NOVEMBER–DECEMBER 1984

Infantry

A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM

A Department of the Army Publication

64th Year

Infantry

A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM

November-December 1984 Volume 74, Number 6

ARTICLES

FORUM AND FEATURES

TRAINING NOTES

DEPARTMENTS

FRONT COVER

The Battle of the Bulge was fought 40 years ago. None of those who were in it will ever forget the Ardennes.

INFANTRY: Published bimonthly at the United States Army Infantry School, it provides current information on in fantry 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 INFAN-TRY 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 cur rency, 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 INFAN TRY 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.

USAIS

Commandant's NOTE

Major General John W. Foss
Chief of Infantry

The Army is standardizing tasks and duties to save training time and to promote combat effectiveness. For if the simple repetitive tasks appropriate to a soldier's duties are standardized, then our soldiers can be immediately effective when we move them either from the training base into units or from one unit to another.

Standardization varies at different levels: There are certain things all soldiers must do in the same way — saluting or putting on protective masks, for instance — either because it is the best way or because it is essential to the uniformity expected from an army. For the same reasons, at the team or crew level, tasks that call for interaction, such as fire commands or the firing crew duties in a Bradley, must be standardized.

Today, higher up the chain of command, our tactical principles and terminology have been standardized, and, at the highest level, we operate from a standardized doctrine.

Standardization, therefore, is intended to apply where it makes sense; it is not intended to overly restrict a commander's flexibility in his tactical thinking or in his appreciation of a particular situation. We in the Infantry can meet the Army's objective, but only if we can develop a standardization program that is the product of a joint effort between the Infantry School as proponent and our Infantry commanders.

That program must focus on three key areas or "basic subsystems" of the Infantry — the soldiers themselves, their training, and their equipment. At the present time, some of the typical standardization activities we are looking at include CMF 11 promotion and quality criteria, initial-entry and one-station unit training, drill and SQT development, NCO Academy and Basic NCO Course accreditation, SOPs, load plans, and maintenance doctrine.

We are also working on the standardization of certain other specific activities:

Battle Drills. In the Tactical Leadership Course (the subject of my note in the July-August 1984 issue of INFANTRY), we have standardized task and procedure execution, but we execute tactics flexibly and innovatively. And because trainers realize the value of the 20 battle drills that are included in the course, we are preparing a standardization training program for light infantry units and putting it into packets for eventual distribution and use throughout the world.

Bradley IFV Training. Our 11M training courses for soldiers assigned to the Bradley-equipped battalions have standardized the instruction on the vehicles themselves as well as on their proper employment.

Maintenance Certification. In our Officer Basic Course, we conduct maintenance certification programs in four areas: weapons, communications, NBC, and vehicles. Each of the four programs is taught by a committee so that the training remains the same from one class to the next. (The School also conducts certification training on vehicles for its Officer Advanced Course and Advanced NCO Course students and will expand that to include certification in weapons, communications, and NBC.)

An important part of all our standardization efforts is the feedback we get from the field. One way we get that feedback is by sending the Infantry Liaison Team from the School's Directorate of Evaluation and Standardization to visit Infantry brigade-sized units throughout the world. During these visits, the team members talk to commanders, staff officers, trainers, and soldiers to get their views on Infantry training and equipment. Our focus is on the total organization; to ensure success, there is total schoolhouse involvement.

In addition, the School uses its Infantry Hotline to gather feedback and to help units solve their problems. This hotline gives Infantry leaders a direct point of contact in the School. (The AUTOVON number for the Infantry Hotline is 835-7693.)

We are continuing to work on standardizing many of our institutional training programs. Through these efforts, and with your help, we are doing a better job, we believe, of maintaining the high state of readiness and training that professional Infantry soldiers must have.

Infantry In Action

Battle of the Bulge

EDITOR'S NOTE: Forty years ago, in mid-December 1944, the German Army on the Western Front in Europe launched a powerful offensive against the United States forces in the Ardennes. That offensive was designed to knife through the Allied armies and force a negotiated peace. The mettle of the American soldier was tested in the fires of adversity, and the quality of his response earned him the right to stand shoulder to shoulder with his forebears of Valley Forge, Fredericksburg, and the Marne.

This article was abstracted and edited from material taken from three official United States Army historical studies published by the Office of the Chief of Military History (OCMH): THE SUPREME COMMAND, by Forrest C. Pogue (1954); THE ARDENNES: BATTLE OF THE BULGE, by Hugh M. Cole (1965); and THE LAST OFFENSIVE, by Charles B. MacDonald (1973). These sources have been used with the permission of OCMH, Department of the Army.

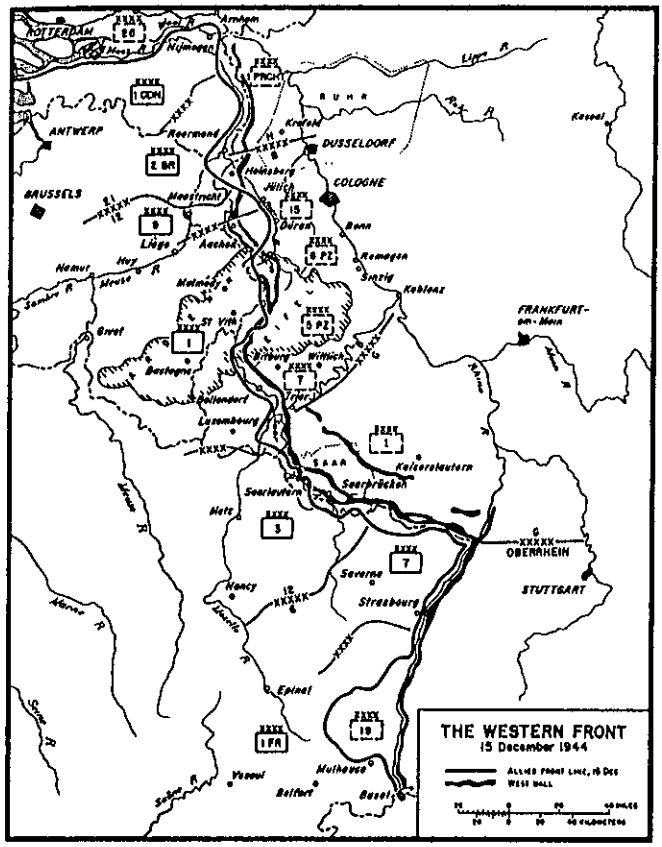
On 7 December 1944 the senior Allied commanders in the West — General Dwight D. Eisenhower, Air Chief Marshal Sir Arthur W. Tedder, Field Marshal Sir Bernard L. Montgomery, and Lieutenant General Omar N. Bradley — met to lay plans for future operations. The Allied attacks in November had failed to achieve their main strategic goals: They had not decisively defeated the German armies west of the Rhine, nor had they crossed the river (see Map 1).

There was general agreement that the Allies should launch an all-out offensive on the Western Front early in 1945. After the meeting, General Eisenhower set plans in motion to continue putting pressure on the enemy and to chew up as many German divisions as possible before the main offensive in the north.

By this time, however, the German high command had decided to conduct a counteroffensive in mid-December in the Ardennes with the objective of destroying the Allied forces north of the line Antwerp-Brussels-Bastogne and thereby bringing about a decisive change in the over-all situation (see Map 2).

To hide their intentions, the Germans worked out elaborate deception plans. They made all their preparations under the guise of a counterattack in the north against the Allied drive toward the Rhine. Only a small number of high-ranking officers knew the details of the plan, and the plan stressed the defensive nature of the preparations. The two major attacking forces — the *Fifth Panzer* and *Sixth Panzer Armies* — were given fake names, and other units were shifted or renamed to confuse the Allies. The units of the *Sixth Panzer Army* were not brought into the line until the eve of the attack, and all their movements to the front were made at night. In addition, some of the units earmarked for the attack were left off situation maps even at the highest headquarters.

The main German effort by *Army Group B* was coordinated with those of *Army Group H* to the north, while *Army Groups G* and *Oberrhein,* to the south, were ordered to tie up Allied forces. The initial breakthrough was to be aided by Operation *GREIF* (or CONDOR), in which German officers and men, dressed in U.S. uniforms and driving U.S. vehicles, were to spread con-



Map 1.

fusion by issuing false orders and by seizing bridges and key points. They were to be aided by some 800 parachutists who were to be dropped in the Malmedy area. (EDITOR'S NOTE: Both of these operations were almost total failures. See Cole, pp. 269-271.)

The Germans hit Lieutenant General Courtney Hodges' First Army front in the early morning of 16 December. The smashing blow drove back five U.S. divisions in the Ardennes area. The surprise gained by the attack, along with the disruption of communications, rapidly created such widespread confusion along the front that the extent of the enemy action was not known for several hours at higher headquarters.

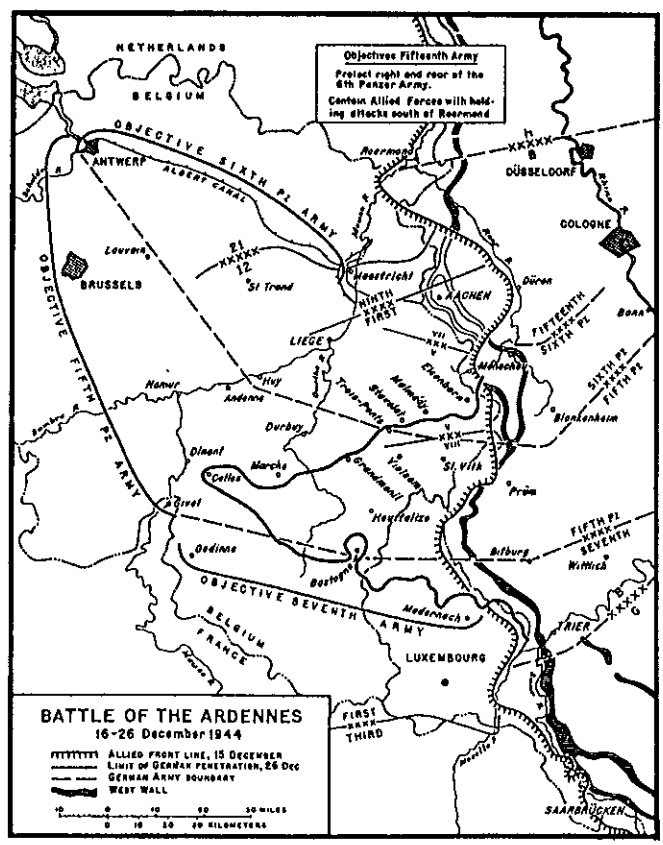
During the afternoon of 16 December, at Supreme Headquarters, Generals Eisenhower and Bradley conferred and then ordered reinforcements to the threatened area. More reinforcements were ordered to the area the next day.

Even as these first decisions were being made at Supreme Headquarters, First Army units were staging strong defensive actions that forced the Germans to withdraw in the *Fifteenth Army* sector and slowed the drives of the two panzer armies, thus completely upsetting the timetables of the enemy commanders.

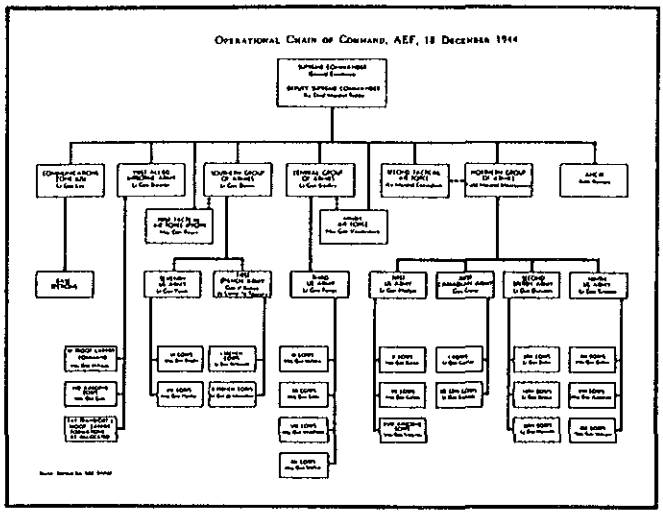
In the first two days of the German attack, the Allies still thought it might be nothing more than an effort to pull forces away from the offensives they were then planning. But by 19 December, General Eisenhower, apparently influenced by the growing evidence that the enemy was making an all-out attack toward the Meuse, placed immediate emphasis on checking that drive in the First Army area. At the same time, Lieutenant General George S. Patton, commander of the Third Army, was ordered to move north with six of his divisions and conduct a major attack against the south flank of the German penetration on 22 or 23 December. In brief, the general plan now called for plugging the holes in the Allied line in the north with U.S. and British units and for coordinating the attacks launched from south of the German penetration.

In the meantime, First Army soldiers in the bulge continued to fight desperately to halt the German drive or at least to check its speed. The enemy in this period moved ever closer to St. Vith and Bastogne, smashing some First Army units and isolating others. Even in the face of these powerful attacks, the U.S. forces managed to succeed in improvising effective counterattacks. U.S. armor delayed the enemy in the area of St. Vith until new positions could be established to the west. On the north flank of the breakthrough, First Army forces, in one of the most critical battles of the campaign, held the Elsenborn ridge, the village of Butgenbach south of the ridge, and the Malmedy-Stavelot line against repeated attacks by elements of the *Sixth Panzer Army,* thus buying the time the Allied forces needed.

But because the German columns continued to forge westward, General Eisenhower decided to put Field Marshal Montgomery in temporary command of all Allied forces north of the Ardennes (see accompanying chart). This change of command, though temporary, led to great



Map 2.



resentment on the part of many Americans. (See Pogue, pp. 378-380.)

The emphasis north of the Ardennes during the first week of the German offensive was necessarily on defensive measures. With his forces heavily hit and badly stretched, General Hodges could do little more than meet enemy attacks as they developed and hope that he could get a reserve to use later in an effective counterattack.

South of the Ardennes, however, Generals Bradley and Patton were moving rapidly to strike at the enemy penetration. By 21 December General Patton had broken off his battle in the Saar area and was attacking toward Bastogne. He had swung the bulk of his Third Army on a 90-degree angle and moved it north from 50 to 70 miles into the new attack. But his forces were met by enemy air attacks and by stubborn resistance that delayed the relief of Bastogne.

By now, though, conditions within the German armies were worsening. Their attack, whose success had been staked on surprise and speed, had now lost the effect of surprise and was falling more and more behind schedule as well. The *Sixth Panzer Army* had failed to break through the Monschau-Malmedy area. St. Vith had held out three times as long as the Germans had anticipated, and Bastogne, which had been expected to fall the second day of the offensive, stubbornly held out even after the Germans had surrounded it.

The German situation was destined to grow worse. The fog, which had interfered with air activity since the beginning of the attack, lifted on 23 December and the Allied air offensive was renewed. Allied planes immediately rushed supplies to beleaguered units such as those in Bastogne and opened powerful attacks against enemy armor columns and supply lines. A symbol of the changed situation for the Allies was the arrival on 26 December at Bastogne of advance elements of General Patton's tanks, which had broken through from the south.

On the same day, miles to the west near Dinant, First Army armor formations smashed the enemy's most ambitious bid to reach the Meuse. Other German drives were turned back near Celles. By the 28th, as a heavy snowfall slowed their armor, the Germans began the process of pulling back.

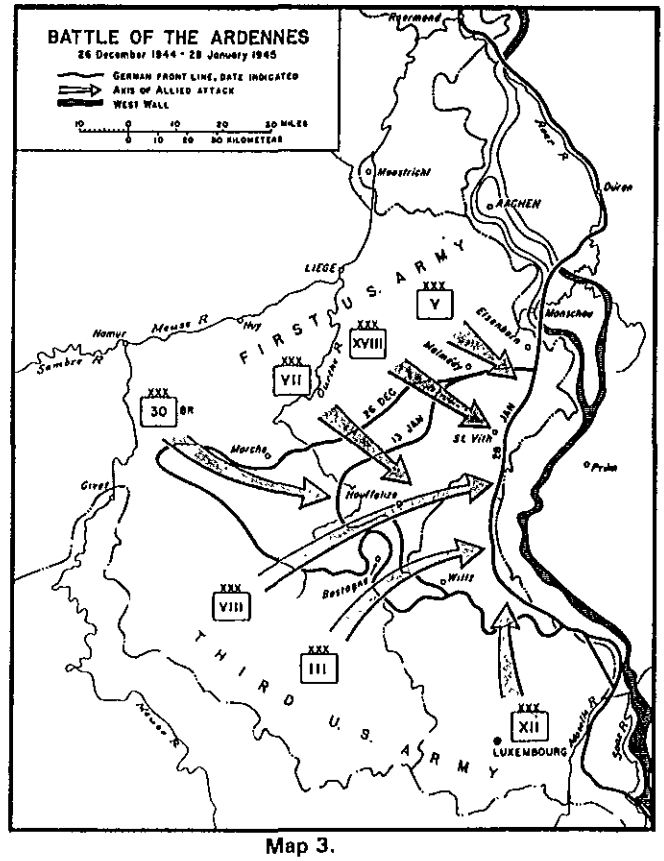
General Patton ordered his forces to push northward to Houffalize and to continue their march toward St. Vith. General Hodges at the same time ordered his units southward with the object of linking up with these Third Army forces. Although the enemy drive to the Meuse had been effectively stopped, the German forces still had to be driven back from Luxembourg and Belgium.

COUNTERATTACK

On 3 January 1945 the First Army began its attack to link up with the Third Army, to push in what had become known as "the Bulge," and to reach the Rhine River. The next day, the Third Army, which had been attacking in the Ardennes since 22 December, started a new phase of its campaign to push in the southern portion of the bulge (see Map 3).

The First Army's attack was spearheaded by the VII Corps, which had under its control two armored divisions, which led off; three infantry divisions (one behind each armored division and one in reserve); and 12 field artillery battalions in addition to the divisional artillery. Initially, the Germans offered only light resistance, but soon that resistance stiffened.

It was bitterly cold. The ground was frozen and covered with snow, and the roads were icy. A low, foglike overcast so restricted visibility that planned support from fighter-bombers could hardly be assured. In fact, it was



Map 3.

so foggy that not a single tactical plane could support the attack at any time during the day. Observation by artillery planes was possible for no more than an hour. It was a pattern that would not change much for the next two weeks.

Much of the time infantry and armor advanced through snow flurries, which were interspersed with light rain on the few occasions when the temperatures rose above freezing. During the late afternoon and evening of 7 January, a heavy snowfall added several inches to the cover already on the ground. Drifts piled in some places to a depth of three to four feet.

While the role of the infantry divisions was nominally a supporting one, it turned out to be more than that when the first shock of armor failed to produce a penetration. Before the fighting was over, both infantry divisions would incur casualties appreciably greater than those of either of the armor divisions.

By 8 January the Germans had begun to withdraw in the face of the attack by VII Corps and its neighbor, XVIII Airborne Corps. And on 16 January patrols from the First and Third Armies met in the vicinity of Houffalize.

The Third Army attack on 4 January had run head-on into a new German attempt to take Bastogne, although by nightfall on 5 January a virtual battle of attrition between the two forces had ended. Heavy fighting did persist in the area until 11 January, when the first signs of German withdrawal from the Bastogne area became apparent.

The meeting between the two armies at Houffalize on 16 January marked the completion of the first phase of the campaign to push in the bulge. And at midnight the next day the First Army reverted to General Bradley's control.

This meeting did not mark a break in the First Army's offensive to erase the bulge, but the XVIII Airborne Corps now took over the main assignment, a drive eastward on St. Vith. For the Third Army, though, the meeting at Houffalize did represent a distinct break in the offensive. General Patton, who wanted to get his units ready for an attack from the south directed almost due northward toward St. Vith, resumed his attack on 18 January.

Across the way, the German commanders finally received permission to withdraw from the bulge. And when the main XVIII Airborne Corps attack started, nowhere was there a solid German line. Although the German defense was a stubborn one that included small counterattacks, it centered primarily in villages and occasionally on key high ground. The Germans might slow the advance but neither they nor cruel winter weather with waist-high drifts of snow could stop it. (Sometimes the weather was more of a problem than the enemy.)

On 23 January 1944, St. Vith fell to the First Army, and in the south, by 26 January, all traces of the bulge were finally erased. Although the retiring Germans saved most of their arms and equipment, they had to destroy large numbers of tanks and artillery pieces for lack of spare parts and gasoline.

The drive from 3 through 28 January to flatten the bulge added 39,672 battle casualties to an American total of 41,315 that had been incurred during that phase of the fighting when the Germans were on the offensive. Estimates of German losses for all of the fighting in the Ardennes range from 81,834 to 103,900.

The greatest depth of the German penetration, achieved on the tenth day of the attack, was about 60 air miles. But by that time the average width of the salient had been reduced from 47 air miles to 30, and at its tip the salient measured no more than five miles on a front facing the Meuse.

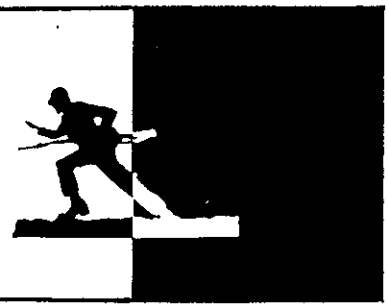
This short account of the Battle of the Bulge only touches on the battle's highlights. But as a more detailed study would reveal, the Battle of the Bulge is really a story of the American fighting man and the manner in which he fought myriad small defensive battles until the torrent of the German attack had been slowed and dispersed, its force disrupted and finally spent. It is a story of squads, platoons, companies, and even conglomerate scratch units that fought with courage, with fortitude, with sheer obstinacy, often without information or communications or any knowledge of the whereabouts of their friends. In less than two weeks the enemy had been stopped and the Americans were preparing to resume the offensive.

Bastogne has become the symbol of this obstinate, gallant, and successful defense. The full story of the battle, however, emphasizes the crucial significance of the early American success in containing the attack. U.S. soldiers achieved that success by holding firm on the northern and southern shoulders of the penetration and by upsetting the enemy timetable at St. Vith and on a dozen lesser known but equally important battlefields.

