Edition (S/N 008-000-00399-8, 136 Pages, \$5.00). This publication compares the latest Soviet strength with that of the United States and also provides a detailed report on the structure of the Soviet military organization.

The catalog, Number Y-4, lists such interesting publications as **LEADERSHIP IN ORGANIZATIONS** (S/N 008-027-00002-1, 1983, 718 Pages, \$27.00); **SOVIET ARMY OPERATIONS** (S/N 008-020-00945-8, 1983, 352 Pages, \$8.00); **THE UNITED STATES ARMY IN VIETNAM — ADVICE AND SUPPORT: THE EARLY YEARS, 1941-1960** (Paperbound Edition, S/N 008-020-00933-9, 1983, 391 Pages, \$11.00); **1983 WEAPON SYSTEMS** (S/N 008-020-00934-2, 1983, 133 Pages, \$6.50); **CROSS CHANNEL ATTACK** (S/N 008-029-00020-2, 1951, reprinted 1977, 519 Pages, \$29.00); and **BREAKOUT AND PURSUIT** (S/N 008-029-00021-2, 1961, 748 Pages, \$26.50).

All orders to the Superintendent of Documents should be accompanied by payment in the form of check or money order made payable to the Superintendent of Documents. Payment may also be made by VISA or MasterCard, with the expiration date of the card noted.

We have also received a number of fine reference publications, the most important and useful being:

• **WORLD ARMY BADGES AND INSIGNIA SINCE 1939**. Omnibus Edition. By Guido Rosignoli (Ster-

ling, 1984. 218 Pages. \$16.95). This book combines two previously published books (**ARMY BADGES OF WORLD WAR 2** and **ARMY BADGES SINCE 1945**) into one volume. Nearly 4,000 badges and insignia from the armies of Great Britain, the United States, the Soviet Union, Germany (the Third Reich and the modern German Federal and Democratic Republics), Poland, Italy, and Belgium are shown.

• **JANE'S MAIN BATTLE TANKS**. By Christopher F. Foss (Jane's, 1983. 205 Pages. \$18.95). Although the material in this volume is based on the publisher's larger and more detailed volume — **JANE'S ARMOUR AND ARTILLERY, 1982-83** — it has been updated where necessary. The book contains the developmental histories of each main battle tank (MBT) in service throughout the world, complete lists of variants, and details on some of the new MBT designs that may enter service in the late 1980s or early 1990s. It has several hundred photographs and line drawings, a glossary of abbreviations, and a useful index.

• **WHEELED ARMoured FIGHTING VEHICLES IN SERVICE**. By B. T. White (Sterling, 1983. 128 Pages. \$16.95). This book makes an excellent companion for the one on main battle tanks, because wheeled armored fighting vehicles are becoming quite popular in many of the world's armies and their total numbers are steadily increasing. The author gives detailed accounts of more than 50 such vehicles and their variants in use today. His text is nicely supplemented with full color and black-and-white photographs and numerous line drawings.

• **WORLD ARMIES**. Second Edition. Edited by John Keegan (Gale,

1983. 688 Pages. \$80.00). As the first edition did when it was published in 1979, this second edition of an outstanding reference series provides country-by-country surveys of armies and military establishments. Each survey contains such information as equipment and its procurement, budgets, paramilitary forces, and recent military operations. Each was prepared by an area specialist, many of whom are at the Royal Military Academy, Sandhurst. Keegan himself did the U.S. survey, and he treats us most kindly.

• **ROYAL UNITED SERVICES INSTITUTE AND BRASSEY'S DEFENCE YEARBOOK, 1984**. Edited by the Staff of the Institute (Pergamon, 1984. 405 Pages. \$50.00). This is the 94th edition of one of the world's most popular military yearbooks. It contains a number of essays that should interest most Infantrymen — Lance Davidson's "The Impact of Precision-Guided Munitions on War"; Neville Cross's "Trends in Land Warfare: Air Defence in the Field"; J. R. Walker's "The Future of Land/Air Warfare"; and John Laffin's "The Middle East: Old Game — With New Rules." Too, Richard Tubb's "Defence Literature of the Year" is a most useful compilation of recent published titles in the field of defense studies.

• **HANDBOOK ON WEAPONRY**. Second English Edition. General Director: Dr. R. Germershausen (Rheinmetall GmbH, 1982. 752 Pages. \$19.95, Softbound). This book, a translation of the fifth German edition of 1980, discusses the major aspects of armament technology: explosives, ballistics, targets and guide lines; the application of probability theory; and automatic weapons, guns, munitions, and missiles. It is particularly important for the weapons technician, but it

can serve as a most useful information source for all Infantrymen. It contains numerous tables and illustrations.

• **JANE'S 1983-84 MILITARY REVIEW.** Edited by Ian V. Hogg. Third Year of Issue (Jane's, 1983. 173 Pages). While there are some similarities between this and the Brassey's yearbook mentioned above, the general tone is different and the concentration is more on the tools of war. In this volume, for example, there are separate essays on land mines, military pistols, helicopters, remotely piloted vehicles, light anti-aircraft defense weapons, and electronic warfare. Each essay has been written by someone who knows his subject.

• **COUNTRIES OF THE WORLD AND THEIR LEADERS YEARBOOK, 1984.** (Gale, 1984. 2 Volumes, 1,524 Pages. \$80.00/set.) Like its predecessors, this two-volume set offers a good deal of information about today's world in addition to the 168 individual country sections prepared by the U.S. State Department. For example, there is in this set such information as U.S. embassies and consulates and their personnel; the climates of the world; the chiefs of state and cabinet members of foreign governments; and the State Department's "International Treaty Organizations" series.