One division historian said it perhaps better than anyone else:

None of those who were in it will ever forget the Ardennes. If we came through, by far the largest credit must go to the men who shouldered rifles and carried machineguns and mortars in the freezing weather, plunged through knee-deep and waist-high snow, dug foxholes in ground as hard as steel, stormed hill after hill in the face of perfect enemy observation, and cleared out woods as dark as night in the middle of the day. That is not the whole story but it is the best part of it.

INFANTRY NEWS



AN ERROR in INFANTRY's July-August 1984 issue needs to be corrected. That error appears in the article "Heavy-Light Connection: Division," by Major General Howard G. Crowell, Jr., and Lieutenant Colonel Jared L. Bates.

On page 16, toward the end of the next-to-last paragraph, is this sentence: "The light brigade's heavy task force will receive logistic support from the reserve brigade's fire support battery ..." Those last three words should read "forward support battalion."

INFANTRY's editors accept responsibility for this error and offer their apologies.

THE 1984 USAIS INSTRUCTIONAL Material Catalog was recently published and sent to the field. It lists the instructional material that is available from the School.

The School encourages all military personnel to obtain and make the greatest possible use of the instructional material it offers. All of the material in the catalog is free for the asking to authorized personnel and units. Instructions for ordering the material are given on Page 13 of the Catalog.

Copies of the Catalog may be obtained from Commandant, USAIS, ATTN: Training Support Division, Fort Benning, GA 31905; or AUTOVON 784-4460, commercial 404/544-4460, Ms. Myra Lee.

THE SOLDIER'S MANUAL, the Job Book, and the Trainer's Guide are vital to the SQT and commander's evaluation portions of the Army's Individual Training Evaluation Program (ITEP) and to the overall training program of a unit and its soldiers.

The Infantry School, in its visits to various CONUS and OCONUS units to validate the Fiscal Year 1985 CMF 11 SQT, has identified what may be a serious problem: There appears to be an insufficient number of CMF 11 Soldier's Manuals, Job Books, and Trainer's Guides at the unit and individual levels to adequately support training requirements.

The Army's AG Publications Center was told of this problem and will give the matter its immediate attention. The Center has told the School that there are enough of these publications on hand to accommodate all resupply requests. The Center's normal processing time is 15 days, not including mailing time, and shipments should reach the requestor within 30 days.

Units must make certain they follow the proper procedures to request a resupply of all enlisted personnel management system (EPMS) items. Chapter 4, DA Pamphlet 310-10 and Appendix D of the same publication contain the proper procedures. Paragraph 4-5 and Appendix J of the pamphlet tell how to trace a requisition or obtain assistance.

Units must ensure that they have on hand adequate supplies of Soldier's Manuals, Job Books, and Trainer's Guides. They can do this easily enough by following the procedures outlined in DA Pamphlet 310-10.

POSTAL REGISTRATION

1. Date of Filing: 30 September 1984.
2. Title of Publication: INFANTRY Magazine.
3. Frequancy of Issue: Bimonthly.
4. Location of Known Office of Publication: U.S. Army Infantry School, ATTN: ATSH-I-V-M, Fort Benning, GA 31905-5593.
5. Location of the Headquarters of the Publication: U.S. Army Infantry School, ATTN: ATSH-I-V-M, Fort Benning, GA 31905-5593.
6. Publisher and Editor: Albert N. Garland, INFANTRY Magazine, PO Box 2005, Fort Benning, GA 31905-0605.

FIELD MANUAL 7-85, Ranger Operations, is being written at the Infantry School. It will address doctrinal issues concerning the employment of the Ranger battalions and the Ranger regiment.

Anyone who has experience in this area or who has recommendations to make regarding the subject matter that should be included in such a manual is asked to write to the Director, Ranger Department, ATTN: COL Mace, The Infantry School, Fort Benning, GA 31905, or to call AUTOVON 784-7212/6768.

TRADOC PAMPHLET 34-1, 27 July 1984, has been distributed to the field. The pamphlet was prepared in the interest of doctrinal development, and it clearly defines the terms "doctrine," "tactics," "techniques," and "procedures."

The proponent for the pamphlet is the Office of the Deputy Chief of Staff for Doctrine. Users are invited to send comments and suggestions for improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) through channels to the Commander, TRADOC, ATTN: ATDO-D, Fort Monroe, VA 23651-5000.

BALLISTIC PROTECTIVE lenses for the standard sun, wind, and dust goggles have entered production. These are similar to the goggles fielded by the Israelis in 1976. Such goggles have been shown to have the potential

for reducing eye casualties in combat by about 50 percent for tank commanders and others who might be exposed to armor debris resulting from projectile strikes or to small fragments from explosive projectiles.

As of April 1984 they were listed as:

• Lens, ballistic, Class 4, neutral gray, NSN 8465-01-109-3996.

• Lens, ballistic, Class 3, clear, NSN 8465-01-109-3997.

NSNs may be changed without notice, though, so it is wise to check your listing before ordering these lenses. Eventually, 100,000 will be manufactured unless the demand supports more.

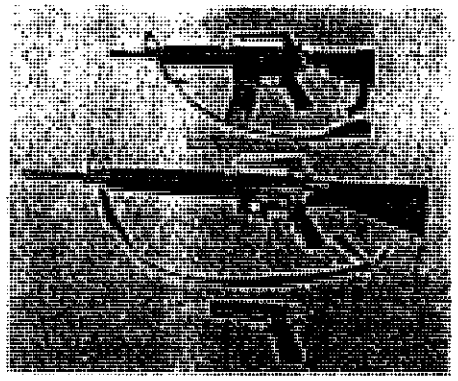
THE U.S. ARMY INFANTRY BOARD submitted the following item:

• **XM177E2 Rifle.** Current TOEs authorize the M1911A1 pistol for some soldiers to use as a personal defense weapon during combat operations. But the pistol does not provide the range, accuracy, and volume of fire that various types of rifles, carbines, shotguns, submachineguns, and other small arms weapons provide. Unfortunately, even though these other weapons do provide greater firepower, they are so large and unwieldy that they usually get in a soldier's way when he has to perform certain primary military duties or functions.

As a solution to this problem, a lightweight, short-barreled rifle or carbine that will provide greater firepower is being considered as a replacement for some pistols.

Based on a request from the Infantry School, the Board recently tested the XM177E2, 5.56mm rifle as one possible replacement. This is a gas-operated, air-cooled, selective fire, shoulder weapon with a telescoping butt stock. It is fed from either 20- or 30-round aluminum magazines that are interchangeable with those of the M16 family. Its functioning is identical to that of the other weapons in the M16 family, except for the firing port weapon on the Bradley Infantry Fighting Vehicle.

The Board conducted a side-by-side



From top to bottom, left side view of XM177E2, M16A2, and M1911A1 pistol.

comparison test of the XM177E2, the standard M16A2 rifle, and the standard M1911A1 pistol. Both day and night firing programs were conducted, and instrumented, stationary, E-type, flat, hit-sensitive silhouette targets at ranges from 50 to 300 meters were used.

The Infantry School will use the test results to determine the potential of an XM177E2-type weapon as a replacement for the current M16A2 and M1911A1 in certain designated roles.

THE AIRLAND BATTLE doctrine has increased the need for training Army personnel to function in and to use the Air Force Tactical Air Control System and the Army's Air Ground System.

The Air Force's Air Ground Operations School at Hurlburt Field, Florida, offers a number of excellent courses to train personnel from all of the military services in the concepts, doctrine, tactics, techniques, and procedures involved in conducting joint and combined operations. Unfortunately, the Army has not always filled its quotas for the various courses, so a lot of this good training is going to waste as far as the Army is concerned.

The School is the only one authorized to train Army officers and enlisted people for the award of the additional skill identifiers that pertain directly to AirLand operations — 5U, Air Operations Officer, and Q8, Tactical Air Operations Specialist. Although it is an Air Force school, it does have a stong joint services flavor and even has an Army element that provides instruction in such subjects as ground operations, intelligence, communications, air defense artillery, field artillery, and Army aviation.

The School conducts two courses: the Battle Staff Course and the Joint Firepower Control Course.

The Battle Staff Course, which lasts three weeks, provides a fundamental understanding of tactical battle management within the Air Force's tactical air control systems and the Army's air ground system. The focus of the course is at Army division and Air Force operations center levels and higher. Although commanders may waive the grade requirements, the course — five classes of which are held each year — is designed for field grade active duty and reserve component officers who are assigned, or scheduled for assignment, to any position that requires an understanding of the air ground system at the higher level.

The Joint Firepower Control Course emphasizes the control systems and equipment that are used in the joint application of firepower to support ground operations. (See INFANTRY, November-December 1982, pages 38-39.) Ten classes are usually conducted each year. The course itself is designed for Air Force officers who will provide support to Army maneuver units (division level and below) as forward air controllers or air liaison officers, and for Army officers and noncommissioned officers who hold positions in the Army's air ground system at brigade level and below. Although it is a three-week course, Army personnel usually attend only the first two weeks. They receive the additional skill identifier if they successfully complete the program of instruction.

In addition to these two resident courses, the Air Ground Operations School can provide instruction to Active Army units, Army Reserve Component units, and designated service schools. Such instruction is not a substitute for the resident courses, nor does it meet the attendance require-

ments of Army and Air Force personnel. The sole purpose of this nonresident instruction is to respond to unique operational requirements.

The courses mentioned above are listed in the Army's formal schools catalog (DA Pamphlet 351-4) as 2G-F36 (BSC) and 2G-F37/250-F11 (JFCC). Additional information or assistance can be obtained from the School's Army Element at AUTOVON 872-6889/6655 or commercial 904/844-6889/6655. DA assignment personnel may also determine attendance eligibility for active duty officers and enlisted personnel being assigned to units that have identified requirements for air ground operations. Units, therefore, should ensure that their requisitions identify their requirements for personnel with additional skill identifiers 5U or Q8.

ACCORDING TO THE most recent revision of Army Regulation 1-17, battery or troop orderly rooms should have 160 regulations, pamphlets, and circulars. The latest version of the regulation, which was effective 1 September 1984, catalogs all of the administrative Army-level publications units should have.

The regulation also contains a "no growth" policy — neither HQDA offices nor intermediate headquarters can add to the list of required administrative publications without the approval of the Army Adjutant General. And for the first time the new regulation appears as a Project UPDATE publication. "Updates" are published as complete regulations, instead of as several pages of changes that must then be posted to existing publications.

AN IMPROVED PROTECTIVE entrance tent for use in an NBC environment has been developed and accepted by the Army. The unit includes an entry decontamination compartment, a toilet and storage compartment, and a large general purpose compartment. It is intended to serve in

a number of NBC protective roles.

The unit provides a basic 160 square feet of protected area that can be joined with other units to create additional primary or supplementary space. For transport purposes, each complete unit packs in dual duffel bags, which weigh about 40 pounds each.

THE IMPROVED 81mm mortar system has been type classified following nearly three years of development. This means that the system is ready for production with issue to the troops in the field scheduled for 1987.

The new mortar system has been designated the M252. The mortar itself is British, as are the new high explosive M821 rounds. The mortar system includes a NATO base plate and a U.S. system. The mortar will also use the new U.S. smoke (XM819), illumination (XM853), and practice (XM879) rounds now under development by the Armament Research and Development Center.

SECOND UNITED STATES ARMY assumed complete responsibility on 1 May 1984 for all continental U.S. Army missions for eight southeastern states — Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee — and for Puerto Rico and the Virgin Islands.

At that time, Second Army completed its activation and organization process — under way for almost a year — and assumed full command of Army Reserve units in its area.

In addition, Headquarters, Fourth U.S. Army was provisionally activated at Fort Sheridan, Illinois, in early July. Fourth Army will gradually assume command of Army Reserve units in seven midwestern states now in the Fifth Army area: Illinois, Indiana, Iowa, Ohio, Michigan, Minnesota, and Wisconsin.

A NEW DIVISION with a proud heritage of combat service — the 29th Infantry Division — will be part of the National Guard and Total Force starting next year. It will be formed from Army National Guard units in Maryland and Virginia and will be a light infantry division.

Headquarters for the new division will be at Fort Belvoir. The headquarters will be organized in October 1985, with the main portion of the division scheduled to take shape in Fiscal Year 1986.

A COMBAT LEADER'S GUIDE (CLG) is being tested by soldiers to find out if it fills a real need and, if it does, what features it should have.

One very powerful and proved way to assist the modern combat leader is to give him job aids that will help him perform tasks quickly and accurately under high stress in combat.

Job aids can be any brief procedural outline, chart, table, picture, or graph that helps someone perform a task. Generally, tasks that are long (more than five steps), slow (don't require an automatic, immediate response), require reference materials, or involve significant computations would be appropriate for "job aiding."

The Combat Leader's Guide is a prototype standardized, modular job aid system. It is of waterproof nylon with a soft hinge that contains two 4x6 pockets, 4x6 waterproof paper, 4x7¾ waterproof foldout paper, and 11 tabbed index dividers.

Anyone who has ideas, suggestions, or similar locally developed products may send them to ARI Field Unit, ATTN: Dr. John Morey, P.O. Box 2086, Fort Benning, GA 31905.

FORUM & FEATURES

A Christmas Story

MAJOR GENERAL ALBERT H. SMITH, JR., USA (Retired)

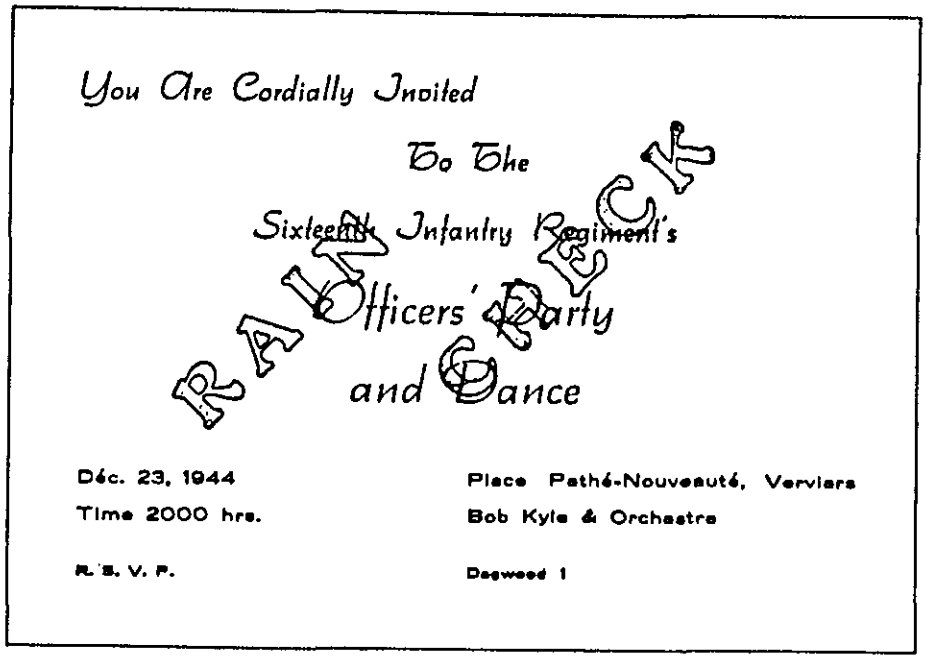
Old soldiers like to tell war stories, especially to the officers and men who are now carrying the ball. I am no exception.

I joined the 16th Infantry Regiment in July 1940 and served continuously with it as part of the 1st Infantry Division in the United States, in North Africa, in Sicily, and in northwest Europe until my departure from Europe on VE-Day, 8 May 1945. I took part in eight campaigns and three invasions with the 16th Infantry, and these experiences instilled in me a pride in the unit and a love of the 1st Division that is with me today. To me, the 16th Infantry (of which I am now Honorary Colonel of the Regiment) and the "Big Red One" are the greatest.

In December 1965 the 16th Infantry was again overseas and again in active combat, this time in South Vietnam. I was at Carlisle Barracks as a member of the Institute of Advanced Studies and wanted to send some sort of special Christmas greeting to the soldiers in my old unit. I decided that maybe the story of the regiment's Christmas in 1944 might bring them a chuckle or a smile. This is the story.

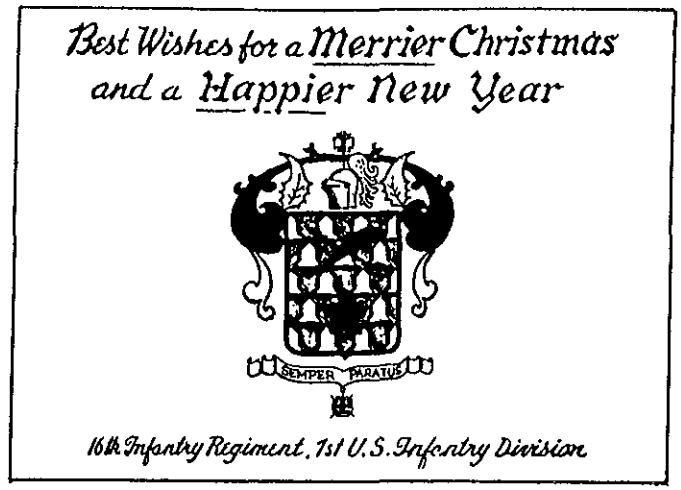
The 16th Infantry was one of the two assault regiments to tackle Omaha Beach in Normandy on 6 June 1944. Thereafter, without any real break, the regiment fought its way across France and into Germany. It tore its way through the Siegfried Line and then had a really tough time in late November and early December pushing through the Huertgen Forest. Word trickled down that we were finally to be pulled out of the line for a much needed rest in the peace and quiet of Belgium.

The dream became a reality, and in mid-December the regiment moved back to a wonderful little Belgium city called Verviers. We all got a bath and clean clothes and were able to sleep on cots for a change. A few lucky ones managed to get leaves to Paris, Brussels, or England. The rest



Invitation to the Officers' Club dance. (The words "Rain Check," understandably, had to be added later.)

Front of Christmas card . . .



and inside.

of us happily settled down to enjoy ten to fifteen days of rest and rehabilitation.

Christmas parties were planned for all grades. In fact, the officers' dance, scheduled for 23 December, was the talk of the European theater — at least in that area near Verviers and Liege. We even sent out invitations. Off-duty nurses and Red Cross girls from 100 miles around promised to attend.

Then it happened! The Germans decided to make one last great attack in the west. This was the Battle of the Bulge.

To make a long story short, the 16th Infantry spent not two weeks, but two days in Verviers and then moved out on less than 12 hours notice to contain the advancing German forces.

Our situation during the period from just before Christmas until well into January was accurately portrayed by a Corporal Wilhelms of the 16th Infantry, who made our Christmas card that year. The accompanying photograph does not do justice to his wonderful coloring, but the drawing does show how we spent our Christmas holiday that year — in foxholes.

(During World War II, receiving mail boosted individual morale more than anything else — even more than a good hot meal. And to encourage that in-coming mail, soldiers wrote home even under the most difficult conditions. Recognizing that very basic fact of life, the regiment's leaders rapidly arranged for this Christmas card to be printed and distributed to all the members of the regiment.)

What with the cold and the snow and all the rest, it was a tough period for the soldiers of the 16th Infantry. But, as always, the men of the 16th did a magnificent job and, in their sector, stopped the Germans in their tracks.

That's the end of the Christmas 1944 war story, except that it all turned out well eventually. The Allies won the war, and 1st Division soldiers stayed to guard the peace in Germany until the division came home in 1955.

In my 1965 message to the 16th Infantry, I added to this story the following:

Heartfelt Seasons Greetings and the best of everything to you new members of the 16th Infantry who are waging today's war.

We know that you are doing a tremendous job over there, and that the 16th Infantry and the Big Red One will win the battles that will end the war in Vietnam — as they did in World Wars I and II. The alumni of those wars, I can assure you, take great pride in your every combat action. Our thoughts and prayers are with you.

God bless you.

How was the story received in Vietnam? Lieutenant Colonel Bill Lober, who at the time commanded the 1st Battalion, 16th Infantry, wrote me on 13 December 1965 and said, in part:

I can't begin to explain the deep impression your narrative of Christmas '44 had on us. Your letter was on my desk when we got in on the 9th after twelve days of jungle campaigning . . . to say the least, your letter and story perfectly proved the close tie between present members of an organization and those who filled the ranks in the past, a fact that we treasure highly.

Although the 16th Infantry and the 1st Division are not involved in a shooting war this year, they are, nevertheless, serving as they have always served. And thousands of other soldiers are still standing guard around the world. So, to the soldiers of the 16th Infantry and to all those other soldiers as well, I send you, in addition to my 1944 Christmas story, "Best Wishes for a Merrier Christmas and a Happier New Year."

MAJOR GENERAL ALBERT H. SMITH, JR., began his Army career in 1940 and served for more than 33 years. Much of this service was with the 1st Infantry Division, including eight campaigns in World War II and three in Vietnam, where he was assistant and acting division commander.

Soviet Mortars

CAPTAIN SCOTT R. GOURLEY
CAPTAIN DAVID F. McDERMOTT

The Soviet Army has always loved its mortars. That statement is no less true today than it was for the Czar's Army 70 years ago. As one modern commentator has written, "The Soviet Commander's favorite weapon is the mortar."

Mortars are rather austere in appearance and deceptively simple in operation, yet they are highly versatile and lethal on the battlefield. Because they are effective and economical in both design and production, mortars provide Soviet infantrymen with readily-available pocket artillery.

The Soviet love of mortars was amply demonstrated during the early days of the "Great Patriotic War" (World War II) when the Red Army employed mortars in a field expedient fire support role to compensate for its severe artillery losses. On today's battlefield, Soviet mortars play a comparable role. In fact, during the early stages of a meeting engagement, mortars may be the only indrect fire support a motorized rifle battalion commander has readily available. As an example of the importance the Soviets place on mortars, it has been stated that during World War II the Soviet Union produced 348,000 mortars while the Germans produced only 68,000. Soviet mortar forces, in fact, were superior in both the quantity and the quality of their equipment, and during the war years both the Germans and the Rumanians, in fact, copied the Soviet 120mm mortar.

Being of relatively uncomplicated design, the early Soviet mortars did not require a great deal of operator training. Even today, although mortars are considered artillery by the Soviets, they are crewed by motorized rifle troops who have received specialized mortar training at battalion level.

Because of the low muzzle velocities associated with mortars (211 to 362 meters per second), mortar shells can be economically mass-produced using relatively thin cast iron casings rather than more expensive steel ones. This, coupled with the round's large explosive charge and its high, plunging trajectory, ensures that mortars, although lacking somewhat in range and accuracy, can be more effective than other field artillery systems, given the proper circumstances. This can be especially true when the mortar is employed against dismounted infantry in open terrain, because the near-vertical angle of a mortar shell's descent results in an almost circular lethal pattern of shell splinters. Against dug-in troops, VT fuzes can be used.

MODERN LINE

The development of the modern line of Soviet mortars began in the 1930s with the introduction of various models of 82mm and 120mm mortars. In 1936 the Soviets introduced the M1937 82mm mortar, followed later by both the M1941/42 and the M1943 82mm models. With identical — and therefore interchangeable — mortar tubes, similar ballistic characteristics, and the ability to use the same ammunition, the three models are easily transportable. They can be broken down into pack loads to be carried by a three-man team or by one pack animal. Additionally, all of the models reportedly can fire the 81mm ammunition employed by Western armies.

The only observable differences among the three models are the baseplates and the mounts. The M1937 has a circular baseplate with a portion cut out and two short shock absorber cylinders. The M1941/42 and M1943 have fully circular baseplates and longer shock absorber cylinders. Despite their many similarities, the M1937, with its more stable bipod mount, became the only standardized 82mm mortar for the Soviet Army.

Today, the M1937 has been phased out of most Soviet infantry units although it remains in Soviet airborne and naval infantry units. Other armies still employing the M1937 include those of the non-Soviet Warsaw Pact nations, Albania, and the People's Republic of China (PRC), where it is called the Type 53 82mm mortar. Some of these countries have even developed a two-wheeled carriage for transporting the mortar and its ammunition. The smoothbore, muzzle-loaded M1937 has a fixed firing pin for drop firing and is found in a six-mortar battery assigned to its parent battalion. Serviced by a five-man crew, the M1937 can deliver HE (high explosive), smoke, illumination, and incendiary rounds out to a range of 3,040 meters.

The 120mm mortar has replaced the 82mm mortar in many Soviet infantry formations. The original M1938 model, which was introduced in 1938, was replaced by the M1943 120mm model. As with the various 82mm mortars, these models are similar in both performance and crew servicing. The only physical differences are the M1943's larger shock absorber cylinders and its more sophisticated traverse and elevation mechanism. Ac-

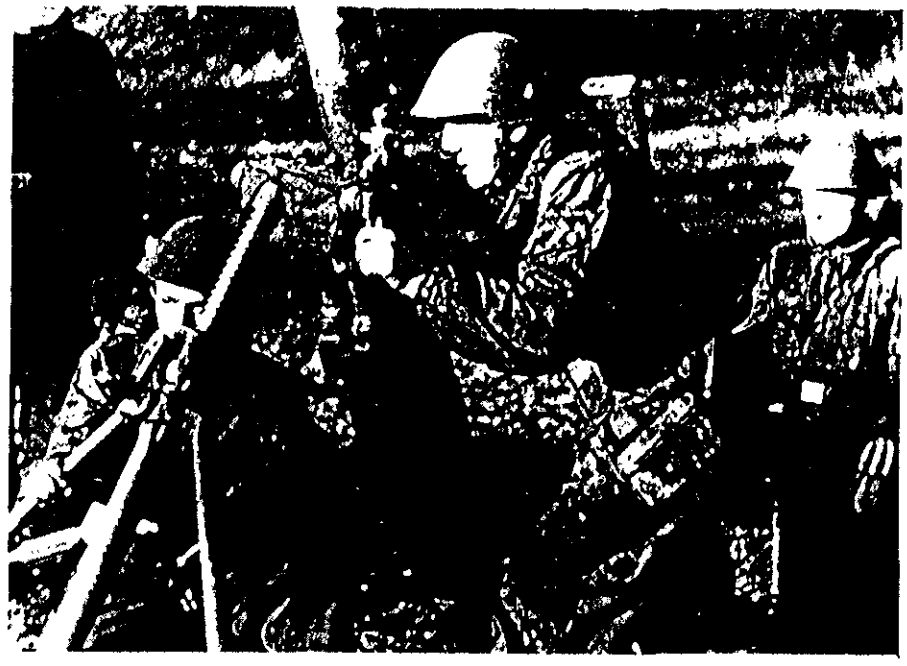
cording to a USAREUR pamphlet, the 120mm mortar is "a highly creditable Soviet achievement in originality and practicality of design."

The M1943, although initially used as a regimental-level weapon, is currently found in a six-piece battery assigned to the motorized rifle battalion. A smoothbore, muzzle-loaded weapon, the M1943 can be either drop-fired or trigger-fired by means of a lanyard. With a six-man crew, the M1943 provides direct support fires out to a range of 5,700 meters and delivers high explosive, incendiary, smoke, illumination, and chemical munitions.

Although all Soviet mortars have difficulty in traversing rapidly, the M1943 can be shifted up to six degrees without its bipod being moved. For purposes of transportation, the M1943 can be broken down into three components. Normally, however, it is folded together with its bipod and towed on a two-wheeled carriage by a GAZ-66, GAZ-69, or MTLB vehicle. In addition to the Soviet Union, the other Warsaw Pact nations, the PRC (where it is the Type 55), and various insurgent movements use the M1943 model and, in isolated cases, the M1938.

Although the M1943 120mm mortar is currently in the Soviet inventory, there have been continuing reports concerning a replacement for it, particularly with regard to the Soviet troops in Afghanistan. At least one reference identifies a new model 120mm mortar, tentatively designated the M1965, which apparently was never deployed. Viktor Suvorov has stated, however, that beginning in 1971 Soviet motorized rifle battalions were re-equipped with an 82mm automatic mortar nicknamed the "Vasileck." Athough Suvorov claims the Vasileck is a relatively uncomplicated system, he credits it with being capable of both single round and automatic fire (up to 120 rounds per minute) delivering both conventional and antitank mortar rounds.

Six Vasilecks are assigned to the mortar battery of a motorized rifle battalion. The Vasileck itself is mounted on a self-propelled armored vehicle or towed by a standard prime mover. The



This Warsaw Pact 120mm mortar appears to be a model M1938 because of the shorter shock absorber cylinders.

deployment of such a weapon, especially in the self-propelled version, provides the battalion commander with a highly mobile and versatile means of fire support capable of concentrated fire (up to 720 rounds per minute) in both a conventional mortar role and, more importantly from the Soviet viewpoint, an antitank role.

When tactically deployed, the M1943 120mm mortar batteries are located one-half to one-and-a-half kilometers from the line of contact in a linear formation 150 to 250 meters long. The mortar battery is normally deployed as a single unit providing direct support fire. Under special situations, the battery can be divided into two firing platoons or attached to one of the battalion's companies.

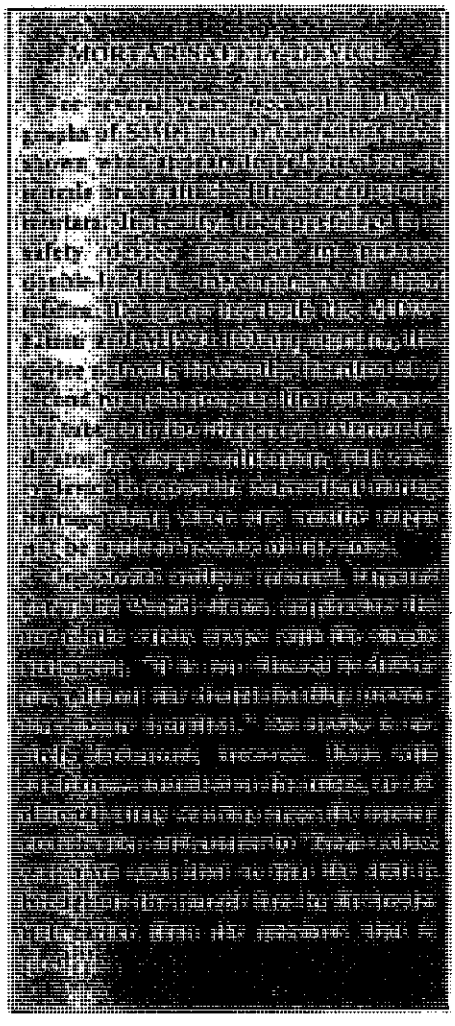
OTHER MORTARS

For a number of years, the Soviets have deployed two models of 107mm mortar, designated the M1938 and the M107. Both systems are allegedly scaled-down versions of the M1938 120mm mortar. The M107 is the more modern system and is replacing the M1938. With a range of 6,300 meters and the capability of HE, smoke, and chemical fires, these 107mm systems are assigned to Soviet mountain units.

The Soviets have also pioneered the development of heavy caliber mortars such as the M160 (160mm) and the M240 (240mm). One of the major differences between these heavy mortars and the medium caliber mortars is the fact that the heavy mortars are breech- rather than muzzle-loaded. The trigger-fired M160, introduced in 1953, has a maximum effective range of 8,040 meters, but it fires only HE ammunition. It is mounted on a two-wheeled carriage, towed by a GAZ-66 general purpose cargo truck.

Originally fielded with motorized rifle divisions, the M160 is currently deployed with Soviet mountain units. It is also in service in the PRC where it is called the Type 56 160mm mortar and deployed with twelve tubes per infantry division. Various makes of the 160mm mortar have seen combat with the Indian Army during the 1971 Indo-Pakistani War and with the Arab forces during the various Middle Eastern conflicts, to include the current situation in Lebanon.

The M1953 240mm mortar, also referred to as the M240, was first deployed in 1953 and is the largest standardized mortar currently in service with the Soviet Army. Although no longer in production, it may still be



deployed in the heavy artillery brigade found at the Front level. It is breech-loaded with a maximum range of 9,700 meters and has replaced medium caliber conventional artillery pieces in certain fire support roles. In loading, the tube is rotated on the trunnions until it reaches a horizontal position that is five feet off the ground. Its barrel is 5.34 meters long, and it has a large disc-shaped baseplate with star-shaped ribbing on its underside, small vertical cylinders on both sides of the barrel just above the axle, and a collar or yoke around the tube itself in which the trunnions are located.

A truck or artillery tractor is the prime mover for the 240mm mortar, which is towed muzzle first. This prime mover also transports the eight-man mortar crew and the system's ammunition, one round of which requires a team of four or five men to lift it into the breech. The 240mm mortar has been described as a "massive weapon" that fires a 100-kilogram (220-pound) high explosive round, and it may have a comparable chemical capability.

More ominously, the 240mm mortars have been assessed as having a nuclear capability. The round in this instance reportedly weighs 130 kilograms. At least one respected observer has speculated, however, that such a round may have been discarded since its blast radius could have been greater than the mortar's maximum range. As in the case of the 160mm mortar, the 240mm mortar has reportedly been observed in combat in Lebanon.

Two other "monster mortars" entered the Soviet arsenal — in extremely limited numbers — during the "bigger is better" decade in the 1950s. During the 7 November 1957 Moscow parade, the Soviets unveiled the M1957 420mm self-propelled mortar. The mortar was mounted on a modified (lengthened) JS tank chassis. The only visible difference between the 420mm mortar and the 310mm self-propelled gun unveiled during the same parade was the lack of a recoil cylinder above the mortar tube. Initial observations mistakenly identified both systems as 300mm gun launchers designed for long-range rocket-assisted projectiles.

The Soviets improved on their designs and introduced the second 420mm mortar, the M1960, which showed extensive modifications. The tube was longer, the vehicle's suspension had been improved with the addition of a larger shock absorber system, and the cab of the vehicle had been repositioned. The M1960 was credited with a maximum range of 18,280 meters and an HE projectile weight of 770 kilograms (1,700 pounds).

Most recently, persistent reports have mentioned a new self-propelled nuclear-capable mortar in service with the heavy artillery brigades found at Front level. Suvorov has said that this system, introduced in 1970, is mounted on a GMZ chassis, which provides increased cross-country mobility and improved crew protection. Allegedly, efforts are now under way to equip not only Front level artillery formations but also Army and Division level commands with a regiment and a battalion, respectively, of self-propelled 240mm mortars. This is one way the Soviets could provide simple yet economical mass fire support. Further reports indicate that as of 1980 this new mortar had been deployed with Soviet Category I units stationed in the Group of Soviet Forces Germany and the Western Military Districts of the USSR. It is also reported that the self-propelled system has an automatic loading device comparable to the one fitted to the Israeli 160mm mortar.

In the past few decades, U.S. military contact with Soviet mortars has been primarily limited to those in Vietnam. During the Vietnam War, conventional North Vietnamese Army and People's Liberation Armed Force units included mortars in their artillery arsenals. The mortars — some captured and some supplied — included 60mm, 81mm, 82mm, and 120mm systems.

In an era of high technology weapon systems, the continued Soviet reliance on mortars may seem anachronistic, perhaps even humorous. But the simplicity of design, the rugged operational reliability, and the lethality of these systems should never be underestimated. Like the Russian Army that preceded it, the Soviet Army loves its mortars.

CAPTAIN SCOTT R. GOURLEY, a U S Army Reserve Field Artillery officer, is an ROTC graduate of the University of California at Los Angeles While on active duty he served, among other assignments, as an instructor in target acquisition and Soviet artillery at the U.S Army Field Artillery School

CAPTAIN DAVID F. McDERMOTT is an Intelligence officer, also in the U S Army Reserve, now serving with the 91st Division (Training), at the Presidio of San Francisco A graduate of the U S Military Academy, he served at Fort Hood in Military Intelligence assignments while on active duty

Initial Skill Trainer MOS

MAJOR JOSEPH E. PERKINS

The classification of jobs necessary to field any army has been an important step in organizing men and women for war since the dawn of civilization. Improvements such as standardized aptitude, achievement, and medical testing have enabled today's Army to predict the trainability of a total stranger with better than 90 percent reliability. Unfortunately, as that stranger becomes a soldier and climbs from one skill level to the next, the classification process loses its accuracy, objectivity, and predictability. The lack of correlation between a job description and the skills of the job holder is particularly noticeable among drill sergeants, especially in a U.S. Army Reserve training division.

The drill sergeants in today's USAR training divisions were intended to augment or replace the cadre of existing training centers or to set up new centers upon mobilization. Although these drill sergeants give a good account of themselves during their active duty training tours, most of them are not qualified to hold the military occupational specialties they've been awarded.

CONTRADICTION

This obvious contradiction is due more to weaknesses in the current skill classification and verification system than to inadequate performance on the part of the drill sergeants or to inflated evaluations by their supervisors. The creation of a separate MOS that would incorporate the skills necessary to train recruits to Skill Level 1, or to supervise their training, under the constraints of a training division's personnel and equipment allowances, would reduce the disparity between the drill sergeant's job description and the actual job he performed.

As it stands now, a drill sergeant's job is not an MOS at all. Rather, it is a special qualification identifier that a noncommissioned officer earns after at least four years of on-the-job experience in one or more stateside or overseas tours. It presumes that, before an infantryman "earns his hat," he has served as an entry level rifleman, mortarman, or a TOW gunner to the extent that he has led a fireteam or a squad during live fire ARTEPs. The requirement that a noncommissioned officer must have progressed through a succession of increasingly responsible jobs before receiving drill sergeant training is reflected in the job description of an 11B30 or a 19E40. It is this prerequisite that contradicts the reality of the successful USAR drill sergeant.

Most USAR and some Active Army "hats" who are considered qualified infantrymen, or tankers, or artillerymen, on the basis of standardized written tests and performance evaluations, have never served as mortar squad leaders, artillery section leaders, or tank commanders — and they probably never will. Yet, despite belonging to divisions that have fewer tanks than an armor company and only two batteries of cannon, the Reservists have had enough branch training to earn high marks from their active counterparts at the training centers.

How is this possible?

The answer is obvious. The job of transforming a civilian into a novice rifleman, tanker, or cannoneer clearly does not require that each drill sergeant be branch qualified at Skill Levels 3 or 4. Conversely, leading a squad or serving as a platoon sergeant does require the experience that training successively larger and more complex groups of soldiers requires. Should drill sergeants without that experience be considered qualified to replace squad leaders or platoon sergeants upon mobilization? Not at all. Bringing civilians to novice skill levels as soldiers and preparing units to function through the noise, heat, and smoke of battle are two very different, though related, tasks.

TWO DANGERS

Two dangers are an inherent part of our current classification requirements. On the one hand, the USAR drill sergeant is given the frustrating and often unattainable task of honing his skills as an infantry squad or platoon sergeant in an organization that has neither squads nor platoons for him to lead. On the other, if he is able to verify his MOS through the Skill Qualification Test batteries, he becomes classified as something he is not. He may be an above-average student of Soldier's Manuals and How to Fight Manuals, but he is far from being a squad leader or a tank commander. Yet, under the current classification system, that is precisely how he is advertised to mobilization planners.

Geography and the nature of Reserve duty do not help. The Active Army infantryman might rotate through One Station Unit Training at Fort Benning, spend a tour south of the Demilitarized Zone in Korea, and serve at least part of a duty tour at Fort

Soldiers in One Station Unit Training at Fort Benning.

Riley in the four or five years before he enters the Drill Sergeant Academy. His Reserve counterpart, after OSUT, will return to his job and his family. And while the Active Army soldier is practicing squad and platoon tactics, hipshoots, and battle drills during a series of field training exercises and unannounced readiness tests, the Reservist is learning the infantryman's craft through study, instruction, and practice drills with makeshift units and scarce training resources.

Stationing problems and parochialism also contribute to the lack of opportunity a Reservist has to polish his skills. In small towns, for instance, there is usually only one unit. If it's an engineer platoon, then the high density specialty in that town will be engineering. But if that unit is reorganized as a quartermaster shower and laundry unit, as sometimes happens in the USAR, no one moves out of town. The unit simply turns in its engineer equipment, requisitions quartermaster gear, administratively reduces and classifies enough soldiers to conform to its new personnel allowance, and begins to train its soldiers, individually and collectively, to be ready for mobilization. Thus, in small towns, cross-fertilization and seasoning is accomplished only when the local unit is reorganized, and this usually happens only once or twice a decade.

The larger the community, of course, the more opportunity there is for transfer between units. For example, a soldier might serve a tour with the 1st Battalion, 315th Infantry (Mechanized), in Philadelphia learning his craft as an infantryman. Then he might transfer to the 78th Training Division (only an hour away by commuter train across the Delaware River) where he can exploit his leadership experience by becoming an infantry drill sergeant. But this rarely happens. Parochialism, lack of information, indentification with the old peer group, and skepticism about the opportunities to transfer back make such arrangements impractical between two USAR units and impossible between a Reserve and a National Guard unit.

As a result, two classes of infantrymen, tankers, and artillerymen have been created in the USAR: those with collective training and leadership experience, and those without it. Yet the personnel selection and classification system does not recognize the distinction between them — and it should.

The creation of a special USAR MOS would not be without precedent. Skills peculiar to USAR organizations and their equipment have already been identified in the fields of air defense (16F), aerial reconnaissance and surveillance (17L), data processing (34J), and railway equipment repair (65B, D). Establishing initial skills trainer MOSs in the infantry (11T), armor (19T), and artillery (13T) career management fields would recognize the realities imposed on the training divisions and on the USAR drill sergeants by equipment and organizational constraints and geography. (These MOSs might also prove useful in classifying Active Army combat arms drill sergeants whose branch backgrounds were limited to training center tours or non-ARTEP unit experience.)

Because the tasks a soldier must master to hold a basic (11B, 13B, 19E) MOS are more numerous and more sophisticated than those for the trainer MOS, the simpler MOS could serve as a feeder for the more complex one. By verifying his skills as an 11B4X, a soldier would be considered qualified as an 11T4X. However, for an 11T to qualify as an 11B, a transition regimen or evaluation would be required, and both would be based on ARTEP performance.

An initial skills trainer MOS, therefore, would make the selection and classification system more accurate for three of the combat arms. By determining additional training requirements before general mobilization and by identifying individuals qualified by experience and training to replace mid-level NCOs in infantry, armor, and artillery battalions, the Total Army could use its scarce manpower resources — its squad, section, and platoon sergeants — more efficiently.

MAJOR JOSEPH E. PERKINS, a 1965 graduate of The Citadel, is assigned to the 84th Division (Training) in Milwaukee, Wisconsin. Previously, he held a succession of command and staff positions in air cavalry, armor, and infantry units as a Reservist and a National Guardsman in the United States, Germany, and Vietnam.

The Mil
and the Mil Relation Formula

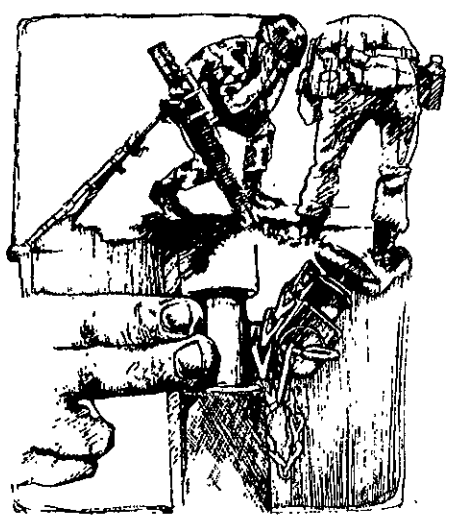
MAJOR PETER R. MOORE

Most infantrymen are familiar with the fact that mortarmen and artillerymen use the mil (1/6,400 of a circle, or about 1/18 of a degree) instead of the more familiar degree (1/360 of a circle) as their basic unit of angular measurement. We have all been taught the mil relation or WORM (W = RM) formula, which is most commonly used for finding deviation shifts when adjusting indirect fire. But few infantrymen (including mortarmen) know where the mil and the mil relation formula came from, or more important, how accurate the formula is.

The mil was developed by the French Army in the 1890s and was originally called the *millieme* (French for "thousandth"). The credit for the invention goes to a Captain (later Major General) Estienne, who designed a new sight that was graduated in 6,400 mils and adopted in 1900 for the famous 1897 model 75mm gun. The 75 was the first field piece with an effective hydro-pneumatic recoil system, allowing it to be fired without being relaid after each round. It became the standard American direct support artillery weapon in World War I and stayed in our service through the following two decades.