• **A DICTIONARY OF SOLDIER TALK.** By Colonel John R. Elting, *et. al.* (Scribner's, 1984. 416 Pages. \$35.00). This book, put together by three long-serving but now retired soldiers, includes definitions of more than 3,000 words and phrases that have been common in American soldiers' speech at some time from the Revolution to the Vietnam War. (An appendix of terms unique to the U.S. Navy and Marine Corps is also included.) The entries range from the technical to the obscene ("shrapnel" and "drop your laundry") and tells of each term's origin, period of use, definition, and, in some cases, etymologies and examples of use. Infantrymen everywhere should really appreciate this one.

• **THE WARS IN VIETNAM, CAMBODIA AND LAOS, 1945-1982: A BIBLIOGRAPHIC GUIDE.** By Richard Dean Burns and Milton Leitenberg (ABC-CLIO, 1983. 290 Pages. \$58.50). This book is a comprehensive guide to the literature surrounding U.S. involvement in the Indochina wars — the Vietnamese effort to expel the French, 1946-1954; the civil war between North and South Vietnam, with the United States intervening, 1961-1975; and the Vietnamese invasion of Cambodia and the Communist Chinese counterattack, 1977-1982: The citations are divided into nine chapters, and each chapter is divided by topic. The works deemed most important to the topic under discussion are emphasized by commentaries. The book also has a general chronology, a glossary of terms, an author index, maps, and tables.

MILITARY LEADERSHIP: IN PURSUIT OF EXCELLENCE. By Robert L. Taylor and William E. Rosenbach (Westview Press, 1984. \$25.00). Reviewed by George G. Eddy, University of Texas, Austin.

As Custer wondered where all those Indians were coming from, we also might wonder where all the books such as this one keep coming from, and, perhaps more important, why they keep coming. This book purports to represent a pursuit of excellence. The authors, both U.S. Air Force officers, may be in hot pursuit of excellence, but they have yet to find it. Their book is old hat, with nothing new to be found in it. All the pieces have been published elsewhere.

Divided into four parts with selections from 22 authors, the book opens with the pretentious assertion that "never before has a text addressed the specific concerns of military leadership." But two of the included articles are, in fact, from just such a book, **MILITARY LEADERSHIP**, which was published in 1981.

It is all downhill from this point as far as breaking new ground is con-

cerned. True, some of the pieces are interesting, such as Stokesbury's "Leadership as an Art" and S.L.A. Marshall's "Leaders and Leadership." But we have read them before exactly as printed. And despite pulling nearly all of their material from the past, the authors neglect to mention the encyclopedic **STOGDILL'S HANDBOOK OF LEADERSHIP**, which was also published in 1981.

The most significant observation about this book is readily derived from one of the articles in it. Consider these perceptively pungent and ironic remarks by Admiral James Stockdale in his article called "Educating Leaders": "The social sciences have not yet outgrown an ideology of relativism, an egalitarianism of ideas, a culture-centered positivism, allegedly scientific, that most philosophers have long since called into question." (Translation: claptrap from the social sciences.)

Stockdale, of course, was not referring to this book, but to the tenor of the times, of which this book proves to be a foremost illustration. The authors, as you might expect, dismiss Stockdale's charge in such great haste that they overlook their own embracement of this flawed concept.

Why did the authors, therefore, include the Stockdale piece? One might better ask: Given the publishers' fatuous claim of originality, why did they publish this book? It does not deserve a place in a military man's library.

THE GENERAL: MACARTHUR AND THE MAN CALLED "DOC." By Roger Egeberg (Hippocrene, 1983. 242 Pages. \$12.95). Reviewed by Major John H. Van Vliet III, United States Army.

The old adage says, "Don't judge a book by its cover." That's certainly good advice for anyone who picks up this book, for its flyleaf come-on and its foreword lead the reader to believe that the author, who had been General Douglas MacArthur's personal physician and aide during the last

part of World War II, would tell of "The General's" human side. Unfortunately, the book fails to live up to that happy prospect. In fact, it also fails to do much of anything else.

Doctor Egeberg joined MacArthur's staff at the beginning of 1944 and stayed with MacArthur through the end of the war. He does provide a colorfully written, chronological sequence of stories that, for the most part, centers on "The General." His writing is vivid and resembles that of well-schooled diarists of a century ago. But the stories very rarely penetrate or provide insight into the heart of the man. All the reader is left with is a number of nicely described cameos of the same General MacArthur he already knew from the newsreels and the public information photographs: MacArthur with his pipe; MacArthur, the superb speaker; MacArthur watching over his troops; MacArthur, the iron-willed and dignified commander. All are there, and all are painted with a prose that matches photographs in their exactness — and in their lack of depth.

For reasons of his own, the author chooses to keep the reader at arm's length from "The General." He has kept to himself whatever real insights he may have had into MacArthur's character and personality. Those who would know something of General MacArthur should avoid this book. There are others that do a far better job.

INSIDE THE GREEN BERETS: THE FIRST THIRTY YEARS. By Colonel Charles M. Simpson III (Presidio Press, 1983. 229 Pages. \$15.95). Reviewed by Captain Bryan Evans III, United States Army.

There are not many factual accounts of the United States Army Special Forces (USASF), primarily because much of the material pertaining to that particular group of soldiers is still classified. Unfortunately, this lack of reliable printed information has created a rather wide gap of information between the many sensa-

tional and misinformed fictional publications that have appeared in recent years and the few dry official historical accounts that have been published.

This book bridges that gap nicely. The author spent nine of his thirty years of active service in the Army with the Special Forces — with the 10th Special Forces Group when it was first organized, and then with the 5th Special Forces Group as its deputy commander and its commander. (He does admit that his knowledge of today's Special Forces is somewhat deficient when it comes to current operational concepts.)

Colonel Simpson traces the development of USASF back to the Office of Strategic Services (OSS) and the principle of behind-the-lines operations, for the initial development of USASF doctrine came from old OSS documents. He highlights the 10th SF Group's operations during the late 1950s and early 1960s to illustrate the need for such units at that time. Vietnam was moving to the forefront of U.S. policy, and the initial burden of carrying out that policy fell to the embryonic 1st SF Regiment.

Most of the book is devoted to the Vietnam experience, for it is there that Colonel Simpson feels the SF image became distorted. He is not uncritical of USASF actions in Vietnam, but he is not devastating in his criticism either. In fact, he confines most of his comments to the formation of the Civilian Irregular Defense Groups (CIDGs) and the mobile strike forces, quick reaction units known as "Mike forces."

Simpson feels that if the efforts towards Vietnamization had started earlier, and if the Mike force program had reached full fruition before it did, there may have been no reason to commit U.S. combat forces to the fighting in Vietnam. This point is certainly arguable.

He does a good job with his subject and feels that the USASFs still provide the country with a low-budget, low-risk, high-potential power-projection force for use in low intensity conflicts. Well thought out and

provocative, Colonel Simpson's book is must reading for the military professional.

WAR IN THE DESERT. By James Lucas (Beaufort Books, 1982. 284 Pages. \$16.95). Reviewed by Captain John C. Edgecomb, United States Army.

In this book, John Lucas presents a detailed account of the British Eighth Army's victory at El Alamein in late 1942. He does this by taking accounts from the ordinary soldier and weaving them into the bigger picture presented by regimental and divisional plans. It is not only the story of the British soldier, but also of the Australian, the South African, and the New Zealander, many of whom served in the Eighth Army during that momentous battle.

Although his intention is a good one — to put the reader in the tank, or foxhole, or in the desert heat — Lucas never really succeeds in doing that. Still, his book is an interesting one and easy to read, and it is recommended to military professionals.

THE GRAND STRATEGY OF THE SOVIET UNION. By Edward N. Luttwak (St. Martin's, 1983. 242 Pages. \$14.95). Reviewed by Captain Don Rightmyer, United States Air Force.

Observers around the world are still wondering what the recent change in the Soviet top leadership will mean for the Soviet Union, for East-West relations, and for the future. Although Edward Luttwak published his book during Yuri Andropov's time in power, he certainly believes that the reader should look for clues not to the specific holder of the General Secretaryship but to the nature and history of the USSR itself.

Throughout the book, Mr. Luttwak focuses on both the strengths and the weaknesses of the Soviet Union in both external and internal affairs. One example is his belief that the rise of nationalism among the

Soviet Union's population can only be divisive to Soviet internal strength. He also believes that the state and nature of Soviet economics have served as a motivating force for the pursuit of military power during the recent years of U.S. military decline. In fact, U.S. reemergence as a recognized power has been very disconcerting to the Kremlin's leaders.

The author sees an improvement in one of the main Soviet tools — military power — over recent years. He believes that, in addition to the obvious increases in numerical strength, the Soviet officer corps has improved in quality and has experienced a positive change in attitude, evidenced particularly by the campaign in Afghanistan.

What of Soviet adventurism in the future? Luttwak believes that the potential exists for Soviet imperialistic actions, but that they are not inevitable. He believes that the main instigation for such behavior would not be opportunities for expansion but perceived threats to Soviet security. He ends by stating that one strong deterrent against expansionist efforts is the fear that the Soviet Union might be reduced to its natural level, which would be far less than the USSR's current world status.

Luttwak is a noted authority, and this book certainly adds to his reputation for insightful, thought-provoking consideration of Soviet and strategic matters.

THE ROAD TO BERLIN: CONTINUING THE HISTORY OF STALIN'S WAR WITH GERMANY. By John Erickson (Westview Press, 1983. 877 Pages. \$42.50). Reviewed by Alexander S. Birkos, Mount Shasta, California.

The author of this work needs no introduction to those with an interest in Soviet affairs and history. Erickson, now Director of Defense Studies at the University of Edinburgh, is the author of two previously published books (*The Soviet High Command, 1918-1941* and *The Road to Stalingrad*) that may be viewed as "pre-

quels" to the current work. These three volumes, along with Albert Seaton's *The Russo-German War, 1941-45*, have contributed greatly in illuminating the broad course of military operations on the Eastern Front during World War II.

In fact, anyone who intends to undertake a serious study of the Soviet-German war would do well to read these four books. And anyone who undertakes to write a book about that conflict should note Erickson's remarks about historical sources and extant Soviet literature that appear in the second part of his current book. His comments about the qualitative value of the various sources will help any writer to avoid historiographical pitfalls.

This book is largely a descriptive and a survey history. It opens on the eve of the Soviet counteroffensive at Stalingrad in 1942 and ends with the Red Army's entry into Berlin and Prague in 1945. Erickson describes virtually every battle in prodigious detail. His focus is almost exclusively on ground operations; the air operations receive less attention, and his coverage of naval operations is almost nil.