The Germans copied the French 6,400-mil division of the circle before World War I, while the Russians adopted the 6,000-mil circle and have stayed with it. The first American cannon to have its deflection scale graduated in mils was the 1902 model three-inch field gun. This weapon was our first modern field piece, but its hydraulic and spring recoil system was not as good as that of the French 75.

The mil relation formula itself cannot be said to have had a sole inventor. All artillery officers in the late 19th century had to be proficient at trigonometry because of the equipment of the period and the lack of accurate maps; the ability to develop equations such as the mil relation formula on an "as needed" basis was part of their stock-in-trade. Magazine articles and



manuals of the period describe the mil as one-thousandth of the range. Thus, a mortarman firing 4 mils to the right of a target at a range of 6,000 meters would have been 24 meters off. Such relationships could have been worked out without the mil, of course, but the mil made it far easier. Consequently, official credit must again be given to Captain Estienne.

It would be nice to get an American into the picture, though, and there was such an American, Second Lieutenant (later Brigadier General) Alston Hamilton of North Carolina. Hamilton was involved in the development of a method of indirect fire in 1897, but it required a complicated instrument that was in short supply. He therefore worked out a simpler method and equipped his battery accordingly for the Spanish-American War in the following year. (American field artillery used only direct fire in those days, though, and indirect fire proved unnecessary in the Cuban campaign.) In 1899 Hamilton described his technique in an article in the *Journal of the United States Artillery* entitled "A Simple Method of Laying Guns for Indirect Fire for the 3.2 B.L. Field Rifle." (The articles of this publication, beginning in 1890, reveal that Hamilton's was the first to show the mil relation formula.)

The 3.2-inch gun that Hamilton was dealing with had its deflection scale graduated in "points," each equal to 1/6 of a degree (about 3 mils). In his article Hamilton considered the problem of concentrating the fire of his guns on a single point (a converged sheaf); he then had to determine how many points to shift each gun with respect to the adjusting gun. A mortar fire direction center today would solve this by using the mil relation formula M = W/R or by looking up the answer in the 100/R column of the firing tables. Hamilton used simple trigonometry to work out a variant of the mil relation formula for points: M = W/(3R) or W = 3RM (where the angle M is measured in points).

There are 6 points in one degree and therefore 2,160 points in a full circle. If we divide the points into thirds, we see

that Hamilton's formula works out to W = RM for a circle divided into 6,480 equal parts, virtually the same as the present W = RM for a 6,400-mil circle.

It turns out that the introduction of the mil coincided with the arrival of modern artillery and the beginning of the changeover from direct to indirect fire. Modern mortars were developed a decade and a half later (during World War I), and so infantrymen found themselves having to learn about mils. World War I also saw the widespread use of telephones at the tactical level for forward observation, and the tactical use of radios soon followed. The development of extensive electronic communications meant that infantrymen were likely to find themselves adjusting artillery fire, which again required a knowledge of the mil and an understanding of its versatility.

With some simple logic and mathematics, we, too, can come to a better understanding of the whole matter, which is something that we now only memorize. This understanding will make the memorization easier and will let us see just how useful the mil relation formula really is.

First, the world "mil," as we have seen, means one-thousandth (the U.S. dollar, for example, is divided into 100 cents or 1,000 mils, and wire is measured in mils, each equal to 1/1,000 of an inch). But what is the Army's mil one-thousandth of?

To answer this question we need to consider three more questions. Why not divide the circle into 360 degrees or into 64,000 parts instead of 6,400? Why divide it into 6,400 parts instead of, perhaps, 6,283? Why not divide it into 6,000 parts as the Soviets do?

The first question is easy enough to answer. If mortarmen and artillerymen used the degree as their unit of angular measure, then to be accurate they would have to use fire commands that included decimals — for instance, "Deflection one seven nine *point* two five." Fire commands must be shouted out clearly in all kinds of weather, and having a decimal point in them would be asking for trouble. On the other hand, if we used 1/64,000 of a circle as our unit of measure, then deflection commands would be overly precise. (The field artillery does use tenths of mils in special cases, but an examination of bursting areas, deflection probable errors, and ranges of weapons from mortar and cannon firing tables show that we want a unit of measure in the general area of 1/6,400 of the circle.)

The second question (why 6,400 instead of 6,283) is also simple to answer. There may be a theoretical reason, as we will see later, why a mil equal to 1/6,283 of a circle would be better than 1/6,400, but a number like 6,283 is awkward to work with. It cannot be divided by anything, but 6,400 can be divided easily by 2 or by 5 so that sectors can be subdivided many times without using fractions (6,400 ÷ 2 = 3,200 ÷ 2 = 1,600 ÷ 2 = 800 ÷ 2 = 400 ÷ 2 = 200 ÷ 2 = 100 ÷ 2 = 50 ÷ 2 = 25 ÷ 5 = 5). The Soviet choice of 6,000 has the added advantage of being divisible by 3 as well as by 2 and 5 (6,000 ÷ 2 = 3,000 ÷ 2 = 1,500 ÷ 2 = 750 ÷ 2 = 375 ÷ 5 = 75 ÷ 5 = 15 ÷ 3 = 5). In short, it is easy to do mental arithmetic with either 6,400 or 6,000.

ACCURACY

The last question (should we use 6,000 instead of 6,400) gets to the heart of the mil relation formula: W = RM, where W = width in meters, R = range in thousands of meters, and M = angle in mils. The formula is based on the assumption that a one-mil arc subtends a distance of one meter at a range of 1,000 meters, or that one mil subtends a distance equal to 1/1,000 of the radius of a circle drawn with the observer at the center, and a radius equal to the observer-target distance. It is easy to check the validity of this assumption by using the formula for the circumference of a circle: C = 2 (Pi)r, where Pi = 3.1416 and r = radius of the circle. A circle with a radius of 1,000 meters has a circumference of 2 x 1,000 x Pi = 2,000 x 3.1416 = 6,283 meters. One mil subtends 1/6,400 of this circumference, so one mil = 6,283 ÷ 6,400 = 0.98 meter. Therefore, the assumption and the mil relation formula are 98 percent accurate for a one-mil angle. The formula slowly gets less accurate as the mil angle increases, but it is still 98 percent correct for a 100-mil angle. Accuracy then falls off more rapidly, but even for an angle of 600 mils (the maximum for which the formula is used), it is between 90 and 92 percent accurate. (The calculations for 100 and 600 mils require elementary trigonometry, and the results vary slightly depending on whether one is adjusting a burst onto a target or shifting from a registration point to a new target.)

In other words, dividing the circle into 6,400 parts means that each part will be almost 1/1,000 of the radius of the circle. The formula would be more exact, of course, if the circle were divided into 6,283 parts, but the resulting arithmetic would be too messy. Since 6,400 is slightly closer to 6,283 than is 6,000, the U.S. mil relation formula is slightly more accurate than the Soviet version (which is 95 to 96 percent accurate for angles between 1 and 100 mils).

The fact that the mil relation formula is about 98 percent accurate in most situations is worth knowing. Some infantrymen have the bad habit of assuming that their eyeball estimates are better than the formula when adjusting indirect fire. They invariably underestimate deviation errors. For instance, they call for a 50-meter shift when the formula specifies 120 meters. This wastes time that may not be available on the modern battlefield. Yet, they usually know the range fairly accurately from the map (or from flash-to-bang time) and certainly should be able to measure the mil angle pretty well with their binoculars or their fingers. All they have to remember is that the mil relation formula is a pretty good one, and that only the enemy benefits from the assumption that calibrated eyeballs are better.

MAJOR PETER R. MOORE is an Infantry Reserve officer now serving as S-3 of the 11th Special Forces Group at Fort Meade. While on active duty he served as a 4.2-inch-mortar platoon leader with the 8th Infantry Division. In his civilian job, he is legislative assistant to a U.S. Senator

EDITOR'S NOTE: This article is an adaptation of a talk given by the author at Fort Benning earlier this year.

The term "light infantry," like "light horse," has always tended to titillate the military ear with its rather attractive musical ring. This was particularly true in the period following the South African War (1899-1902), during which conflict the dash and tactical prowess of Boer mounted infantry, commandos, field-cornetcies, and corporalships made a lasting impression upon British imperial arms. A Montreal veteran of that struggle, the late Brigadier A. Hamilton Gault, in applying in August 1914 for a charter to raise the last privately sponsored regiment in the British Empire, let it be known that he personally preferred "light horse" in the name of the cavalry unit he originally proposed because it had an "irregular tang" to it. As there was a far greater demand for unmounted troops by this time, however, he agreed to settle for "Princess Patricia's Canadian Light Infantry," the term "Light Infantry" being included as "vaguely applicable" to the force initially contemplated in his draft proposal.

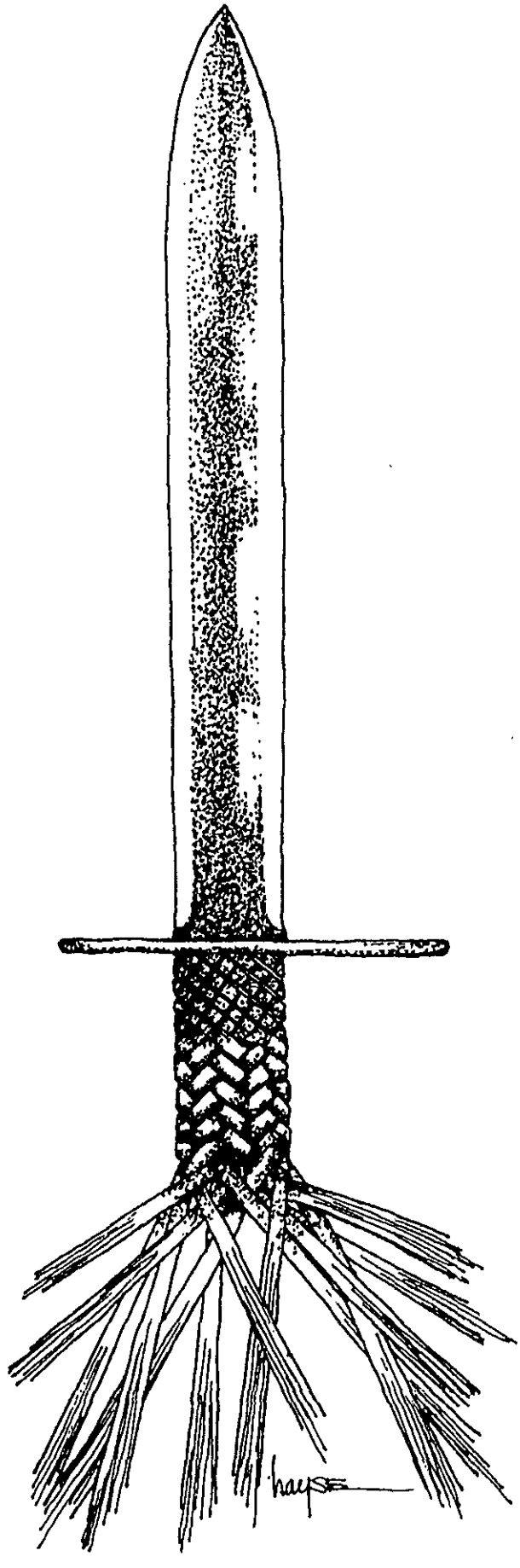
By the last half of Queen Victoria's reign, of course, names such as *light infantry, rifles, fusiliers,* and *grenadiers* had ceased to have any real meaning in the armies of the British and Indian empires. The dominance of the rifle had, in fact, placed the general purpose infantryman in a position of ascendency on the battlefield. This was perhaps the inevitable result of a military progression that had been originally spearheaded by the rifle regiments, which at one time were armed with rifles while the rest of the army had muskets. Fusiliers, for their part, were light infantry of an even earlier era; armed with a fusil — a light flintlock as opposed to a matchlock musket — they were used to guard artillery and encamped battalions. Grenadiers, in their time the elite of the infantry, had been specially selected soldiers who possessed the height and strength to hurl hand grenades with great accuracy and effect. But such names had been retained because of a strong historical tradition, and there continued to be tall grenadiers long after grenades went out of fashion. (By World War I, the term *grenadier* had so changed in meaning that when the grenade throwers returned to the battlefield there were objections to calling them grenadiers and they became known as *bombers* instead.)

Obviously, the infantry, constantly marching hand in hand with technology over all nature of ground, has been forced to appear in many forms and guises, several of them reincarnations, on successive battlefields. One suspects, nonetheless, that the appeal of light infantry lies as much in its psychical as in its physical dimensions. Light infantry tradition is rooted, for instance, in revolutions in thought, discipline, and officer-man relationships as well as in tactics, uniform, and equipment.

Historically, by the 1740s, the tactics of the European infantry of the line, based on volley fire, had become so rigid and mechanical that a need developed for skirmishing and scouting troops who could shoot accurately at individual targets and who could use ground to reconnoiter and to delay. The first large-scale appearance of light troops occurred during the War of the Austrian Succession (1740-1748) when Maria Theresa called upon her Borderers — "wild Croats and Pandours" who had been part of Austrian frontier defenses against the Turks — to defend her realm from northern and western threats. Early in 1741 more than 30,000 of these troops made their appearance on the battlefields of central Europe. Their effectiveness, which decreased substantially after their initial appearance, led other powers to introduce or build up similar forces. Significantly, many German states began to deploy companies of *jaeger,* or gamekeepers from the boar and deer hunts of the great forests, who were first-class woodsmen as well as crack shots with rifled arms.

The British Army had no light troops to speak of until certain line battalions serving in America during the 1750s raised some ad hoc light companies, because most active and prescient soldiers saw a need, as one such soldier put it, "to adopt some system for meeting on their own terms, but with the advantages of discipline, the Indians and the backwoods man." It remained, however, for Generals Wolfe and Amherst, both of whom used bodies of marksmen often armed with rifles, to actually introduce the widespread use of "light" or "rifle" infantry within the British Army.

In the wilderness of the North American frontier,



meanwhile, the sharpshooting tradition of the *jaeger* had already found new expression, the German and Swiss gunsmiths of Pennsylvania having transformed the rifles of their homelands into the long "American" rifle. British, European, and American developments in light units, therefore, were all fused in 1756 when many of these same Pennsylvania immigrants were formed into the Royal American Regiment, later the 60th Rifles. From this unit sprang the King's Royal Rifle Corps (today part of The Royal Greenjackets) and, less directly, their affiliated regiment, the Queen's Own Rifles of Canada.

A resurgence of British Army interest in light infantry occurred during the French revolutionary wars, when in 1797 Frederick, Duke of York, began to reform the light troops. This was in direct response to the extreme skill in skirmishing exhibited by the French, who in their early battles were able to inflict heavy losses on opposing line infantry without having to commit their own to close combat. Again, German influence was felt as Major General Baron de Rottenburg's *Regulations for the Exercise of Riflemen and Light Infantry* was published in English translation in 1798 and used to devise a light infantry drill system. General Sir John Moore, who was appointed by the Duke of York in 1803 to command Shorncliffe Camp, acknowledged that he used the book as his "groundwork" in the tactical training of the Light Division for the Peninsular War.

The King's Royal Rifle Corps and the newly created 95th Regiment (later the Rifle Brigade) formed the nucleus of this green-clad rifle force, which came to dominate not only French *tirailleurs* and *voltigeurs* but, in the words of one witness, the Peninsular Army itself:

When the Light Division joined the army at Talavera it had not been engaged with the enemy, while the army it joined had been engaged on the Douro and the Tagus, yet was inferior in discipline for war, seeing that its picquets were often in scrapes and at Talavera a brigade had been surprised. But the men of the Light Division, though new to war, were looked up to from the day of junction as the veterans of the army! *And by their discipline they sustained that character throughout the war, committing no blunders* ....

Sir John Moore's major qualification for command lay in his ability to awaken the faculties of those under him by inspiring and teaching. The secret to his training system, of course, was in its approach to discipline and motivation. "The service of light infantry," he wrote, "does not so much require men of stature as it requires them to be intelligent, hardy, and active." He believed the essential thing that was needed was not a new drill but a new discipline, a new spirit that aimed at replacing a mechanical instrument with a living organism.

Moore's whole system was one of developing rather than suppressing intelligence, of making the training of the men contribute to the effective unity of the whole, of enlisting the zeal of the private as much as of the officer. Self-discipline fashioned on the role-model, with its em-

phasis on the prevention instead of the punishment of crime, underscored Moore's methodology. The light infantryman who was capable of fighting in open order under less direct supervision was, in effect, the harbinger of the general purpose infantryman of the future.

TRENCH WARFARE

The domination of the battlefield by foot infantry receded as the relative power of the rifle ebbed during World War I, in the course of which high commands variously persisted in attempting to fight the bullet with the target. The trench warfare that ensued also produced a specialized infantry of bombers and bayonet-men who often preferred to resort to maces and war clubs. Hopelessly addicted to massive artillery barrages, they had forgotten how to deliver accurate rifle fire and failed to appreciate how to employ light machineguns to fight their own way forward when artillery support ceased.

The Germans' introduction of elite storm trooper units, organized around the basic *gruppe* with its own base of fire in a four-man light machinegun *trupp* and assault element in a seven-man *stosstrupp,* must thus be regarded as among the most significant of infantry developments. With a low ratio of men to weapons and a high quality of junior leadership, the *sturmtruppen* ultimately set the standard for the remainder of the German infantry. Established storm units like *Sturmbataillon Rohr* served as training cadres, teaching storm unit techniques and the new infiltration tactics to selected small unit leaders. These leaders, in turn, established storm units in their own formations. It is interesting to note, though, that General Erich von Ludendorff, who eagerly embraced this tactical solution to the impasse of trench warfare, very much regretted the counter-productive 1918 decision to divide frontline troops into "storm" and "trench" divisions.

In many respects the German *sturmtruppen* manifested certain traits traditionally associated with light infantry: They exploited surprise, moved fast, employed stealth, shot straight, and were capable of independent and highly individual performance. Although they were special troops and obviously well-trained, they were not really specialists but rather all-round soldiers who were capable of doing many things. They also represented an essentially intellectual, as opposed to a technological, solution to an existing operational problem. Similarly, in World War II, two relatively modern forms of special troops — mountain troops and airborne forces — were introduced to capitalize upon or resolve particular military situations.

This conflict, in fact, saw the biggest build-up of mountain troops in history. By 1944, for example, the German forces included nine *Wehrmacht* and six *Waffen-SS* mountain divisions; they also had under their command numerous allied mountain divisions. Because they were highly versatile, these divisions not only operated in the mountainous regions of Norway, the Mediterranean, and the Caucasus, but were found to be the most effective type of force for sustained combat in the forests and swamps of Russia.

Interestingly, German mountain battalions and companies had twice as many machineguns and mortars as comparable standard American infantry units had, with only two-thirds as much manpower at company level. In the view of Steven L. Canby, who has written extensively on military strategy and tactics, mountain troops definitely fall into the category of "classic light infantry," which, he argues, is "an infantry qualitatively distinct from that of the 82d Airborne or the new directions of the 9th Division."

Airborne forces, of course, also made their debut in strength during World War II. The German feat of capturing an island — Crete, which was defended by 39,000 troops — with an airborne force never larger than 15,000 men and initially without any artillery, heavy weapons, or vehicles remains one of the greatest feats in military history (the critical air-landing of the 5th Mountain Division notwithstanding). Due to their severe losses, however — 5,670, mostly in the 7th Airborne Division — the Germans did not undertake another major airborne operation during the war.

The Soviets for their part, despite being the first to experiment with the airborne idea, in the initial stages of the war, did not seem willing to leave so many picked infantrymen inactive for long periods. Later, nonetheless, they did undertake a number of significant combined parachute and air-landed operations (two each of about 10,000 men) west of the Urals. While all of the major operations conducted by the Soviets failed to achieve their objectives, many of their small-scale insertions were effective.

Anglo-American airborne operations, on the other hand, were conducted on a more successful and grander scale, but there are some who still argue that the British airborne program, much too large for the available airlift, was essentially a waste. Airborne divisions spent too much time out of action (the 1st Division, for example, was in reserve from June through September 1944), and potentially good combat leaders who might otherwise have improved the effectiveness of line infantry units were, in reality, left out of combat.

This last point deserves some expansion, since it has some direct effects on the proliferation of specialist combat troops generally. The commander of the U.S. Army Ground Forces in World War II, Lieutenant General L.J. McNair, contended that "specialist-type" training "almost invariably taught particular skills ('tricks') at the expense of general military proficiency," and he stressed "the futility of perfecting men in the techniques of skis, gliders, or landing craft if after meeting the enemy they were not competent all-around soldiers." General William Slim of the British Indian Army was also much opposed to forming specialist forces, with the exception of airborne units — forces that would drain high quality

manpower from the line infantry units. In his opinion:

The result of these ... special units was undoubtedly to lower the quality of the rest of the Army, especially of the infantry, not only by skimming the cream off it, but by encouraging the idea that certain of the normal operations of war were so difficult that only specially equipped corps d'elite *could be expected to undertake them. Armies do not win wars by means of a few bodies of super-soldiers but by the average quality of their standard units .... The level of initiative, individual training, and weapon skill required in, say, a commando, is admirable; what is not admirable is that it should be confined to a few small units. Any well-trained infantry battalion should be able to do what a commando can do.*

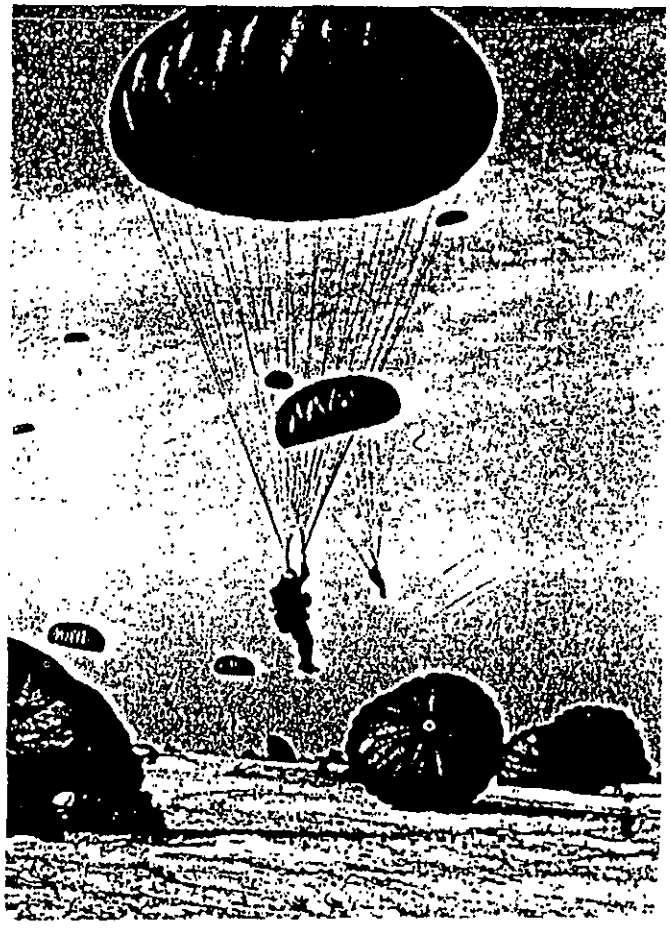
TWO FORMS

As when there were pikemen and musketeers, the North Atlantic Treaty Organization (NATO) today recognizes two forms of infantry: "light" or non-armored infantry that, ground- or helicopter-mobile, fights dismounted and is suited for combat in terrain where tanks cannot deploy; and "heavy," or armored infantry, that with high mobility, armor protection, and the ability to work within a system of armored combat troops, can fight either mounted or dismounted. In short, infantry riding in armored personnel carriers (APCs) or mechanized infantry fighting vehicles (IFVs) able to keep pace with and support the mobile armored battle belong to the latter category, while parachute, airtransportable, mountain, lorried, and foot infantry belong to the former.