Of almost equal focus, but most fascinating, are the political-diplomatic aspects of the war as seen in Stalin's dealings and maneuverings with Churchill and Roosevelt. From 1943 on, the Soviet leader was quick to grasp the political implications and opportunities that opened up to him as a result of the Red Army's victories.

Erickson contends that there can be little doubt that the Soviet war against Germany was largely Stalin's war. His control over all aspects of the Soviet war effort and operational planning was total. Stalin did intrude into military matters much as Hitler did, but at least after 1942 he had the good sense to heed the advice of the military professionals much more carefully than did his counterpart across the way.

Despite Erickson's high standard of research and his undeniable reputation as a scholar, this is not an easy

book to read or to digest. The reader is faced with a massive amount of text, and the lack of an adequate number of maps — there are 16 all told — makes it difficult to follow the details of the battles. Charts and statistical tables, too, may have helped the reader to analyze the disposition and strength of the opposing forces and to keep track of the order of battle. As it is, the reader will have to keep an atlas close at hand.

But this book, despite its flaws, is worthy of study by the military professional. It can hardly be bested for its breadth as a descriptive survey.

RECENT AND RECOMMENDED

SIGNIFICA. By Irving Wallace, et. al. E.P. Dutton, 1983. 374 Pages. \$15.95.

WEAPONS OF WAR. By Christy Campbell. Peter Bedrick Books, 1983. 304 Pages. \$19.95.

THE WAR AGAINST HITLER: MILITARY STRATEGY IN THE WEST. Edited by Albert A. Nofi. Hippocrene Books, 1982. 273 Pages. \$22.50.

BIRD: THE CHRISTMASTIDE BATTLE. By S.L.A. Marshall. A Reprint. The Battery Press, 1983. 206 Pages. \$16.95.

THE 6th INFANTRY DIVISION IN WORLD WAR II, 1939-1945. Prepared by the Division Public Relations Section in 1947. A Reprint. The Battery Press, 1983. 180 Pages. \$26.50.

INTREPID'S LAST CASE. By William Stevenson, 1983. 321 Pages. \$16.95

THE OTHER WESTERN EUROPE: A POLITICAL ANALYSIS OF THE SMALLER DEMOCRACIES. Second Edition. By Earl H. Fry, et. al. ABC-CLIO, 1983. 288 Pages. \$18.00.

ON THE BRINK: DEFENSE, DEFICITS, AND WELFARE SPENDING. By James L. Clayton. National Strategy Information Center, 1984. 158 Pages. \$8.95, Softbound.

THE DICTIONARY OF HISTORIC NICKNAMES. By Carl Sifakis. Facts on File, 1984. 566 Pages. \$29.95.

U.S. INTERNATIONAL BROADCASTING AND NATIONAL SECURITY. By James L. Tyson. National Strategy Information Center, 1983. 160 Pages. \$7.95, Softbound.

THE KAMIKAZES. By Edwin P. Hoyt. Arbor House, 1983. 333 Pages. \$16.95.

DROP ZONE SICILY. By William B. Breuer. Presidio Press, 1983. 212 Pages. \$15.95.

THE GURKHAS. By Byron Farwell. Norton, 1984. 317 Pages. \$17.95.

THE GREAT WAR AT SEA. By Richard Hough. Oxford University Press, 1984. 353 Pages. \$25.00.

THE UNITED STATES CAVALRY: AN ILLUSTRATED HISTORY. By Gregory J.W. Urwin. Sterling, 1984. 192 Pages. \$17.95.

AN ILLUSTRATED GUIDE TO THE ISRAELI AIR FORCE. By Bill Gunston. ARCO Publishing, 1983. 160 Pages. \$9.95.

INFANTRY LETTERS



VIETNAM EXHIBIT AT INFANTRY MUSEUM

I was saddened to read in your "letters" section (March-April 1984, page 51) that one of your contributors was "saddened by the absence of a Vietnam section in the Infantry Museum."

The museum has had on display, since the opening of its new building in July 1977, an extensive collection of Vietnam War period weapons, uniforms, equipment, maps, rations, and personal memorabilia. This exhibit, in the Hall of Infantry on the second floor, stands proudly among others honoring U.S. Infantrymen from all the wars and U.S. Army military actions in which Infantrymen have defended the Nation, to include — as of March 1984 — Grenada.

Our Vietnam collection includes a large photo mural of 11th Air Assault Infantrymen training at Fort Benning during the early 1960s as well as a wide range of U.S. weapons used during the war.

Additionally, on the Museum's third floor in the Foreign Gallery, which opened 1 July 1983, we have several display cases of uniforms, weapons, and other equipment used by the enemy against U.S. Infantry. This interesting collection of equipment of the Viet Cong, North Vietnam, and other communist nations includes a Ho Chi Minh bicycle captured in 1970. The bicycle is displayed showing the heavy load of supplies these "people's porters" could deliver.

In addition to these two major exhibits we also have Vietnam-related exhibits in our Medal of Honor room, Gallery of Military Art, special military music exhibit, Commander in Chief exhibit, and Bond Lounge.

We recognize that our displays do

not speak to individual unit actions or campaigns. Order of Battle information, while available in our library, simply cannot be exhibited because of lack of space. Within the next year, the museum will open a room devoted to heraldic items such as flags, shoulder patches, crests, badges, and medals. This room, we hope, will fill the need for people to see something of their own units at the National Infantry Museum.

Meanwhile, we are eager to increase our collection of Vietnam era artifacts and hope that your readers will contact the museum with offers to donate unique items.