According to the former commander of NATO's Central Army Group, General Frederick J. Kroesen, "the infantry that General Patton knew and valued so highly came in but three categories: paratroopers for dislocating enemy defenses against deep envelopments; light infantry to clear, reconnoiter and protect; and mechanized infantry to accompany his tanks during exploitation or counter-attack." What many people tend now to forget, in Kroesen's view, is that "most of the divisions involved in the greatest battles of World War II were light infantry."

If the matter of employing light infantry today remains a somewhat bewildering subject, it may in part be directly related to the basic confusion over the role of infantry generally. At least one author — D.M.O. Miller — has already argued in *Military Technology and Economics* (May-June 1979) that "one of the most fundamental questions in modern warfare" is that of "the proper role and use of the infantry." No less an authority than the late Colonel John Weeks felt compelled to write in the same issue, "It is very difficult to produce a precise definition of the role of infantry and the best that can be done is to outline the various tasks that the infantry are called upon to fulfill ...."

The failure of Soviet infantry units to keep up with



their tanks during World War II was a major, if not a decisive, factor in the relative tactical successes won by the *Wehrmacht*. It also undoubtedly figured, however, in the 1967 introduction of the world's first true infantry fighting vehicle, the BMP. Apparently having learned from the Germans that mobile infantry is an equal and essential partner of a tank crew force, the Soviets identified the need for infantrymen to be able to fight mounted from under armor in support of both tanks and the primary weapons of their own IFVs.

Like their precursors, the *panzergrenadiers* of the Third Reich, Soviet motor rifle troops tended to become a distinct and independent arm in their own right. During the great BMP controversy of the mid-1970s, it was even postulated that motor rifle forces, with artillery and air support, could carry out a series of slashing raids deep into an enemy's rear area. The effects of antitank guided missiles (ATGMs) during the 1973 Yom Kippur War, though, increased the vulnerability of the BMP, which the Israelis judged to be an 11-man coffin. (Certainly a hit from any primary surface-to-surface or air-to-surface antitank warhead will disrupt the vehicle and probably disable all the men in it.) In short, a BMP-mounted strike force is too light for a high intensity environment (likely one reason the Soviets substantially boosted the number of tanks in their motor rifle divisions), and motor rifle troops are now back to performing their primary task of helping tanks get forward.

It has been accepted, of course, that intimate tank sup-

port is a proper role for infantry, the "in house" or *Hausinfanterie* kind, the value of which was appreciated by both Germans and Russians on the Eastern Front and the neglect of which almost cost the Israelis the 1973 war. But whether such armored infantry should constitute the bulk of an army's infantry component and dictate its fighting doctrine is debatable. Indeed, this is perhaps the crux of the infantry problem, because it poses dilemmas such as whether the soldier should fight mounted or dismounted, what the optimum IFV armament should be, and the importance of traditional infantry skills, not to mention costs in money and technical manpower. Brigadier Richard Simpkin, for instance, regrets that the cavalryman has to worship a metal box instead of a horse. To him, the "mechanized infantry," or *panzergrenadier,* concept as it is today "stands for an ideal which lacks both a doctrine and a cult object and is thus open to truly Orwellian levels of double-think and double-speak." He argues that:

... the same men, whether marching, bundled into "battle taxis," mounted in Marders, hoisted in helicopters, or carried around on magic carpets, cannot do two different jobs in two different places at the same time. *Second, the fact that well trained and motivated tank crews can undergo a waiting period of several days closed down in their vehicles under NBC threat and emerge fit to fight does* not *mean that a dozen men packed like sardines into a tin box with all their equipment can do the same. The third notion, less specious but still highly misleading, is that taking an infantry battalion, organized to operate on its feet and steeped in tribal usages appropriate to the way of fighting, and packing it into mobile tin boxes qualifies it to participate in the sophisticated quickstep of the maneuver battle. The tank man halts between moves; the infantryman moves between positions.*

There is no doubt that the tendency of modern NATO armies has been to follow the German lead in making mechanized or armored infantry the most purposeful category. In short, infantry whose major purpose was to protect tanks and get them forward in mobile warfare (dismounting only when immediately available dismounted support was essential to the latter) is now also tasked with positional forward defense, often in its own right. In the *Bundeswehr* defensive concept this means that tanks and Marder IFVs conduct a retrograde maneuver battle, falling back onto and through dismounted elements, which are preferably sited on reserve slopes. If ground has to be yielded, the Marders pick up their sections and retire to a new line of dismounted action, covered on their way out by the armor. As Marders can also be deployed in an anti-helicopter role, it would appear that in defensive operations at least the *Bundeswehr* places little emphasis on the direct support of infantrymen.

To some observers, the West Germans and Soviets have clearly "wedded their mechanized infantry to the vehicles they would have liked when they last fought each other" and ignored the fact that the power of the dismounted infantrymen to influence armored operations is "so much increased that the concept which led them to design those Leviathans is outdated."

Simpkin basically argues that mechanized infantry in the in-house role is not really infantry at all, but rather an appendage to the tank corps. In his opinion, the proposal to incorporate into the armored arm those regiments and self-propelled artillery units that had traditionally formed the motor battalions within British armored brigades during World War II (namely, the Royal Green Jackets and Royal Horse Artillery) would have been most appropriate.

He appears convinced that had armored logistic units also been allowed to retain their identity and their links, the resulting concentration of armored expertise might well have led to radical thinking on doctrine and equipment and to a sizable leap in fighting power. He also feels that if in-house infantry were organic to armor as the "assault troops" of British armored reconnaissance units are today, they would be better trained in the armored way of living and fighting; their section commanders, for example, would be more interchangeable with their vehicle commanders. They would also receive special training that, while omitting many irrelevant aspects of infantry training, would include a number of basic field engineering and recovery skills, as well as specialist skills such as the operation and maintenance of sophisticated surveillance systems.

TRADITIONAL LOT

It must not be forgotten, though, that successful defensive operations historically have depended as much on static or positional elements as on dynamic or mobile features. Providing the cover from which firepower is developed has traditionally been the lot of the infantry, which of all arms is deemed best able to hold ground. The whole alertness of an army, in fact, ultimately revolves around the infantryman; by day and night, in fog, rain or snow, it is he who stands on guard and patrols for information and domination. There must, of course, be enough men to provide the sentries (double at night) and the patrols, and to ensure that the great bulk of the infantry does not get too tired from too much sentry and patrol work.

Connected with this, infantry in the defense today faces several formidable problems. According to recently completed Canadian Army wargames, the greatest threat to the infantry is from Soviet artillery, which must be expected to destroy all unprotected troops on identified battle positions — and most of their IFVs if the troops are located with them. To dig-in properly while continuing their patrol and sentry tasks, however, calls for far more troops than most armored infantry organizations currently dispose. (The Marder and the Bradley, though ideally suited for supporting mobile tank forces, dismount only six men each.)

The additional threat of massed enemy armor must

also be viewed in light of engagement ranges: Fire that is opened too soon from main defensive localities risks incurring the destructive wrath of Soviet artillery. Yet, if IFVs are deployed forward in sniping positions they are likely to be subjected to attrition from the direct fire of enemy tanks and attack helicopters. Here again the mobility of infantry could be reduced to that of 1916.

All of this leads to the conclusion that, given appropriate terrain, the use of IFVs in depth as mobile fire support for properly dug-in infantry on reverse slopes might be a more reasonable defensive tactic. In such a case there could be greater need for a general purpose — as opposed to a strictly anti-IFV — main armament that has a high explosive, screening smoke, and illuminating capability in addition to HEAT (high explosive antitank) variations. This, naturally, begs the question of whether the cannon requirement should be separated from the troop lift requirement.

If there were such a vehicle, though, the IFVs could be employed under centralized control as direct fire support weapon systems in their own right, while APCs without cannon could remain in "hide" positions close enough to move up quickly and redeploy the dismounted infantry but far enough away to avoid destruction by artillery fire. Obviously, standard infantry battalions with larger dismountable sections and with soldiers better trained in traditional infantry skills would likely prove more battle effective in such circumstances than armored infantry battalions. (Even Rommel's infantry had to learn this lesson outside Tobruk in 1941.) Standard battalions would also be more capable of defending urban and forested areas in both forward and rear combat zones. Armored infantry battalions, in contrast, are not as well-suited for such terrain, for in the words of one German general:

My troops sit in vehicles, are trained to fight from vehicles, and their weapons are specially suited to fighting a mobile enemy in open country. I don't have the manpower, the training, the equipment for city fighting.

The matter of whether hostilities in Central Europe would be characterized by highly mobile, long-range engagements has already been disputed. The surface features and terrain structures of the Federal Republic of Germany are roughly 30 percent wooded, 50 percent agricultural fields, and 10 percent built-up areas and traffic infrastructures. The Soviets themselves estimate that only 50 percent of West Germany is passable to tanks. Target sighting estimates that are also accepted by the Soviets indicate that in antitank engagements, 60 percent of the targets are likely to be acquired at less than one kilometer; however, intervisibility to 2,000 meters and beyond is not expected to decrease below 30 percent.

The foregoing statistics, nonetheless, tend to reinforce General Kroesen's contention that on the drizzly Central Europe front:

We cannot hit what we cannot see and the 14 hours of darkness in mid-winter, snow, rain and the many days throughout the year when fog lasts until noon or even all day are limitations that today's weaponry cannot readily overcome. The same is true of our opponent's weapons. Those realities and the availability of tactical smoke-generating devices in abundance lead me to believe that the next war will be won or lost at the 300-meter range just as in the past.

It is perhaps for such reasons that Major General E.W. von Mellenthin continues to insist that "the Russian infantryman is still one of the most important military factors in the World."

If one adheres to NATO definitions, there is really no classification difference between standard, or line, infantry and light infantry. The advent of the helicopter, furthermore, may now allow both line and airborne infantry to fulfill the role of mountain troops in all but their most specialized aspects. (The *Bundeswehr,* incidentally, fields only one mountain brigade, which, along with one *panzer* and one *panzergrenadier* brigade, constitutes the 1st Mountain Division; the Soviets field no mountain troops per se but do train in mountain warfare.)

The 40 percent of West Germany that is wooded and populated, of course, should not be used as a reason for spawning numerous additional varieties of terrain-dependent infantry. One highly trained and aggressive type of infantry that can fight in both built-up areas and forests and engage tanks at close quarters should surely suffice. These neglected areas of combat, the direct consequence of the mechanized infantry interregnum, would then regain their preeminence along with such other time-honored infantry pursuits as patrolling, sniping, stalking

by stealth, and fighting at night. There would also be a greater requirement for more sophisticated demolition training and for operating more intimately with the assault engineers, all the while still being able to work effectively with supporting armor.

Infantry trained in this fashion would have no problem in carrying out the ambush, tank hunting, and raiding tasks associated with the "guerrilla-zone" or "net" operations proposed, respectively, by F.O. Miksche and Brigadier Simpkin. They would also fall into the category of Canby's "classic light infantryman" operating in "the mixed open and close terrain of West Germany" as "an adjunct element to complement and supplement the combined arms tank team."

While a blurred distinction between line and light infantries is perhaps fortunate for those armies that cannot afford more than one type, the difference between this category and mechanized or armored infantry must be better appreciated. The term "mechanized" appears to be the greatest cause of confusion, because it fails to relate clearly to the tactical requirement to fix or hold, on the one hand, and to hit on the other. Much cloudiness of thought in this regard might be largely dispelled, however, by merely recalling General George S. Patton's counsel that in an infantry formation — best suited for fighting through or holding ground — the purpose of tanks is to support the infantry. Conversely, in an armored formation — best suited for delivering lightning blows — the function of the infantry is to break the tanks loose. Again, line infantry trained in light infantry skills would be most useful to the former, and in-house infantry trained in armored support skills to the latter.

It is somewhat ironic, of course, that traditional light infantry, rifle, and *jaeger* units of both the British and the German armies were among the first armored infantry troops, which today constitute the heaviest of infantries. The lesson here may be that light infantry has historically been more connected with progressive military developments than with any one weapon, machine, type of terrain, or even tactic. Above all, it has invariably been associated with imaginative offensive action in the clash of arms.

A further irony of the current discussion on infantry employment in general is that armies have essentially passed this way before. In 1934 in a book entitled *The Infantry Experiment,* British General H. Rowan-Robinson wrote that "the future of infantry is one of those puzzles of the age which are the undigested fruit of the quick advance of science." Like some of our contemporary writers today, he went on to argue pejoratively that the "fiction that infantry is still the Queen of Battle is of continental concoction and receives some of its substance from the republican politician who much prefers a large army of short-service conscripts — chiefly foot soldiers — to a small professional standing army that might, like the Praetorian Guards, dominate the State." Voicing an "advanced military opinion," he concluded that "Infantry in its existing form has no great scope in continental warfare of the more advanced type."

Yet, as we now know all too well, the Western Allies in World War II all experienced critical shortages of foot slogging infantry reinforcements. The British, surprised by the North African theater's "rates of wastage" and faced with an acute shortage of infantry, eventually were forced to break up two divisions, though this measure solved only part of the problem.

By the first weeks of 1944, the U.S. Army's shortage of infantry replacements also reached crisis proportions. General Patton's Third Army replacement requirement for that year reached 9,000, the average rifle company being at only 55 percent of its authorized strength. In the Canadian Army, casualties in the infantry were much higher than had been calculated; by August 1944 the average deficiency in 15 battalions in the First Canadian Army ran to 120 all ranks. In effect, each battalion was more than a company short. On the eve of the Gothic Line battles in Italy, moreover, one light antiaircraft unit and an armored reconnaissance regiment were converted to infantry within the 5th Canadian Armored Division.

Though the Canadians, volunteers all, resorted to a remustering policy to produce more infantrymen, the situation eventually became so serious that it precipitated a political crisis within Canada itself. Paradoxically, in the opinion of General Ferdinand van Senger und Etterlin, the German defender of Cassino, although the numbers of infantry had steadily declined relative to the numbers of other fighting troops, the infantry remained more firmly established as queen of the battlefield.

An almost superstitious belief in the all-conquering powers of technology may indeed have caused the Western powers in World War II to grossly underestimate the role of the fighting man on foot. But given that war continues to be a primitive endeavor in which there is always a "friction" that militates against complexity, it is highly likely that the traditional infantry fighting skills applied with cunning and flexibility will still be applicable in the next one. In fact, we might do well to heed Shelford Bidwell's caution:

The more complex the weapon system the greater the mathematical probability, therefore, of wrecking it, not by using a super counter-weapon, but by reverting to the use of a few skilled raiders armed with nothing but rifle, grenade, and explosive charge.

Chances are these would be light infantrymen.

LIEUTENANT COLONEL JOHN A. ENGLISH, a field officer in Princess Patricia's Canadian Light Infantry, has served with both the British and the Canadian Armies in England, Germany, Denmark, Cyprus, Canada, and Alaska. He attended the War Studies Course at the Royal Military College of Canada, and his master's thesis for that course, "A Perspective on Infantry," was subsequently published in the United States. He recently completed an assignment as Chief of Tactics at the Combat Training Center, Gagetown, and is now a Visiting Defence Fellow at Queen's University.

COHORT Company Training Program

LIEUTENANT COLONEL JOSEPH C. WINDLE

CAPTAIN HAROLD E. RAUGH JR.

In an effort to restore its former sense of cohesion and teamwork, the Army has developed a unit-based replacement system as an alternative to the individual replacement system that has predominated since World War II. The key element in this new manning system is a regimental concept formed around Project COHORT (COHesion, Operational Readiness, and Training). The primary goal of COHORT is to improve unit cohesion and to stabilize personnel turbulence at company level. It will do these things by keeping a company of soldiers and their leaders together for three years, throughout their training, their stateside assignment, and their initial overseas deployment.

Clearly, the process of taking an entire group of soldiers straight from their One Station Unit Training (OSUT) and assimilating them into a regimental company requires a well considered training strategy. Not only the soldiers but also the company's leaders have to be trained in a somewhat different way. Unfortunately, though, there is no standarized program for COHORT company training. When the 2d Battalion, 32d Infantry, 7th Infantry Division (Light) was scheduled to get its first COHORT company last year, the battalion's planners, therefore, had to come up with a strategy of their own for conducting COHORT training.

The purpose behind the battalion's training strategy

was to increase the effectiveness of all its training and to ensure that the COHORT company was properly assimilated into the parent battalion.

This training strategy, which became the keystone of all chain of command, individual, and collective COHORT training within the battalion, may also be useful to other battalions that are getting COHORT companies. It is based upon ten principles.

Develop a high-quality training program for the chain of command and the leaders. The key phrase here is "chain of command and leaders," as opposed to "cadre" — a training center term and a misnomer in a COHORT unit. The chain of command is just that, and these people are scheduled to remain with the COHORT company for its entire three-year life cycle.

These leaders must be confident, competent, and motivated, and a good train-up program is the key to their success. The program the battalion developed for this purpose is six weeks long and consists of the subjects shown in Figure 1.

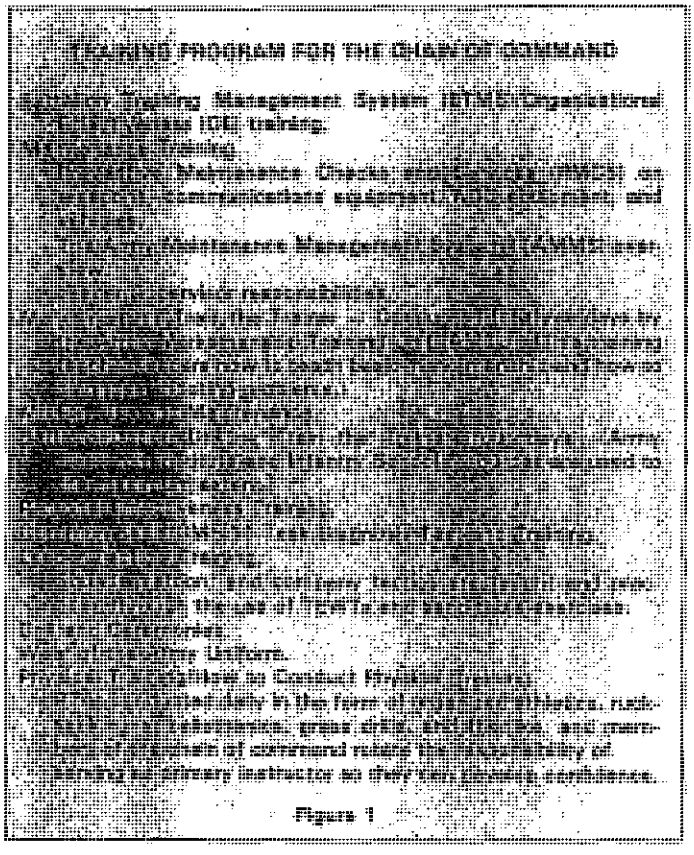


Figure 1

Visit COHORT units during their OSUT. The battalion commander, the company commander, the first sergeant, and the key members of the chain of command visit their COHORT units during OSUT. (More on this later when we discuss transition training.)

Become thoroughly familiar with the OSUT program of instruction. COHORT leaders must know what is in the OSUT program before they can develop the individual and collective training that will follow it.

Integrate the necessary individual training up front. Once the COHORT leaders are totally familiar with the OSUT POI, they develop their training plans. The first items they put into the plan (in the priority shown) are the critical tasks and skills that are not taught in OSUT, not taught to Soldier's Manual and ARTEP standards, taught but not tested in OSUT; and (for sustainment) taught and tested on mid-cycle and end-of-cycle tests in OSUT.

Assess the soldiers' proficiency in individual skills. The battalion's COHORT units conduct this assessment during the seventh to ninth weeks, after the squad ARTEPs. They assess not only the proficiency of the individual soldiers, but also the leadership and instructional abilities of the squad leaders in teaching their soldiers critical individual skills.

Conduct a leadership development program for COHORT leaders. During OSUT, ten soldiers who exhibit outstanding leadership abilities and potential are selected and designated "COHORT leaders." Nine of these soldiers serve as fire team leaders and one as an 81mm mortar squad leader. To further develop the leadership abilities of these designated leaders after OSUT, the battalion developed a 42-hour COHORT junior leader training program, which is outlined in Figure 2.

The battalion command sergeant major, the company first sergeants, and (in the case of map reading) the scout

COHORT JUNIOR LEADER TRAINING PROGRAM

Leadership Skills (Fundamentals) — 6 hours (FMs 22-100, 22-101, 22-600-20).
- Traits and Principles of Leadership.
- Professionalism and Ethics.
- Discipline.
- The Chain of Command and the NCO Support Channel.
- Duties and Responsibilities.
- Noncommissioned and Commissioned Officers.

Application — 2 hours (FM 22-100).
- Decision Making.
- The Effective Leader.

Contemporary Human Problems — 6 hours (FM 22-100).
- Drug Abuse.
- Human Relations.
- Prevention of AWOL.

The Development of Basic Counseling Skills — 4 hours (FM 22-101).
- The Leader as a Counselor.
- Types of Counseling.
  - Performance (Personnel Counseling).
  - Career.
  - Individual and Family Problems.

General Subjects — 12 hours.
- Map Reading.
- Fitting and Wearing the Uniform, Awards and Decorations (AR 670-1).

Physical Readiness Training (Teaching Methods) — 2 hours (FM 21-20).

Drill and Ceremonies (Teaching Methods) — 4 hours (FM 22-5).

Inspections — 3 hours (FM 22-5).
- Reasons for Inspections.
- How to Conduct Inspections.

OPSEC and SIGSEC — 1 hour.

Military Justice — 2 hours.

Examination

TOTAL HOURS — 42

Figure 2

COHORT INDIVIDUAL AND COLLECTIVE TRAINING PLAN
(Rifle Company)

WEEK 1 (Fill Week):

Day 1 (Wednesday):
- Initial briefing by First Sergeant and introduction of the chain of command.
- Personnel Asset Inventory (PAI).
- Linen issue and room assignment.
- Command-supervised chow.
- NCO-supervised activity (getting settled into barracks).

Day 2:
- First Sergeant in-brief.
- PAC inprocessing (half of company).
- CIF issue (half of company).
- Company Commander welcome.
- Squad Leader time.
- NCO-supervised activity (until 2000/2100 hours).

Day 3:
- Company Commander in-brief (standards, training overview).
- Regimental history and punch-bowl ceremony.
- PAC inprocessing/CIF issue.
- Assignment of duty positions, weapons, and protective masks (rotating by platoon).
- Company Physical Readiness Training.
- NCO-supervised activity (until 2000 hours).

Day 4 (Saturday):
- TA-50 layout inspection (First Sergeant).
- Identify shortfalls.

WEEK 2 (INDIVIDUAL TRAINING WEEK 1):
- Diagnostic Evaluation, Individual Skills.
- Battalion Commander/Command Sergeant Major in-brief.
- M16 Zero.
- M16 Field/Practice FCCMC Firing (1 day).
- M16 Qualification (1 day).
- Maintenance/Driver Training.

WEEK 3 (INDIVIDUAL TRAINING WEEK 2):
- M203 FAMFIRE (and qualification for designated gunners).
- LAW FAMFIRE.
- Hand Grenade/Claymore Familiarization.
- Protective Mask Fitting/NBC Proficiency Course.
- Driver Training.

WEEK 4 (COLLECTIVE TRAINING WEEK 1):
- Battle/Situation Drill Training (Rifle platoons).
- Crew Training/Drills (MG crews).
- Drivers/Maintenance Training (Mortars).

WEEK 5 (COLLECTIVE TRAINING WEEK 2):
- Squad Training: Movement to Contact/Hasty Attack (ARTEP Task 9-1), Antiarmor Ambush (9-2), Recon Patrol (9-3), Raid Patrols (9-7), Ambush Patrol (9-8) (Rifle platoons).
- M60 Training/Qualification, .45 Pistol Qualification (MG crews).
- Mechanical Training/Crew Drill, .45 Pistol Qualification, Driver Training (Mortars).

WEEK 6 (COLLECTIVE TRAINING WEEK 3):
- Squad Training: MTC (9-1), Squad Raid (9-7) (Rifle platoons with MG crews).
- Crew Drill, Gunners Exam, Section Training (Mortars).
- Sub-caliber Live-fire (Mortars).

WEEK 7 (COLLECTIVE TRAINING WEEK 4):
- Squad Training: Battle/Situational Drills (Rifle platoon with MG crews).
- Squad Training on ARTEP tasks 9-1, 9-2, 9-3, 9-7, 9-8 (Rifle platoons with MG crews).
- Rappelling (Rifle platoons with MG crews).
- Section Drill, Tactical Training (Mortars).
- Sub-caliber Live-fire Training (Mortars).
- Rappelling (Mortars).

WEEK 8 (COLLECTIVE TRAINING WEEK 5):
- Squad ARTEP (9-1, 9-2, 9-3, 9-7, 9-8) (Rifle platoons with MG crews).
- Section Live-fire Training (Mortars).

WEEK 9 (COLLECTIVE TRAINING WEEK 6):
- Squad Post-ARTEP Training (Rifle platoons with MG crews).
- Squad Live-fire Reaction Course (Rifle platoons with MG crews).
- Introduction to Airmobile, Helicopter Rappelling (Rifle platoons with MG crews).
- Crew, Section Training (Mortars).
- Gunners Exam for the Record (Mortars).

WEEK 10 (COLLECTIVE TRAINING WEEK 7):
- Platoon Tactical Training (Rifle platoons with MG crews).
- Movement to Contact, Hasty Attack (9-1, 9-2) (Rifle platoons with MG crews).
- Antiarmor Ambush (9-3) (Rifle platoons with MG crews).
- Section Training (Mortars).
- Sub-caliber Live-fire Training (Mortars).

WEEK 11 (COLLECTIVE TRAINING WEEK 8):
- Platoon Tactical Training — Area Recon (9-5), Patrols (9-6), Raid (9-8), Ambush (9-9) (Rifle platoons with MG crews).
- Platoon Attack Course (Live fire) (Rifle platoons with MG crews).
- Live-fire Exercise (Mortars).

WEEK 12 (COLLECTIVE TRAINING WEEK 9):
- Platoon Tactical Training (ARTEP Mission Rehearsal) (Rifle platoons with MG crews).
- Sub-caliber Live-fire Training (Mortars).

WEEK 13 (COLLECTIVE TRAINING WEEK 10):
- Platoon ARTEPs (Force-on-Force) 9-1, 9-2, 9-3, 9-5, 9-6, 9-8, 9-9 (Rifle platoons with MG crews).
- Mortar Live-fire Exercise (Mortar section).

WEEK 14 (COLLECTIVE TRAINING WEEK 11):
- Post-ARTEP Tactical Training (as determined by commander) (Rifle platoons with MG crews).
- Platoon Airmobile Operations (Rifle platoons with MG crews).
- Crew Section Drill (Mortar section).
- Gunners Exam/Mechanical Training (Mortar section).
- Maintenance (Mortar section).

WEEK 15 (COLLECTIVE TRAINING WEEK 12):
- Company Tactical Training, ARTEP Tasks 7-1, 7-2, 7-3, 7-4, 7-6, 7-9 (Leader oriented), 7-11, 7-12.
- Mortar Sub-caliber Live-fire.

WEEK 16 (COLLECTIVE TRAINING WEEK 13):
- Pre-ARTEP Training (Company).
- Mortar Live-Fire ARTEP.

WEEK 17 (COLLECTIVE TRAINING WEEK 14):
- Company ARTEP.

Figure 3

platoon leader conduct these training sessions, which vary in length from two to four hours, every week for four months. This training greatly improves individual proficiency and confidence.

All the soldiers who are selected as COHORT leaders are appointed acting corporals and billeted together in NCO rooms. These soldiers are then taken out of the squad they trained with in OSUT and placed with a new group, primarily to improve their authority and positions as COHORT leaders.

Use drill training to link individual training with collective training. Battle drills and situational drills are used to support collective ARTEP tasks. Quality drill training such as this helps develop individual skills and teamwork.

Allow post-ARTEP time for training the soldiers on their deficiencies. Once the soldiers' shortcomings have

been diagnosed on an ARTEP, they are immediately retrained on any tasks necessary to bring the unit to peak proficiency. (A two-week period of post-ARTEP training is best.) The battalion commander permits his company commanders to use their good judgment and initiative in the short-term planning of quality training exercises.

Stress marksmanship and live fire. Marksmanship and live fire training are of primary importance to an infantryman in a COHORT company, and a significant amount of time is devoted to training leaders in these areas. In training, the battalion conducts squad live fire exercises and executes ambushes and movements to contact in the live-fire mode. Known distances (KD) ranges are used regularly, and live fire training is sustained throughout the year. (A light infantry soldier has to be able to put his first round on the target.)

Conduct a thorough transition program to turn OSUT soldiers into FORSCOM soldiers. This final principle of the training strategy is a very important one; the manner in which a soldier is received into the unit is sure to have a lasting impression on him.

During the last week of OSUT, the battalion commander, the company commander, the first sergeant, and the other key members of the chain of command are present in the unit and at the graduation ceremony. After coordinating closely and carefully with Training Center leaders, the members of the chain of command participate in a formal ceremony in front of parents and drill sergeants, exchanging the guidon and the designation of the OSUT unit for those of the new regimental unit. Someone reads the unit history, explains the heritage behind the unit crest, and pins distinctive unit insignia on the uniforms of all the new members of the re-designated unit. A simple and well-planned ceremony such as this will pay huge dividends in morale and unit esprit de corps, and it will help inculcate into each soldier a strong sense of belonging.

At this point, the new soldiers — at last a part of their regiment — have high expectations of what the "real Army" is like, and it is the duty of unit leaders to plan and conduct realistic, innovative, and challenging individual and collective training. The battalion developed and is executing a 17-week program for that purpose. (See Figure 3.)

The first three weeks of this program are devoted to continuing the transition process and to beginning skills training. To ease the soldiers' transition from the controlled, sterile environment of OSUT, a gradual loosening of control is implemented. Leaders are present and visible to the new infantrymen after regular duty hours. The first few days after they arrive at the new installation, the soldiers are given a post familiarization and orientation, which includes such subjects as Army Community Services (ACS), Red Cross activities, family housing, medical care, recreation services, and a tour of the local community. Their family members are also included in this orientation.

Of paramount importance to each new soldier is the regimental punch bowl ceremony, in which each new soldier is formally assimilated into the regiment. This rite of passage, which includes a slide presentation on the history and traditions of the regiment, concludes with a number of toasts: The brigade commander toasts the regiment; the battalion commander toasts the battalion; and the company commander toasts the company. After this ceremony, all the soldiers of the COHORT company are considered full-fledged, bona fide members of the regiment.

The collective training phase, which follows this transition and individual training phase, occurs during Weeks 4 through 17, with the Soldier's Manual and the ARTEP manual being used to set the tasks, conditions, and standards for all the training. (For a combat support company, the training plan has been revised slightly to provide training on the weapons that are unique to that unit. (See Figure 4.)

COHORT INDIVIDUAL TRAINING PLAN (CSC)

WEEKS 1 and 2:
- Same as Rifle Companies (except M60 FAMFIRE).

WEEK 3:
- .45 Qualification.

WEEKS 3-5 (GENERAL TRAINING):
- Maintenance Training.
- Driver Training and Testing.
- Individual and Crew-Served Weapons Training.

WEEKS 4 and 5:
- M60 Training and Qualification.

WEEK 7:
- Heavy Mortar Live-fire.
- Antitank (TOW Qualification — 7 sections).
- Scout Platoon FTX.

WEEK 9:
- Heavy Mortar Live-fire.
- Antitank (TOW Qualification — 7 sections).
- Scout Platoon FTX.

WEEK 13:
- TOW Live-fire

Figure 4

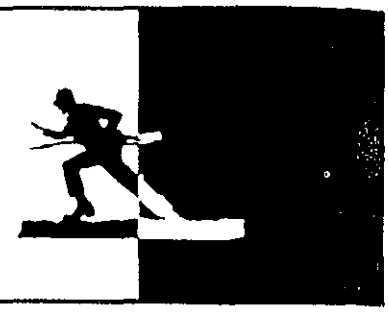
This entire training strategy was developed to serve as the overriding philosophy for the planning and execution of all COHORT training in the 2d Battalion, 32d Infantry. Although it is still too early to conclusively evaluate the effectiveness of the COHORT training programs that make up this strategy, great strides are being made in improving morale and proficiency, unit cohesion, and esprit de corps.

If this program is successful, the end result should be cohesive, combat-ready companies made up of soldiers who are skilled and tough and who understand the personal commitment required to be an infantryman.

LIEUTENANT COLONEL JOSEPH C. WINDLE is commander of the 2d Battalion, 32d Infantry, at Fort Ord. An ROTC graduate of Auburn University, he holds a master's degree from Kansas State University and has completed the Command and General Staff College Course.

CAPTAIN HAROLD E. RAUGH, JR., formerly Assistant S-3 of the 2d Brigade, 7th Infantry Division, is now Adjutant of the same brigade. He is a 1978 graduate of the University of Wisconsin at Oshkosh and a frequent contributor to INFANTRY and other professional journals. He previously served as S-4 of the 1st Battlion, 23d Infantry Regiment in Korea.

TRAINING NOTES



Fire Control

LIEUTENANT COLONEL WOLF D. KUTTER
MAJOR GLENN M. HARNED

Until recently, fire control was something our battalion took for granted — it was considered "Sergeants' business," the squad leader's responsibility.

But when we conducted live fire exercises as part of our squad ARTEP evaluation to determine our squad's proficiency first in the defense, and then in a movement to contact, we discovered that most of our squad and fire team leaders did not have the tactical and technical knowledge we thought they did. Tactically, they did not know how to fit their direct fire weapons to a piece of terrain, or how to integrate the fires of those weapons to effectively cover an expected enemy target array. Technically, at the squad level, they did not know how to control the rate and distribution of the fires of their direct fire weapons, particularly the LAW, the M203 grenade launcher, the M60 machinegun, and the automatic rifle. (In this article, we address only the technical aspects of fire control and not the tactical framework in which fire control is employed.)

In the past, the greatest emphasis in their training had been placed on teaching them how to get the kind of concentrated fire that was needed for qualification. The automatic riflemen had not been trained to use their bipods for distributed fire; in fact, there were very few designated automatic riflemen at all. The NCOs had not been trained to use oral fire commands and arm and hand signals to control the fire of any attached machinegun. Machinegun crew drill had not been performed regularly in all companies, nor had there been much practice in pair and volley firing with the LAW. And squad and fire team SOPs for controlling and integrating fires had not been established and rehearsed.

We realized that this failure to train in fire control and the integration of fires could have dire consequences for the battalion if we were suddenly committed to an active combat situation. For example, it could result in battle losses from friendly fire, the premature disclosure of positions, an ineffective employment of weapons, a loss of time in adjusting fires, and a considerable waste of ammunition. Clearly, we had to do something.

The first thing we did was to identify the causes of our fire control training problem. They turned out to be numerous:

- Most infantry officers today are not combat veterans, have never been squad leaders, and have had only limited experience with live fire exercises. Thus, they often fail to understand the critical importance of fire control at squad level. Similarly, almost all the NCOs they lead also lack combat experience, and they, too, do not understand the importance of fire control at squad level.
- Most collective training is officer-oriented. The emphasis is placed on tactics at platoon level and higher, and squad level training, in the words of most training programs, is "conducted concurrently as multi-echelon training." Officers tend to focus on organizing the training effort and executing the training plan according to

DEFINITIONS

Fire control: All actions connected with applying effective fire on a target to include the ability to select and designate targets for the appropriate weapons, open fire at the desired instant, adjust the fire of the weapons, regulate the rate of fire, shift fire from one target to another, and cease fire.

Integration of fires: Assigning either targets or sectors of fire, or both, to organic and supporting weapons to ensure that their fires are properly concentrated or distributed.

Fire concentration: Applying fire on one aiming point. Concentrated fire is directed at a point target.

Fire distribution: Applying fire in either depth or width, or both, on more than one aiming point. Distributed fire is directed at an area target.

Riflemen engage targets during live fire defense exercise.

a schedule instead of concentrating on the quality of training or meeting squad level standards. Even when the squads are given collective training time, the average squad leader lacks the requisite skills to train his squad in proper fire control procedures.

• Most Army ranges are designed for zeroing, familiarization, and qualification with a specific weapon system, not for the integration of weapon systems and the distribution of their fires at squad level.

• Annual ammunition allocations do not support extensive live fire exercises. Once the ammunition and pyrotechnics for familiarization, qualification, and tactical live fire training are subtracted, not much remains. Particularly critical shortfalls exist in tracer ammunition, smoke, and pyrotechnics for fire control, 40mm TP rounds, and LAW subcaliber rockets.

• Published ARTEP 7-15 and TC 25-3 ammunition requirements do not identify any need during live fire exercises for 5.56mm tracer ammunition, 40mm TP or signaling rounds, or smoke grenades.

• There is a distinct void in Army doctrine. Two series of field manuals, for instance, govern fire control. The FM-7 series provides tactical applications but does not discuss techniques. The FM-23 series provides the techniques of fire for each weapon system. But since FM 23-12 became obsolete, there has not been a field manual that explains how a leader integrates and controls the fires of all of his direct fire weapons. Certainly the three-page treatment of fire control in the 11B20 Soldier's Manual (Task 071-326-5501) is inadequate; like FM 7-8, it describes what must be done tactically, but not how to do it.

• Since the M16A1 replaced the M14A2 as the squad automatic rifle, and since FM 23-16 became obsolete, the Army has lacked any substantive doctrine or emphasis on automatic rifle marksmanship and distributed rifle fire. This problem will soon become critical, because the introduction of the M249 Squad Automatic Weapon significantly alters how a rifle squad fights and how it applies its fires.

After identifying these problems we then attacked our fire control problem at company and battalion level by conducting unit schools on fire control and "how to do it" procedures. The trainers were platoon sergeants, first sergeants, company commanders, and the battalion commander himself — experienced soldiers who had learned the techniques of fire control before it became a lost art. Our platoon leaders, as well as our junior NCOs, benefited greatly from these sessions.

We followed these unit schools with squad level training programs to develop and rehearse squad SOPs and battle drills. The squad training culminated in a live fire defense exercise, with each squad twice firing the scenario provided in ARTEP 7-15 (Squad Forced March/Live Fire). A brief refresher training period preceded the live fire problem, and an after-action review followed each live fire exercise.

Although this training program has dramatically improved the effectiveness and control of direct fires in our battalion, much work needs to be accomplished to solve the problem of fire control throughout the Army. Accordingly, these are our recommendations:

• Firing ranges and marksmanship training programs should be redesigned to place more emphasis on individual distributed fire, on fire control and the integration of direct fires, and on live fire ARTEP events at squad and platoon level.

• All live fire ARTEP events should be preceded by training on target detection ranges and by squad level MILES training that places a premium on fire control.

• Whenever possible, techniques of fire should be integrated into tactical training.

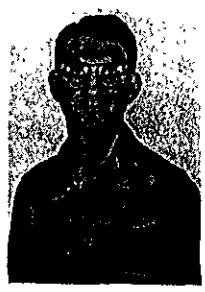
• ARTEP 7-15 and TC 25-3 should be rewritten to include more tracer ammunition, smoke, and pyrotechnics (to include 40mm signaling cartridges) for fire control training.

These two documents should be synchronized and should address live-fire as well as blank-fire events up to at least platoon level.

- Sufficient training ammunition should be allocated to support the programs listed above.
- FM 23-12 should be updated and re-published to prescribe the basic techniques and SOPs that enable the squad leader to effectively integrate and control the direct fires of his organic and supporting weapons.
- FM 23-16 should also be updated and re-published to provide doctrine and techniques for squad automatic rifle marksmanship with the M249 SAW.
- The 11B20 Soldier's Manual fire control task (071-326-5501) should be rewritten to include not only what to do but how to do it. Assault techniques, methods of fire control, the squad fire command, and the integration of direct fires should all be addressed.
- Appropriate tasks for fire distribution using the M16A1 rifle, M203 grenade launcher, M60 machinegun, and M249 SAW should be added to the 11B10 Soldier's Manual.

The integration of tactical training and the techniques of fire control at squad level are fundamental to success in combat, yet this vital area has been virtually ignored by the Army's doctrine writers, trainers, and training managers. If the recommendations listed above were adopted, they would make a significant contribution to raising the training curve and, consequently, the combat readiness of our rifle squads, the real cutting edge of our combat power.

LIEUTENANT COLONEL WOLF D. KUTTER commands the 4th Battalion, 187th Infantry, 101st Airborne Division (Air Assault). He commanded a rifle company with the 1st Cavalry Division in Vietnam and has served as battalion S-3, battalion executive officer, and assistant division G-3 with the 3d Armored Division in Germany.



MAJOR GLENN M. HARNED, a 1972 graduate of the University of Pennsylvania, has served as battalion S-3 and executive officer of the 4th Battalion, 187th Infantry. He previously served with the 1st Cavalry Division at Fort Hood and with the Special Forces Detachment (Airborne), Europe, in Germany.

Winning at the NTC:

The Delay

MAJOR VERNON W. HUMPHREY

In this continuing series on the battles fought at the National Training Center at Fort Irwin, California, we have examined a movement to contact, a deliberate attack, and a defend in sector mission. We have also looked at reconnaissance, fire coordination, and command and control. This article examines one of the most difficult of all operations, the delay.*

This particular battle took place in the "Valley of Death," which is a narrow valley that has almost impassable mountains to its north and south. The western end of the valley, about two kilometers wide, terminates in an escarpment known as "The Shelf." West of The Shelf, the terrain is extremely restricted until it drops away to the "Langford River" (actually a road with designated "fording sites"). The terrain is fairly open west of the river and gradually becomes more rugged until it takes on an extremely restricted character in the vicinity of Hill 1045. The key terrain features, from east to west, are Hill 692, The Shelf, Hill 785, the fording sites, The Porkchop, Hill 931, and the 1045 hillmass (see the accompanying map).

A task force was ordered to delay in sector against an expected attack from the east. It was to delay the enemy forward of the 1045 hillmass for 24 hours.

The task force established its initial delay positions on The Shelf, with Team Alpha on the right (south), Team Bravo in the center, and Team Charlie on the left (north). An obstacle consisting of an antitank ditch, mines, and wire was to be constructed across the valley west of hill 692, and an engineer company was attached to the task force for this purpose.

The scout platoon was to screen forward of Hill 692. On its way back after doing its job, it was to close a gap that had been left in the obstacle specifically for its use. The company commanders were directed to prepare delay positions in the vicinity of Hill 785 and to reconnoiter other positions in the vicinity of Hill 931.