DICK D. GRUBE
Director
National Infantry Museum

LIGHT DIVISION

I have noted with much interest the Commandant's Note in your January-February 1984 issue on the new Infantry Division (Light).

There are some disturbing factors in this new-found "return-to-the-basics" movement. I don't really know much about the new division but won't let my ignorance prevent me from sharing some random thoughts — realizing that the good officers and men at the Home of the Infantry have probably already worked out the answers to these and numerous other items.

The real problem is not how "heavy" or "light" our divisions are. It is a lack of strategic airlift/sealift. Our good friends in the Navy and Air Force favor spending their dollars for power projection, antisubmarine warfare, strategic delivery systems, air defense, counter-air aircraft, space weapons, and such. Airlift/

sealift programs — programs that spend dollars to get the Army somewhere — are not high priority programs. Therefore, it seems that if one cannot get to the scene early with "heavy" forces, one must come up with a new concept — the "light" division.

The concept of this division has merit but it also has serious drawbacks. If the traditional mission of the Infantry to "close with the enemy and destroy him by fire and maneuver" is still valid (and I, for one, think it is), then what is it we want the light division to be able to do? And under what circumstances? It's all very well to have a fire brigade mentality and get the force there early, but what do we do next?

We may be structuring a division that has, at best, limited combat power and very limited staying power. Of course, the ready answer is to reinforce it with heavy elements and, *voila*, we are coming full circle again, especially if the reinforcing elements are less mobile than the division, and chances are that will be the case.

Part of the problem appears to be jumbled thinking between *strategic* mobility and *tactical* mobility. The light division has quite a lot of the first, and that's fine for *getting* the division somewhere. But it doesn't have much of the second, and that has large implications for its combat effectiveness. Of course, tactical mobility is not the *sine qua non*, because by itself it seldom wins the battle. But somewhere there is a balance between the strategic mobility of the light division and the combat capabilities of our heavy divisions.

Moreover, because it lacks the tactical mobility and the massive firepower of a heavy division, the light division stands a good chance of be-

ing driven to ground in numerous scenarios. Does this suggest then that the strength of the light division should be, by design, in its defensive capability? If so, then are we willing to give up the decisiveness of the offense? Of course, there are a number of good defense or economy of force missions for light divisions, but this is something our Army leadership should conscientiously wrestle with.

Against whom would this division be employed? Preferably against other "light" forces, right? Well, even most third-rate nations nowadays have *very* substantial forces. Do we intend to pit this new light division against such folks as Libya, Syria, Iraq, and Iran? Presumably not, but if one looks at global hot spots, one will be hard pressed to find many "light" forces in those Third World hot spots.

This, then, leads to the possibility that light divisions could be committed early in situations in which they would very likely be seriously outgunned and outmaneuvered. They would then assume the role of sacrificial lamb, which is scant comfort to the members of the unit. I suppose the Hobson's Choice of getting there early and light versus getting there late and heavy is indeed not a choice. Sometimes it may be better not to get there at all under those conditions.

Having written all this criticism, I'd better hasten to say that Infantry is still needed and still decisive. Many countries have used Infantry forces well (and by extension, light divisions), but I would suggest that most of them did so using interior lines of communication (such as in Vietnam or China) or were willing to accept a long, costly, and less decisive form of warfare. (The Italian Campaign in World War II comes quickly to mind.)

If an army can afford the luxury, light divisions are fine to have in its force structure. For instance, if it has 130 active divisions, it might want to have half a dozen light divisions. But if it has only 16 divisions as our army does, how many can it afford?

I think the consensus among force

planners is that we need more heavy divisions for employment against our main adversary and his primary client states. Unfortunately, every light division we form will be formed at the expense of one of the heavy ones, which we already need more of. Of course, if the real reason we're forming light divisions is to get away from the lack of strategic air and sea lift, or to get away from the fact that we really can't afford to (or won't) equip and support the heavy divisions we currently have, then that's another matter completely.

Finally, Napoleon was probably right about God being on the side of the larger battalion. If a commander has a choice, there are few times when he'd prefer to go "light" if he can go "heavy." I think it has something to do with the Principles of War (we don't talk much about them any more). With the heavy division's greater firepower, better maneuverability, and more sustainability in combat, why go "light"?

All this reminds me of David Lloyd George, who once said, "The most dangerous thing in the world to do is to attempt to leap a chasm in two bounds."

ROBERT G. CLARKE
COL, INFANTRY
HQ USCINCPAC

MAJOR WEAKNESSES

Recently *INFANTRY* magazine published two articles on the new light infantry division. [See Commandant's Note, January-February 1984, p. 3 and "Infantry Division (Light)," March-April 1984, p. 14.] We read both with interest. However, while there is a real role for the light infantry division in the U.S. Army, we believe that the proposed structure of the new light infantry division suffers from several major weaknesses.

First, while the division's structure will improve its strategic mobility, the light division will almost certainly lack tactical mobility. Organic mobility in the division is limited to a trans-

portation battalion and two lift companies. Together, these units can move only two battalions. Meanwhile, the other seven infantry battalions will be forced to reach their objective the same way their predecessors of antiquity, the Roman legions, did — by putting one foot in front of the other.

Second, considering the regions around the world in which there is even a slight possibility for the introduction of American ground forces, with the possible exception of Central America, all of our potential adversaries have forces that are heavier and that have greater tactical mobility than this new light division. Even in a Central American scenario, one cannot help wondering whether the division would be more effective and efficient if it had more organic helicopters to transport its troops into battle. Thick jungle and mountainous terrain, for instance, will make it difficult for the division commander to concentrate his traditional foot-slogging companies and battalions quickly.