Just at dawn, a number of OPFOR

* *This is the seventh and last in this series. The views expressed are the author's own and do not necessarily reflect those of the Department of Defense or any element of it.*

reconnaissance vehicles passed through the obstacle and penetrated the task force's position. One BRDM was knocked out as it passed between Teams Alpha and Bravo on its way to the task force's rear area; the other OPFOR vehicles made it successfully. OPFOR dismounted patrols took possession of the gap in the obstacle. The scout platoon, operating forward of Hill 692, apparently was unaware of this activity.

Shortly afterward, clouds of smoke and dust heralded the approach of the vehicles of the OPFOR mechanized rifle regiment. The task force's scout platoon passed a call for fire, then headed rearward for the gap in the obstacles, only to run into the OPFOR dismounted patrols.

From the main position, the entire Valley of Death seemed to be filled with smoke. Through the haze, the dim shapes of armored vehicle launched bridges (AVLBs), tanks, and BMPs could be seen. There were so many of them and they were coming so fast (about 15 to 20 kilometers per hour) that they simply presented more targets than the friendly forces could engage.

Now BMPs and tanks began to appear to the south of Hill 692. Here they were masked by Hill 692 from Team Charlie and from most of Team Bravo's left flank weapons as well.

As the two lead motorized rifle battalions closed with Team Alpha, the order was given to pull back to the next delay position. By this time Teams Alpha and Bravo were engaging tanks and BMPs at ranges of 500 to 1,000 meters. As the teams began to pull out of position, they were overrun and destroyed.

Team Charlie, completely unengaged, was able to pull out of its positions and form a column. But as the column began to move, it was hit by the second echelon motorized rifle battalion and destroyed.

ANALYSIS

In analyzing the destruction of the task force, it is immediately obvious that there was inadequate counter-reconnaissance. The OPFOR was able to penetrate the task force's obstacle by stealth and then to use the obstacle to ambush and destroy the scout platoon.

The task force's plan had envisioned a major engagement area in the vicinity of Hill 692, but it had failed to take into consideration the importance of Hill 692, which the OPFOR units used to mask their attack on Team Alpha.

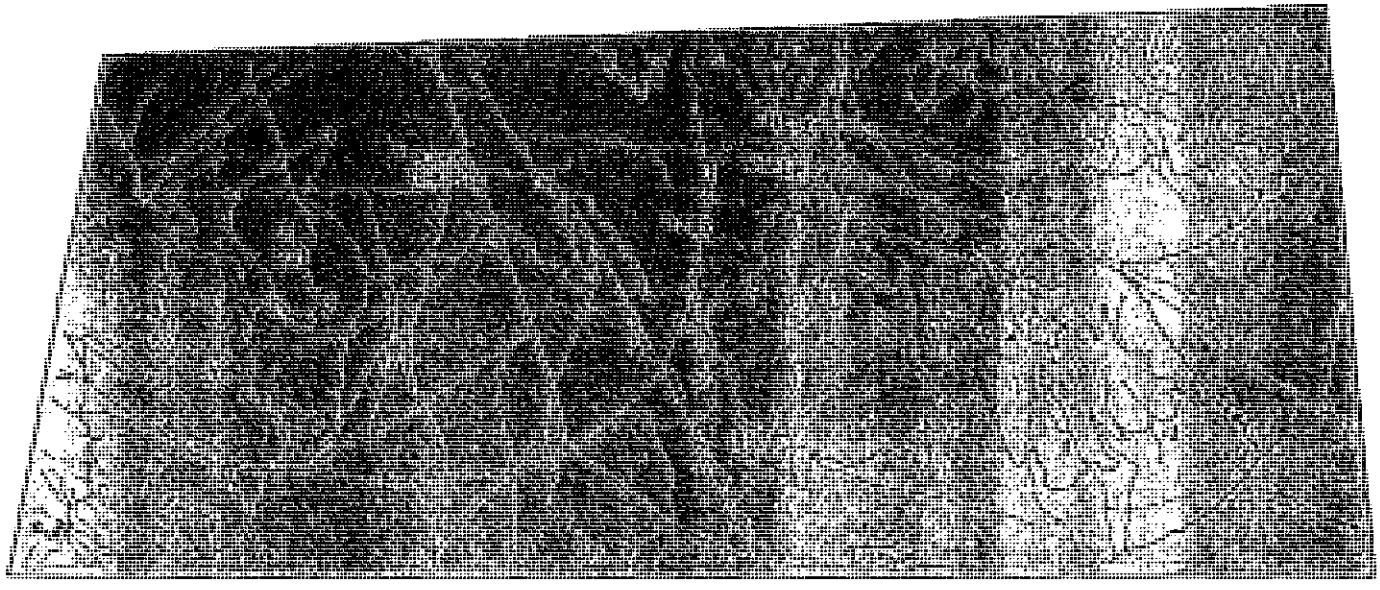
The task force apparently had also failed to realize how fast the OPFOR would be able to move, and it simply had too few weapons to deal with the vast array of targets in a short time. This problem was compounded by the poor positioning of the units and weapon systems, the failure of the units and weapon systems to reposition as the battle progressed, and the liberal use of smoke by the OPFOR.

The delay was doomed to failure from the very beginning, in fact: At 12 kilometers per hour, the OPFOR can cover 2,000 meters in 10 minutes (and they usually move even faster than that). Even the best trained units cannot pull out of a defensive position in less than five minutes, nor can they occupy their next position in less than five more minutes. It is obvious, then, that a task force in a delay role will be overrun if it allows the OPFOR units to approach closer than 2,000 meters — unless some provision is made to slow them down.

Many units will allow the OPFOR to close to 1,500 or even 1,000 meters before beginning a withdrawal. But by the time they reach their next delay position, the OPFOR units are usually right behind them, and they have to keep going, hoping to gain enough distance to occupy a battle position *somewhere.* (This race is known as the "Irwin 500," and it is a thrilling spectacle!)

HOW IT MIGHT HAVE GONE

An alternative solution begins with the scout platoon. Reinforced with



two TOWs and two tanks, it operates well forward of Hill 692. There, the tanks and TOWs are placed in the gullies and behind small hills on both sides of the Valley of Death, between 1,000 and 2,000 meters east of Hill 692. One mechanized rifle platoon, under the command of Team Alpha, is made responsible for the obstacle west of Hill 692.

Team Alpha, a tank-heavy team, is then assigned responsibility for the engagement area forward of the obstacle and is positioned on The Shelf. A TOW section is attached and is initially positioned on The Shelf with instructions to withdraw to Hill 785 *as soon as the OPFOR reaches the obstacle.*

MEANTIME

In the meantime, Team Bravo prepares platoon battle positions in the vicinity of The Porkchop, covering the fording sites on the Langford River and emplacing a TOW section so that the area between Hill 785 and The Porkchop is covered by fire.

Finally, Team Charlie occupies positions in the vicinity of Hill 931, with the remainder of the task force's TOWs in position to cover the approaches to the river and the fording sites.

As the OPFOR approaches, the scout platoon gives an early warning and calls for fire, keeping the approaching OPFOR under indirect fire as it closes. The attached tanks and TOWs allow the OPFOR either to draw even with their concealed positions or to pass them. Then they fire into the OPFOR's flanks and rear. As the attack progresses, the scout platoon, with its attachments, *follows* the OPFOR units and continues to fire on them from behind.

As the OPFOR nears the obstacle, they are taken under long range TOW fire from The Shelf. They are also engaged by the mechanized rifle platoon that is defending the obstacle as well as by the reinforced scout platoon in their rear.

The obstacle serves as a "trigger line." As soon as the OPFOR units reach it, Team Alpha's TOWs pull back. The tanks continue to fire to cover the TOWs' withdrawal. From their new positions in the vicinity of Hill 785, the TOWs can fire on the obstacle at long range.

At this time the battle approaches a critical decision point: If the OPFOR has been slowed appreciably, the task force commander may elect to continue the fight from The Shelf, reinforcing Team Alpha with additional TOWs. Otherwise, Team Alpha passes control of the mechanized platoon in the obstacle to the scouts and begins its pullback, overwatched by the TOWs. Platoons and tanks that cannot pull out remain in position and slug it out. If they are bypassed by the OPFOR, they come under the control of the scout platoon and join it in following the OPFOR units and shooting them up from the rear.

Preplanned areas of scatterable mines are used to help Team Alpha's withdrawal. Initially, the mines are used just forward of The Shelf and then, once Team Alpha leaves The Shelf, they are used between The Shelf and Hill 785.

Team Alpha does not stop at Hill 785 — there isn't enough standoff distance from the previous battle positions to make this a practical delay position for the entire team. (But it does offer a good secondary position for the TOWs.)

As Team Alpha heads for the fording sites, Team Bravo's attached TOWs take up the battle. Mines are again fired, this time on the fording sites as soon as Team Alpha crosses. Team Alpha continues to Hill 931.

This is the second critical decision point in the battle. If Team Alpha is still in fighting condition, it occupies the positions around Hill 931, and Team Charlie pulls back to new positions near Hill 1045. There are two other courses of action: Team Alpha can either reinforce Team Charlie's positions or occupy the positions near Hill 1045.

If the OPFOR units succeed in forcing a crossing of the Langford River, Team Bravo remains in position, then repositions itself to fire on the OPFOR from the rear. At the same time, the forces in position near Hills 931 and 1045 continue the battle.

The alternate plan produces six engagement areas (EAs). EA1, primarily an artillery engagement area, is well to the east of The Shelf — about 12 kilometers. If attack helicopters are available, this is where they would make their first attack.

EA2 is on the east side of the obstacle, where the OPFOR units present a lucrative target when they are slowed by the obstacle. Tanks and TOWs (from both The Shelf and the scout platoon), artillery, and infantry units at the obstacle participate in this part of the battle. This is where the second helicopter attack takes place.

EA3 is between the obstacle and The Shelf. TOWs from the vicinity of Hill 785 cover the tanks as they withdraw, and the third helicopter strike is made.

EA4 is the area between Hill 785 and the Langford River; EA5 is between Hill 931 and The Porkchop; and EA6 is between Hill 1045 and Hill 931.

Notice how this scheme of maneuver meshes with the refueling and rearming actions of an attack helicopter company. It keeps the OPFOR under attack as it closes; takes advantage of the planned "pile up" in front of the obstacle; ensures that at least one attack helicopter platoon (and probably two) is available during the critical withdrawal from The Shelf; and continues to engage the OPFOR at every likely area, all the way back to the 1045 hillmass.

LESSONS LEARNED

Several lessons can be learned from this delay action. First, the OPFOR moves so fast and presents so many targets that the U.S. task force's weapon systems cannot engage enough of them to slow the OPFOR appreciably, unless they increase the engagement time by slowing the OPFOR or

by positioning their weapon systems in depth, or both.

Second, the units and weapon systems that are not engaged must be moved to positions from which they can engage the OPFOR effectively. Conversely, units and weapon systems that *are* heavily engaged must "hang tough" and slug it out. If they are bypassed, they should follow the OPFOR.

Finally, because of the speed of the OPFOR advance, a U.S. task force conducting a delay mission, if it is to avoid a decisive engagement, must begin to pull out before the OPFOR gets too close to its positions. This means that infantry units (except for those assigned specific defensive responsibilities) should occupy only those positions on which they plan to accept decisive engagement.

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

Training New Lieutenants

CAPTAIN SAMUEL K. ROCK, JR.

One of the major concerns in the Army is the education and training of its officers. As a result, by the time a new second lieutenant takes his first assignment as a platoon leader, he has had both a pre-commissioning education and a basic course as preparation for that position.

It is a demanding job. A platoon leader is completely responsible for the lives of all the soldiers assigned to his platoon — both in war and in peace. He is supposed to have command presence, extensive military knowledge, motivation, concern, communication skills, and stamina — all of which are essential if he is to get his soldiers' trust and loyalty. These are the building blocks of unit cohesion, without which the platoon is no more than a group of directionless soldiers.

But is the average newly commissioned second lieutenant really ready to take on the kind of responsibility that goes with leading a platoon? Many of the lieutenants themselves don't think so.

In fact, a number of new lieutenants in Europe say that they are not even sure what their job is or how they fit into their units.

Because of such comments, the U.S. Army Medical Research Unit-Europe (USAMRU-E) began a study of company grade officers that initially focused on lieutenants and how they were integrated and socialized into their units.

The study involved conducting lengthy interviews with and observing 20 lieutenants. These officers were in their first assignments after completing their branch basic courses and had not been in their assignments more than three months. All were in the same division. Nine were infantry platoon leaders, and eleven were armor platoon leaders. When the study began, they constituted all of the new infantry and armor platoon leaders in their division.

VARIOUS BACKGROUNDS

The lieutenants had been commissioned from the United States Military Academy, from various Reserve Officer Training Corps programs, and from the Officer Candidate School. The study group, of which I was a member, conducted its interviews and made its observations in garrison and at the Grafenwoehr and Hohenfels training areas.

We asked the lieutenants to tell us what their job was, who had defined it for them, and who had helped them learn the things they needed to know. We also asked them to evaluate their own performances. Their answers were direct and consistent; they believed they were in limbo and were unsure of their roles and responsibilities in their units, They consistently said that although they would like assistance or guidance from their company commanders, they were not getting it and were uncomfortable requesting it.

Although the lieutenants interviewed and observed in the study were a highly motivated group, about 70 percent of them said they had problems associated with learning their job from their company commanders. One lieutenant reported that his commander had admitted he "didn't know what to do with lieutenants," that "he'd never worked with them before." (The company commanders we interviewed said they had learned little in their advanced courses about training lieutenants.)

Another lieutenant reported that his commander was "not explaining how things ought to be ... he hopes everyone will pick up what's going on." Still another one said, "It's interesting ... you've got to grope and find your way. As far as him giving us a lot of guidance, he doesn't."

The process of learning was described by the lieutenants as one of

discovery. Although the lieutenants were motivated to do well, they had little experience to fall back on to direct their efforts. One lieutenant said, "There isn't enough specific guidance — nobody has time to train you right now. It's just swim or drown. I'm treading water as best I can." Another said, "Until I discover some . . . of the ways I'm supposed to be dealing with things, I just kind of plow along trying to figure out the way."

Although the lieutenants recognized they needed help, they didn't think their company commanders saw that need. Still, they were hesitant to ask for help because they were eager to avoid looking like they didn't know what they were supposed to do. One lieutenant phrased it, "You don't really want to go to the boss and say, 'what should I be doing?' That makes you look lost."

In addition, the lieutenants did not think there were books or other references available that defined their role. As new officers, fresh from academic settings, the lieutenants were prepared to search for role definitions, but were frustrated when they tried. As one said, "I would like somebody to define what my job is. Or what the NCO's job is supposed to be. It seems like the Army should define this, what my job is, what I am supposed to do." They were prepared to follow written guidance, but their commanders failed to provide it or to tell them what was available.

REACTIONS

Feedback was also a problem. The new lieutenants said their commanders did not tell them how they were doing. One lieutenant said, "He hasn't said anything, good, bad, or indifferent, directly to me. So I take that to mean that I'm doing all right. I'm at least maintaining a decent level." This lieutenant assumed he was doing an average job. (His company commander, meanwhile, said he was the best lieutenant in the company, and probably in the battalion. The battalion commander, too, said the lieutenant was one of the best in the battalion, as did several of the battalion staff officers. All the NCOs interviewed thought the lieutenant was an excellent officer and said that everyone respected him. But *he* didn't know that.)

LEADERSHIP TRAINING

The reactions of these new platoon leaders illustrate there is a significant problem in leadership training in the Army, particularly at the small unit level (platoon and company). The lieutenants do not understand their role as platoon leaders and their company commanders are not making that role clear to them. Unless this situation is dealt with effectively, the Army may find more of its young officers adopting the attitude of one lieutenant, who was so frustrated he said he was beginning to give up: "It's not worth the aggravation and it's not worth what it's doing to the platoon." In Europe, this is particularly disturbing, for the threat here is clear and immediate. We simply cannot afford platoon leaders who have given up.

Another concern is an offshoot of this frustration. We asked one lieutenant whether, if his platoon were to go to war tomorrow, the men would want to follow the company commander or would prefer someone else. The lieutenant replied, "The men would prefer somebody else." After a slight pause he also said, "I would feel more comfortable with anybody else, too." He didn't say he wouldn't follow his company commander, but the small unit leadership and cohesion in this particular unit was clearly unsatisfactory to meet the challenges and demands of the projected European battlefield.

While the company commanders in this division and in others may not think the remarks made by these lieutenants are accurate, that will not change the beliefs that prompted those remarks. These lieutenants will still believe their company commanders have not created an environment in which they can exercise their initiative, and because they believe this, they will think and act accordingly. If company commanders do not actively work to change that belief through leadership training, they will not change the behavior of their lieutenants.

There are a number of approaches that can help reduce this problem. One brigade commander who read our results proposed, for example, that he spend one day with his lieutenants talking about the brigade's plans and objectives, and showing them not only what he hoped to accomplish during training, but why and how the lieutenants fit into the overall scheme. This would serve as a model for the rest of the chain of command.

Regardless of what the senior leaders say ought to be done, though, the company commander is the model for his new lieutenants and only he is in a pivotal position to resolve this issue.

IDEAS

One of the things he can do is to see that each new lieutenant is effectively integrated into his platoon. This is essential to the smooth and professional function of that unit, for the lieutenant is the leader who will unify the platoon into a cohesive whole. In this effort, a company commander may want to try some or all of the following ideas:

- Assume the new lieutenant doesn't know how things ought to be and tell him. Help him to overcome his fear of asking questions.
- Assign the best lieutenant in the company to sponsor the new lieutenant. Have the new lieutenant follow him for the first week.
- Remember that the new lieutenant has never done the job. Give him specific and detailed guidance at first on how to do it.
- Remember that the new lieutenant is afraid of his commander. Initially, the lieutenant needs training, not punishment.
- Organize a formal training program and put it in writing.

• Provide more positive feedback. The new lieutenant wants to do well but does not know how and may be insecure. (An OER once a year is not enough.)

• Clearly define the new lieutenant's role in relation to that of the NCOs.

In addition to these suggestions, a thoughtful company commander can generate others that will work equally well for him. Above all else, he must realize that the training of new lieutenants is one of his most critical responsibilities.

The results of this study should let other lieutenants know they are not alone in their feelings — that their peers experience the same difficulties. But more important, these results should help company commanders to define the needs of their new lieutenants and to work toward a more helpful training program for them. Finally, the study may help senior commanders to a better understanding of their small unit leaders' problems.

CAPTAIN SAMUEL K. ROCK, JR., a Medical Service Corps officer, is Deputy Commander of the U.S. Army Medical Research U.S. Unit-Europe. Commissioned from the Officer Candidate School at Fort Benning in 1967, he served a tour as an advisor in Vietnam and, more recently, as an educational psychologist at the Academy of health Sciences at Fort Sam Houston. He holds a Ph.D degree from Pennsylvania State University.

SOPs That Work

CAPTAIN PETER G. WILLIAMS

Dog-eared SOPs in black three-ring binders can be found in orderly rooms throughout the world. Some of these unit SOPs are invaluable — others are almost useless. The difference lies in how carefully they were planned and compiled, and in how effectively they are used.

The classic purpose of a tactical SOP (according to Special Text 7-150, Operations) is "to standardize routine, recurring operational and combat service support procedures," procedures that always apply "except when modified by company order." But a unit's SOP can easily be used to accomplish many additional goals as well.

An SOP — a book of standing operating procedures — is, or should be, a written record of how a unit goes about accomplishing its mission. A good one has several advantages: It can quickly tell new soldiers about subjects that are unique to the unit. And considering the rapid turnover of personnel in most units, and the variety of assignments most infantry soldiers can expect over the years, this is an important advantage. Because this written record of instructions, procedures, and information can easily outlast all the personnel in the unit, it is also the unit's best source of institutional memory.

Another advantage is that by providing a set of general instructions for most contingencies, a good SOP helps reduce the need for communicating instructions. This is especially important for units that routinely operate in widely dispersed formations and have to rely heavily on tactical radio communications.

GETTING STARTED

How does a unit go about establishing an SOP that can do all these things? What should be included? And how should it be used once it is published?

Some units start simply by copying an SOP from a unit down the street and adapting it to its needs. A better idea is to look at the samples that can be found in Appendix G of ST 7-150, for example. These provide a good starting point and offer considerable information and proven ways of doing things in mechanized units. But they are not perfect. And they still must be tailored to a specific unit's needs. (These samples are also somewhat light in support operations, probably because these vary greatly from one unit to another.)

All the members of a unit should participate in preparing an SOP; it belongs to the entire unit, not just to a platoon leader or the company commander who finally approves it. The green tabbers of the unit, who together have logged countless hours of experience, will all be affected by the SOP and should take an active part in writing it.

An SOP should include a detailed discussion of the duties and responsibilities of the different positions in the unit. These discussions not only help the new people coming in, they also enable each leader to assume the responsibilities of the next higher level when he needs to. In fact, an SOP can serve as a checklist for a newly promoted leader.

Information that is considered critical to a unit's operation and that might otherwise be overlooked or forgotten also should be included. Such critical procedures, instructions, and information can be indispensable to junior leaders in conducting hip-pocket training. If the SOP includes descriptions of both individual and collective tasks, for example, it can be used to guide individual and squad or

section training. Thus, in a fast-paced training environment, a readily accessible SOP can help make the best possible use of unexpectedly available training time.

The contents of an SOP are not limited to these subjects, of course. Each unit's mission is different, and different leaders may expect an SOP to cover different needs. But most important of all, the SOP should make sense and be realistic. It should not just pay lip service to anything.

Once the people in a unit have decided what their unit SOP should include, their next step is to put the information together. Different techniques apply here, but all of them require solid formatting, preparation, and distribution, and also consistent command emphasis.

The format of an SOP can be important in three ways: An SOP should be easy to carry, easy to keep clean in the field, and easy to change. One way of achieving these goals is to print copies in a size similar to that of a CEOI. Unlike a three-ring notebook, a booklet of such a size can be easily carried in a pocket. And the SOP can be made relatively fieldproof if it is covered with plastic or cardboard on the outside and secured with green tape. And so it will be easy to change, the SOP should carry each subject on a separate page or series of pages. In this way, the unit can revise a section without having to repackage the whole SOP.