Third, when the new division is introduced into mid- or high-intensity conflicts where the enemy has greater mobility, the division will be in *de facto* violation of several of the principles of war. For example, mobility is essential if a unit is to mass its forces quickly and also conduct economy of force operations, both of which are preludes to offensive operations. And once offensive operations are under way, mobility is deeply intertwined with maneuver. Thus, because of inadequate mobility, the division will be violating the principles of the offensive, mass, economy of force, and maneuver.

Fourth, when one examines the employment of the light division in urban and forest terrain in a mid- or high-intensity conflict, one is still struck by the division's inherent weakness due to low mobility. This low mobility prevents the division's commander from rapidly shifting his forces from one sector of his urban or forest front to another — that is, massing his forces and considering

economy of force operations.

Moreover, should the division's FEBA (forward edge of battle area) be penetrated by enemy units conducting breakthrough and exploitation operations, the division will be hard pressed to mass quickly the forces necessary to seal the breakthrough. In addition, there is a strong possibility that during retrograde operations the division will be cut off and isolated because it cannot keep pace with the withdrawing mechanized infantry and armor units on its flanks.

It is also worth noting that the division is preeminently a defensive oriented unit. In retrograde operations it will be difficult for it to keep up with any mechanized infantry or armor forces on its flanks. Consequently, it will tend to be assigned missions of static defense, vulnerable to being bypassed or cut off.

Fifth, the argument that the inherent weaknesses in the division can be overcome, in part, by attaching more combat support and combat service support elements to it seems to be wishful thinking. Currently, the U.S. Army does not have enough such support units to support the more mobile and logistically self-sufficient divisions already in the field. One cannot help wondering where the additional support elements for the light division will come from.

As a consequence of these weaknesses, we believe the U.S. Army needs to consider more fully the critical problems of mobility and maneuver for the new light infantry division. Otherwise, the Army is creating a division that will be so vulnerable on the modern battlefield that it probably will not be deployed but rather will turn into a manpower replacement pool for the more mobile and heavier divisions in combat.

Moreover, with the widespread discussion within the U.S. Army of converting one or more National Guard divisions to the light division structure, there is increasing concern among some of us in the National Guard that the Guard's light divisions, like the active Army's light divisions, would be broken up upon

mobilization and sent into combat piecemeal or, worse yet, that the men would be sent in as individual replacements. There is a fear, too, that converting National Guard divisions to the light structure is just another excuse for not updating and modernizing the National Guard divisions already in the field. (We speak only for ourselves here, though, not for our division or the Indiana National Guard.)

Finally, it is clear that the Army needs a light infantry division, but one with greater tactical mobility than the one proposed. It is no doubt frustrating to the Army's strategic planners that the Air Force and Navy have not provided the Army with the airlift and sealift resources necessary to carry it into battle. But the creation of strategically mobile divisions without the means to maneuver and fight effectively once on the battlefield does not seem to be the complete answer either.

PAUL H. VIVIAN
Captain, Infantry
PETER F. COHEN
Major, Military Intelligence
38th Infantry Division
Indiana Army National Guard

SWITCH

I have just finished reading Lieutenant Colonel Edward Oliver's article on antiarmor weapons in the March-April 1984 issue of *INFANTRY* and found it to be excellent. I did, however, detect an error.

On page 20 is a description of the German *Armbrust* rocket, a particularly noteworthy weapon since it can be employed from within small enclosed places, perfect for MOUT. Accompanying the description is a photograph of a rocker launcher that is definitely *not* an *Armbrust*.

On the following page is a description of the French *Strim* accompanied by a photograph identified as a *Strim* but which is in fact an *Armbrust*.

Although I cannot positively identify the incorrectly labeled first rocket, I would say that it is a *Strim*

since it matches the description, and the soldiers in the photo appear to be French.

My compliments on an otherwise outstanding article. Keep up the good work!

SEAN SEAMUS WALSH
2LT, Infantry
1st Battalion, 69th Infantry
Valley Stream, New York

EDITOR'S NOTE: Lieutenant Walsh is right. The weapon in the photo labeled Armbrust is, in fact, a Strim, and vice versa.

KOREAN WAR RANGERS

I am interested in information on or contact with men who served with any Korean War Ranger Infantry Company (Airborne) or with the Ranger Training Center in 1950-51. My purpose is to plan a Ranger reunion and to prepare a history.

Anyone with such information may write to me at 355 East Baltimore Street, Carlisle, PA 17013, or call me at (717) 249-6709.

ROBERT W. BLACK
COL, Retired

BIFV WIRING HARNESS

Because of the cost and availability of ammunition, Bradley-equipped units may not be able to fire enough live-fire exercises each year to keep their skills up. To maintain our soldiers' level of proficiency, therefore, we will have to use training devices instead.

Two training devices are used for this purpose with the Bradley IFV. One of them, the M16 rifle trainer, which fires both 5.56mm and .22 caliber, can be used to simulate the firing of the M242 25mm gun and the M240C. The other device, the M55 laser, can be used for tracking and gun lay exercises.

A wiring harness is necessary to operate both of these training

devices, and one has been adopted. The problem is that during recent tests of the harness various safety flaws were found: It allowed the weapon to fire when it was not armed; the gunner and Bradley commander were not required to select ammunition for the system to operate; the system operated independently of the weapon control box, thus becoming a safety hazard; the gunner's control operated intermittently when the gunner traversed; and it did not have any type of safety.

While watching the testing of this wiring harness, I had an idea for a much simpler and safer one that would meet the needs of the Infantry community. This device requires that ammunition be selected and that the system be armed before it can be fired. It has a two-position switch that will place the weapon system on safety at any time.

It is also inexpensive: It costs about \$5.75 and takes 15 minutes to make, while the original harness costs about \$364 and takes four to eight hours to make.

My device (which is being considered as an official suggestion) works and is being used here at Fort Benning, but since the other one has been adopted and ordered, I am told, its production "probably cannot be

stopped," even though it does not work and is a safety hazard.

Meanwhile, anyone who would like more information on the inexpensive and safe "Payne Device" should address inquiries to the Commandant, U.S. Army Infantry School, ATTN: ATSH-W-BFV(MG), Fort Benning, Georgia 31905; or call AUTOVON 784-6201 or commercial 404/544-6201.

SSG DENNIS PAYNE
Weapons, Gunnery, and Maintenance Department
Fort Benning, Georgia

BASIC NEED

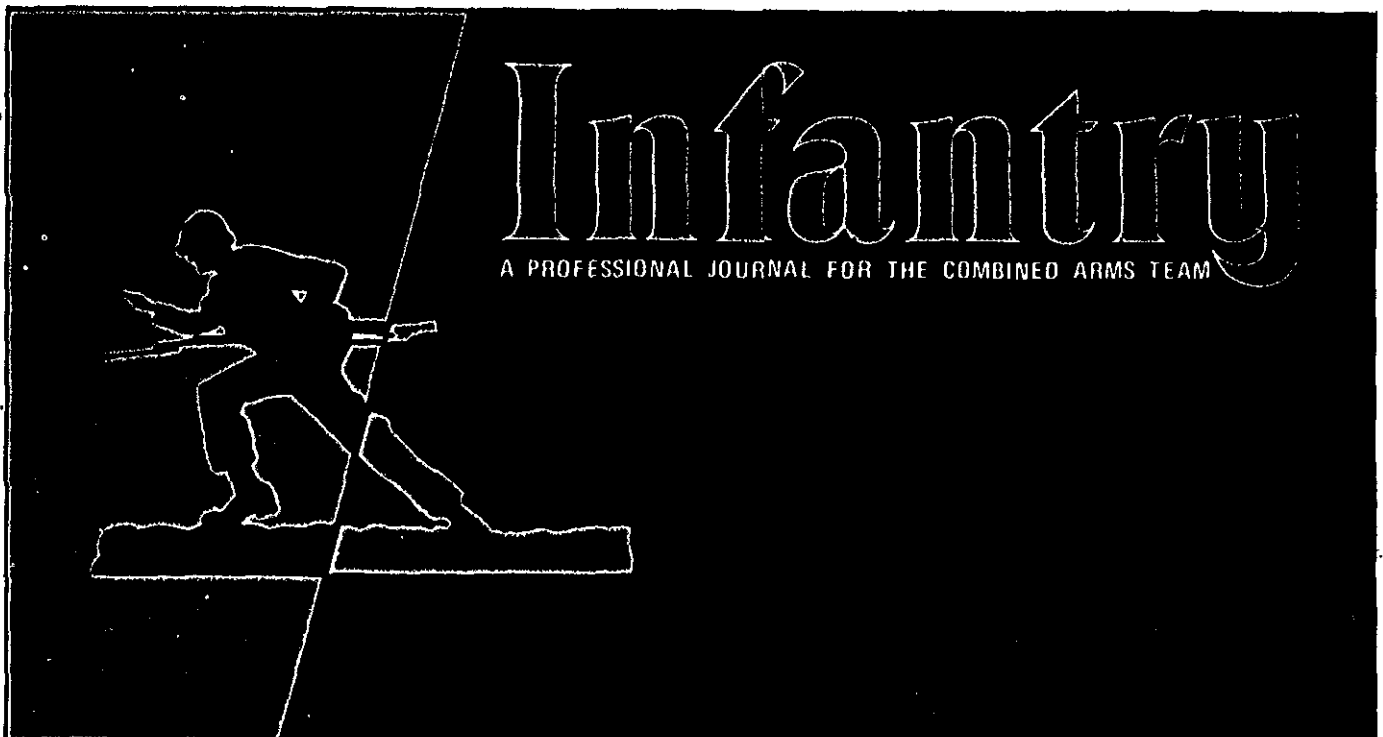
One of the most basic needs for an infantry soldier, or any other soldier, is the ability to read a map and navigate with a compass. Apparently, though, this need is not being met. During the past three years I have served as a land navigation instructor at the Massachusetts Military Academy (National Guard). The Academy's test results during that time have shown that about 30 percent of our basic and advanced NCO course students have failed to pass our land navigation test on their first try. The soldiers who failed held various

ranks and MOSs and represented a number of National Guard and Army Reserve units. Among them were about equal numbers of prior service and non-prior service soldiers.

Most of these soldiers, unfortunately, had had little or no land navigation training in their units before being sent to the Academy. And while one of the functions of all NCO academies is to teach land navigation, these academies operate on the assumption that their soldier-students know at least the basic elements of that subject. In short, it is the responsibility of unit commanders and unit trainers to teach their soldiers the basics of land navigation before sending them to an NCO academy, and then to sustain that training after their soldiers return.

Although my exposure has been confined mainly to Army National Guard and Army Reserve soldiers and units, the problems and solutions I present here may apply to Active Army soldiers and units as well.

One of the chief areas of weakness among the soldiers who come to our Academy is knowing how to convert azimuths. This instruction should be kept simple, and it can be. We have had good results using the LARS/RALS rule to teach soldiers how to make conversions. Thus, to



convert from grid to magnetic azimuth, use LARS — left (GM angle), add; right (GM angle), subtract. To convert from magnetic to grid azimuth, the RALS rule applies.

(Left and right, of course, refer to the magnetic line on the declination diagram on the map. Add and subtract refer to the number of degrees of the GM angle.)

The second weakness that shows up in our students is their lack of understanding of how to hold and use a compass. The program of instruction for the military academies does not include training in this area because it is expected that the soldiers have already had compass training.

We have found that, in teaching soldiers to use the compass, it is important to avoid using teams; it is far better to have individuals navigate on their own. Too often, when teams are used, one skilled soldier will navigate while the others in the team are content to follow him.

Soldiers should also know how to read contour lines to determine elevation. Again, the NCO Academy curriculum does not cover this subject. Resection and intersection instruction should also be kept clear and uncomplicated, and these skills must be

refreshed and used occasionally.

Finally, many of our soldier-students do not know what various map symbols and colors represent. To remedy this problem, it would be a good idea if commanders of Army units (Active, Reserve, and National Guard) would periodically give their soldiers and officers a short informational test that covers the following skills: converting azimuths; measuring road and straight line distances; resecting and intersecting; map symbols; figuring back azimuths; determining coordinates; and measuring grid azimuths.

A test such as this one should reveal the areas in which training is needed and also specifically who needs that training. A commander can then sit down with his platoon leaders and sergeants to plan the needed additional training.

RUSSELL G. FURTADO
SFC, Army National Guard
Hyannis, Massachusetts

16th INFANTRY MEMORABILIA

On 24 February 1983, the 1st Battalion, 26th Infantry was redesignated

the 4th Battalion, 16th Infantry (Rangers), 1st Infantry Division. This battalion is now seeking items of historical interest for display in its battalion museum.

Former 16th Infantry Rangers and their friends who are interested in donating service-related memorabilia (photographs, awards, books, letters) highlighting the Regiment's long and distinguished history (Civil War through Vietnam) are asked to contact the adjutant, Captain Shaver, at this address: Headquarters, 4th Battalion, 16th Infantry, APO New York 09137.

GEORGE BASSO
LTC, Infantry
Commander

FIRST DIVISION REUNION

The Society of the First Division will hold its 66th Annual Reunion in Boston, 22-26 August 1984. For further information, anyone who is interested may write to me at 5 Montgomery Avenue, Philadelphia, PA 19118.

ARTHUR L. CHAITT
Executive Director

Check Here If Gift Subscription (Name of Donor)

Infantry

A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM

INFANTRY MAGAZINE
BOX 2008, FT. BENNING, GEORGIA 31906

SEND INFANTRY MAGAZINE TO THIS ADDRESS — PLEASE PRINT

<input type="checkbox"/> \$19.00	2 YEARS	
<input type="checkbox"/> \$10.00	1 YEAR	

CASH
 BILL ME
 NEW
 RENEWAL
 CHANGE OF ADDRESS

ACTIVE USAR NG RETIRED CADET CIVILIAN

YOUR PERMANENT ADDRESS

STREET ADDRESS _____

CITY _____ STATE OR COUNTRY _____ ZIP _____

Foreign (non-APO) subscribers add \$3.00 per year for postage.

From The Editor

VIETNAM WAR PUBLICATIONS

During the Vietnam War era, **INFANTRY Magazine** was given the job of publishing a series of hardback books on small unit combat experiences from Vietnam. These were to be modeled on the well-known **INFANTRY IN BATTLE**, which had been published by the Infantry School in the early 1930s.

The first book in this series, published in 1967, was called **INFANTRY IN VIETNAM**. The second, **A DISTANT CHALLENGE**, was published in 1971. Between 1967 and 1971, the magazine also printed two paperback books of Vietnam combat experiences – **COMBAT NOTES FROM VIETNAM I and II**. In these, the stories were more personal and did not necessarily point out any particular lessons.

Until recently, these four books had been out of print for some time and copies were difficult to find. In 1982, The Battery Press of Nashville, Tennessee, reprinted the two hard cover books and made them available to the general public. If you are interested in acquiring these books, please direct your queries either to us or to the publisher, whose address is P.O. Box 3107, Uptown Station, Nashville, Tennessee 37219, telephone commercial 615/298-1401.

COMPREHENSIVE INDEX

For most of our existence, we have published annual indexes either as part of a particular issue or separately. But despite good intentions, we had never combined the annual printed indexes into a single comprehensive index.

In 1982, in conjunction with MA/AH Publishing in Manhattan, Kansas, we partially fulfilled our desires by arranging for the printing of a comprehensive index for the period 1965-1981. (At some time in the future, we fully intend to publish a comprehensive index for the period 1921 through 1964.) The period of time we selected, at least in our opinion, was the most relevant to our audience. It was also a period during which Infantry organization, doctrine, and weapon systems changed substantially.

Queries about the published comprehensive index may be directed either to us or to MA/AH Publishing, Eisenhower Hall, Kansas State University, Manhattan, Kansas 66506. Of course, we still publish annual indexes, and copies of these are free for the asking.

OUTSIDE BACK COVER:

Soldiers of the 3d Infantry Division demonstrate to spectators at Kitzingen, West Germany, the capabilities of the Bradley Infantry Fighting Vehicle and the Abrams tank.