The organization of subjects within an SOP might include a general section at the beginning, but the nuts and bolts of the SOP should be in separate sections. These sections can be put in whatever order the author thinks is appropriate. One way is to group them into four categories:

- General — the normal organization and the location of key personnel.
- Tactical operations — alert operations, quartering party operations, assembly areas, road marches, fire distribution, and security (day and night).
- Support operations — daily track maintenance, breakdown procedures, sensitive item reports, and communications maintenance.
- Information — brevity codes; the duties of platoon leader, platoon sergeant, section leader, squad leader, and team leader; and unit navigational procedures.

Any annexes that are needed should be prepared in a succinct and straightforward manner, with a minimum of words being used to get the ideas across.

Once an SOP has been compiled and printed, its distribution largely determines whether it will be effective or not. If a platoon leader and his platoon sergeant, for example, are the only ones who have copies of the platoon SOP, the SOP will not meet the platoon's needs. Every soldier in the unit should have his own copy from the first day he comes into the unit.

Leaders of regularly attached units should also have copies. And when a unit goes to the field, extra copies should be taken along for other units that may be unexpectedly attached, or for other headquarters to which a platoon or the company may be cross-attached.

Even when everyone has a copy, something more is needed to make it work — command emphasis. Platoon leaders, platoon sergeants, and squad leaders should operate and train using their SOP and should let it be known that they expect their subordinates to do the same. Then everyone will use it and profit by it. But if the soldiers see their leaders selectively ignoring certain subjects, they will also start picking areas to ignore. In short, for an SOP to be effective, all the soldiers must believe in it and follow it.

An SOP, to remain effective, also needs to be reviewed regularly. A good time for a unit to examine its SOP's effectiveness is when it returns from a long field problem. The leaders might ask themselves: Are all the annexes being adhered to? If not, why not? Is it because the unit is slack, or is it because a part of the SOP has become unrealistic? Has a better way been found to do something?

When an SOP has been carefully prepared and kept up to date, and when all the unit's members are familiar with it, can refer to it, and will follow it, it will be one of the leader's most valuable assets. It will then make a continuing contribution to the unit's efficiency, and it will outlast all of the unit's leaders.

CAPTAIN PETER G. WILLIAMS, a 1979 graduate of the United States Military Academy, is assigned to the 1st Battalion, 31st Infantry, 2d Infantry Division. He formerly served as a platoon leader and company executive officer in a mechanized infantry battalion in Germany.

A Forgotten War

CAPTAIN MICHAEL A. PHIPPS

Most American military professionals, when discussing 20th century warfare, talk about the Argonne, Normandy, the Ardennes, Pork Chop Hill, and Tet. But they rarely mention (in fact, may never have heard of) Velikiye Luki, Kharkov, Nikopol, or Prokhorovka. This is understandable, perhaps, considering the fact that

United States soldiers have never engaged in combat with Russian troops (except for small contingents of U.S. troops that were sent to Russia in 1918 and 1919). The Germans, however, have fought the Russians on a number of occasions, and between 1941 and 1945, for example, committed three-fourths of their ground and air forces to the thousand-mile-long Eastern Front.

With all the present emphasis on countering a Soviet threat in Western Europe, one might assume that our leaders would be as familiar with some of the 1941-1945 Russo-German battles as with famous American battles. What better way is there to study Red Army operations and tactics? But, amazing as it may seem, those battles have been largely ignored by our leaders and by our historians. World War II's Eastern Front has become, in effect, a forgotten war.

There has been only one definitive Western history of the conflict: Albert Seaton's *The Russo-German War.* The U.S. Army's historical publication *From Stalingrad to Berlin* is quite thorough, except that it glosses over the first year of the campaign. A few popular historians, such as Harrison Salisbury, William Craig, and Cornelius Ryan, have written of events on the Eastern Front, and Martin Caidin, in *The Tigers Are Burning,* tells the story of Kursk, one of history's greatest land battles. But the coverage of the war in Russia is minuscule when the few books that have been published about it are compared with the multitude of volumes about other World War II battlefronts. This lack of attention to the Eastern Front deprives us of one of the best tools we have for analyzing Soviet combat methods.

Although the Soviets' technology and weaponry have certainly changed over the past 40 years, the psyche of the Soviet soldiers and officers probably has not altered significantly. It is doubtful, too, whether the tactics of a Warsaw Pact offensive in Western Europe today would differ greatly from those used during the massive Soviet combined arms offensives of World War II. The major differences would probably be in the use of nuclear and chemical weapons and in the total mechanization of the Soviet infantry units. Other variations might include Soviet air superiority and the Soviet use of large scale vertical envelopments. But if we accept that neither the soldiers nor the basic tactics of the Soviet Army have changed greatly, then it is clear that studying the small unit actions on the Eastern Front from 1941 to 1945 would help us to know our potential enemy a lot better than we know him now.

The U.S. Army did make a tremendous effort after the war to preserve the lessons the Germans had learned when it published its German Report Series. Unfortunately, though, this series is not being used to the extent that it should be. (In the Infantry Officer Basic Course at Fort Benning, for example, it is used only in "breakout from encirclement" instructions, and a poll of officers in a recent class showed that few of them had ever read the series.)

The series consist of 17 pamphlets that examine various German combat experiences during the campaign in Russia. The authors were, for the most part, high-ranking German officers, all veterans of the Eastern Front. The reports were written in the early 1950s under the supervision of General Franz Halder, who had been Chief of the *Wehrmacht* General Staff from 1938 to 1942, and were published as Department of the Army pamphlets. (See the accompanying list.)

By far the most instructive of these pamphlets, at least for company grade combat leaders, is *Small Unit Actions.* Detailed scenarios complete with maps trace platoon and company level engagements across the vast expanse of European Russia. Assaults, defenses, delays, meeting engagements, and urban combat are all dealt with at a small unit level. Few, if any, literary works give a better impression of what it was like to lead men in combat against the Russian soldier.

The other pamphlets in the series are also quite valuable as teaching aids, but two of the most relevant ones are *Russian Combat Methods* and *German Tactics Against Russian Breakthroughs.* The former takes a

GERMAN REPORT SERIES
(Publication date in parentheses)

20-201	Military Improvisations During the Russian Campaign (Aug. 51)
20-202	German Tank Maintenance in World War II (Jan. 54)
20-230	Russian Combat Methods in World War II (Nov. 50)
20-231	Combat in Russian Forests and Swamps (Jul. 51)
20-232	Airborne Operations: A German Appraisal (Oct. 51)
20-233	German Defense Tactics Against Russian Breakthroughs (Oct. 51)
20-234	Operations of Encircled Forces — German Experiences in Russia (Jan. 52)
20-236	Night Combat (Jan. 53)
20-240	Rear Area Security in Russia — The Soviet Second Front Behind the German Lines (Jul. 51)
20-242	German Armored Traffic Control During the Russian Campaign (Jun. 52)
20-243	German Antiguerrilla Operations in the Balkans, 1941-1944 (Aug. 54)
20-260	The German Campaign in the Balkans, Spring 1941 (Nov. 53)
20-261a	The German Campaign in Russia — Planning and Operations, 1940-1942 (Mar. 55)
20-269	Small Unit Actions During the German Campaign in Russia (Jul. 53)
20-290	Terrain Factors in the Russian Campaign (Jul. 51)
20-291	Effects of Climate on Combat in European Russia (Feb. 52)
20-292	Warfare in the Far North (Oct. 51)

NOTE: Although not a part of the German Report Series, Earl F. Ziemke's *The German Northern Theater of Operations, 1940-1945* (DA Pamphlet 20-271, Dec. 59) is important because it tells of the German operations out of Finland that provided the first, and still unique, instance of major military forces operating in the Arctic.

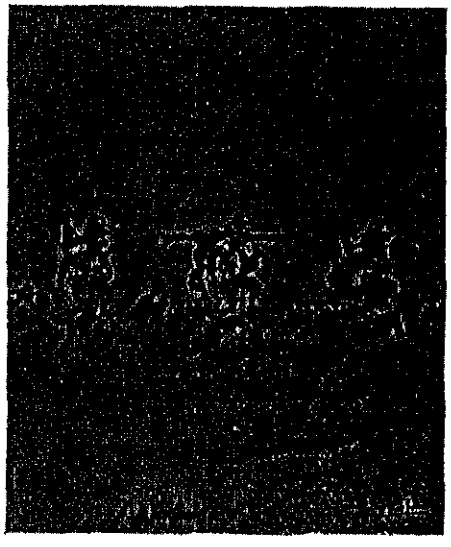
close look at Soviet small unit tactics and at the psychological make-up of the Red Army soldiers as well. It does not, however, equate with what many of our military intelligence instructors tell us to expect in a future war; it does not picture, for instance, the Soviet soldiers of that era as being simple robots who melted away as soon as their officers were killed. John English, too, in his magnificent *Perspective on Infantry,* which was published in 1981, emphasizes the excellence of the Red Army's infantry units of that era in both the attack and the defense.

Some say naively that the Soviet infantryman has changed since then because of the mechanization of the Red Army, and Viktor Suvorov — a former Soviet officer who crossed over to the West — doesn't think much of his old comrades. But history does not support this attitude. Certainly millions of Soviet soldiers surrendered in World War II, and perhaps a million will desert in any future war, too, but it is the multitude that stayed and will stay again and fight that we need to be concerned about.

The massive combined arms breakthrough on a small front marked Soviet tactics in World War II. On a strategic level, the *Wehrmacht* was able to blunt the Soviets' 1941 offensive around Moscow and the Soviet breakthrough at Kharkov in the Spring of 1942. But beginning with the double envelopment of the German Sixth and Fourth Panzer armies at Stalingrad in 1943, the Eastern Front witnessed a series of Soviet breakthroughs that culminated in the penetration of the Oder River line in April 1945.

On a tactical level, though, the Germans consistently stopped the Red Army's local offensive, the most famous being "Manstein's Miracle" in Southern Russia in the Spring of 1943.

To expect our present-day NATO forces to hold firm all along the East German-Czech border in the event of an all-out Warsaw Pact offensive is a pipe dream. Poland in 1939, France in 1940, Russia in 1941-45, Korea in 1950, and the Bar-Lev Line in 1973 have all demonstrated that strong forward defenses can be torn assunder in a matter of days. If the NATO forces are to defend forward, then our leaders should be well versed in defensive tactics against breakthroughs. (Unfortunately, though, there is not even a field manual covering this topic.) The German Report Series' pamphlet that covers Soviet breakthroughs does contain the specific



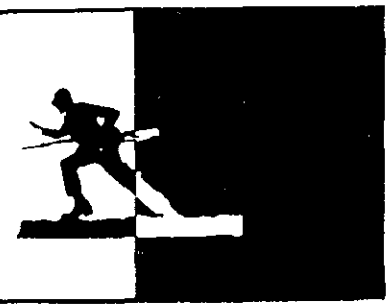
"how-tos" of such defensive tactics. Ten types of tactics against Soviet penetrations are included in the pamphlet, complete with historical examples — a frontal counterattack; flank and spoiling attacks; defensive pincers; mobile reserves; position, zone, and isthmus defenses; and two types of delaying actions. The value of these and all the other techniques covered in the series are quite obvious when considering a future European scenario.

We can be proud of our military heritage, and there is much to learn from our past exploits. But if war comes to Europe again, our opponents (hopefully) will not be German or Japanese. If any conflict of the past resembles the AirLand Battle that has been projected for the future in Europe, it must certainly be the Armageddon-like Russo-German war of 1941-1945. And we can only hope that those who write our doctrine will comprehend the enormity of the Soviet effort in World War II: For every U.S. serviceman lost in that war, the Soviets lost twenty and the Germans six on the Eastern Front. No country except the Soviet Union can claim to have had more than 20,000,000 military casualties and to have still won a war. For this reason, traditional U.S. tactics and "attriting the enemy" may not be enough against the Soviets in the future. The only guarantee of success even in a nuclear or chemical environment will be the tactical competence of our small unit leaders.

S.L.A. Marshall was wont to say, "a handful of men at a certain spot at a given hour could exert a decisive influence on battles and wars." If our "handful of men" do not know their enemy, their effectiveness will certainly be hampered. As leaders, we have a responsibility to train our soldiers to fight their potential foes. If history is indeed a great teacher, then let us study the right history so that we can meet this difficult challenge. "The forgotten war" may be just the right history.

CAPTAIN MICHAEL A. PHIPPS, a 1979 graduate of Johns Hopkins University, recently completed the Infantry Officer Advanced course. He has served with the 82d Airborne Division and the 3d U.S. Infantry (The Old Guard) and now commands a company in the 3d Battalion, 17th Infantry, 7th Infantry Division.

ENLISTED CAREER NOTES



PD NCOs CAN HELP

In the September-October 1984 issue of INFANTRY, Infantry Branch suggested several ways you can improve your chances of being selected by a DA centralized board for promotion or schooling. If you have already done these things and still have not been selected, you may discuss the possible reasons with your Professional Development NCO (PD NCO) in the Infantry Branch. You may write a personal letter directly to him, or you may call him. Either way, your questions will be answered within 30 days after they arrive at MILPERCEN.

Make sure your inquiry includes your full name, rank, MOS, and complete social security number. The PD NCO can evaluate your case even faster if you also mail a current copy of your DA Forms 2A and 2-1 directly to him.

When he receives your query, he will order a current copy of your Official Military Personnel File (OMPF) from Fort Benjamin Harrison. When it arrives, he will carefully examine it for any derogatory information that may have kept you from being selected, and he will check to see if any information that may have influenced the board's decision is missing.

The PD NCO's evaluation will not be based upon the OMPF alone; he will also examine your DA Forms 2A and 2-1 and other assignment or schooling history that is recorded in the Career Management Individual File (CMIF) at the Infantry Branch. By looking carefully at these documents, he can get a fairly accurate picture of your potential for further schooling or promotion and possibly of the reason you were not selected for promotion.

Please keep in mind that the decisions of the promotion board are final and that all records of their deliberations are destroyed upon approval of their recommendations. All the PD NCO can do is to give you his opinion regarding the reasons you were not selected. But at the same time he can offer some suggestions that may improve your eligibility and competitiveness for the next board.

You may write to your PD NCO, as listed below, at DA MILPERCEN, ATTN: DAPC-EPK-I (PD NCO's name), 2461 Eisenhower Avenue, Alexandria, VA 22331-0413. Or you may call him.

		AUTOVON 221- or (202) 325-
SFC Paulk	SGT/SSG 11B/11M	8059/9399
SFC Draughn	SGT-SFC/PSG 11C/11H	9517/9543
SFC Henson	SFC/PSG 11B/11M	8056/8057/8058
SFC Baker	MSG/1SG 11B	8056/8057/8058

IRR BONUS PROGRAM

Certain U.S. Army Reserve soldiers who have combat or combat support skills may now receive $750 in bonus money for adding three years to their individual ready reserve (IRR) obligations.

The Army's new IRR Bonus Program, now in effect, is designed to eliminate shortages in the number of combat and combat support soldiers available for mobilization in the event of a national emergency.

Under the provisions of the program:

- Soldiers, to be eligible, must have less than 11 years of total service and must hold a combat or combat support skill designated by the Army as qualifying for the bonus.
- The bonus is paid in installments.
- Those who get the bonuses must agree to keep the Army informed of their whereabouts and of their physical condition, marital status, and other such data.
- Extensions will be offered to eligible members.
- The soldiers may later transfer to Reserve unit positions and volunteer for training without forfeiting their bonuses.

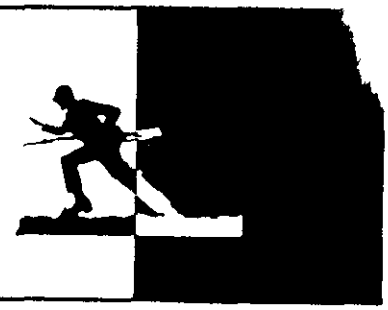
Soldiers who are interested may obtain more information from the Army Reserve Personnel Center at St. Louis; or they may call 1-800-323-1869.

CONSTRUCTION DIVERS

Soldiers who are interested in serving as Army construction divers now have a chance to apply for the MOS. Construction divers provide surface-supplied (hard-hat) and scuba diving in support of port construction, rehabilitation and construction of submarine petroleum pipelines, vessel maintenance, and salvage operations.

Applicants must meet a number of requirements ranging from physical and mental tests to age and length of service. A list of personnel requirements is available from USA MILPERCEN, ATTN: DAPC-EPL-E, 2461 Eisenhower Avenue, Alexandria, VA 22331; medical requirements from the Surgeon General, HQDA, ATTN: DASC-PSP, Washington, DC 20315.

OFFICERS CAREER NOTES



CALLING INFANTRY BRANCH

There is a considerable amount of frustration both in Infantry Branch and in the field because of the volume of telephone calls to assignment officers. Each of them is on the phone almost constantly, with one or more calls on "hold," and you may sometimes have difficulty getting through. But there are some ways in which you can help reduce the number of calls and get better service as well.

First, remember that a current preference statement is vital to your assignment officer in making assignments. Therefore, make sure you have an up-to-date preference form on file 9 to 12 months before you are eligible for reassignment. (Generally speaking, Infantry Branch does not have requirements for assignments until five months before a report date if the location is in CONUS and eight months if the location is overseas. An exception to the CONUS rule is ROTC. We know about 95 percent of the ROTC requirements for the following summer each September or October.)

See that your preference statement is realistic. For example, if you are a captain who is branch qualified and currently with troops, you should not ask for assignment only to troop installations. If you do you risk wasting your top few choices.

Make sure your office and home telephone numbers are on the preference form so that your assignment officer can easily get in touch with you. (Periodically, Army requirements force assignment officers to look for someone to fill an assignment earlier than the normal five or eight months before a reporting date.)

You should be aware, too, that Infantry Branch has several personnel technicians who assist the assignment officers in answering inquiries. Most of these technicians have been in Infantry Branch for several years and can answer many of your questions, including those on extensions, nominations, requests for orders, and receipt of photographs, preference forms, and transcripts, and on other routine matters. Insisting upon speaking to your assignment officer when a technician could answer your question only ties up the officer, keeps other officers on "hold" who are in the active window for assignment, and in the long run raises the frustration level for everyone. Any time the technician you reach cannot answer your question, he or she will then transfer you to the assignment officer himself.

The assignment officers in Infantry Branch have a genuine desire to maintain effective two-way communication with officers in the field. They share your frustrations when high-priority calls cannot be made because of a large volume of routine calls that could be handled either by mail or by the technicians.

Please keep these guidelines in mind so that all infantry officers can be served more efficiently and more quickly.

SPECIALTY CODE 18

A MILPERCEN board convened in July to review the ORBs of about 1,500 officers who applied for designation into Specialty Code (SC) 18. From these applicants, the board designated about 850 officers. Judging from the many phone calls from officers in the field, a few points having to do with Special Operations and the SC 18 board are worth reviewing.

The recent board looked only at each officer's ORB, not at his file ("P" fiche). The members of the board designated an officer in SC 18 on the basis of his experience in his basic branch, on his experience in Special Forces, and on a proportionate representation of his basic year group and branch within Special Operations Forces. The quality of an officer's performance did not necessarily affect his chances of being designated, because OERs were not reviewed. Neither was availability for assignment into the Special Operations Command (SOCOM) considered.

Officers who are not in SC 18 will continue to be assigned to Special Operations Forces (so long as they are "5G" qualified) until 1986-87. (These officers may re-apply for SC 18 each year.)

Special Operations is not an Infantry assignment, nor is it intended to be Infantry-dominant. Combat arms, combat support arms, and combat service support branches are represented throughout SOCOM now, and the board designated some combat support and combat service support officers to ensure greater participation within SOCOM in the future.

Officers who acquire SC 18 as an ADSPEC will continue to serve in assignments in their basic branches. This will serve the dual purpose of developing an officer in his primary branch while simultaneously providing SOCOM with professionally mature and experienced officers.

OPMS SURVEY RESULTS

The initial results of a survey that asked some 17,000 randomly selected officers for their perceptions of the Officer Personnel Management System (OPMS) have been released.

The study group asked these officers for their candid opinions and, as a result, have already identified several areas of obvious concern:

- Officers think combat support and combat service support officers should serve with troops during their initial duty assignments.
- Nearly half the officers surveyed report that the officer efficiency report support form, DA Form 67-8-1, is prepared when an OER is due, not during the first 30 days of an assignment as required by regulation.
- They are concerned about the Army's loss of officers who leave the service as soon as possible following their nonselection for promotion, command, or school. Officers surveyed favor a system that would retain experienced officers through a full career and reduce the effect of an "up or out" policy.
- Many officers feel that if they are not selected to command at battalion level there is little chance for career progression.
- Many officers are concerned about the limited number of commands available; at the same time, though, they don't want command tour lengths redueed from the current 24 months.
- Officers support the current military and civilian training and school systems.

The final results of the survey, along with approved changes to OPMS, will be published when the study has been completed.

PHOTO NOTED ON ORB

Since the decision was made not to put officers' official photos on their Official Military Personnel File (OMPF) microfiche records, officers have had no way of telling whether MILPERCEN has received their latest photos.

But now the month and year of the most recent official photo that MILPERCEN has received are printed in Section X, Remarks, of each officer's Officer Record Brief.

This makes it simple for each officer to make sure his photo is in good order for the next DA selection boards and MILPERCEN career managers to use in deciding on promotions, assignments, and schools.

RANGERS NEEDED

Infantry Branch is constantly looking for lieutenants to serve in the Ranger battalions. To be assigned to one of these battalions, an officer must meet the following prerequisites: Be a senior second lieutenant or a first lieutenant with less than one year time in grade; have completed a normal overseas tour (Korea, Alaska, Panama), or have a minimum of 12 months time-on-station (TOS) in the continental United States; be recommended for the assignment by his present commander; and be Airborne and Ranger qualified.

Any lieutenant who meets the above prerequisites and wants to volunteer for assignment to a Ranger battalion should submit a DA Form 4187 through his chain of command to Commander, MILPERCEN, ATTN: DAPC-OPE-I, 200 Stovall Street, Alexandria, VA 22332.

For further information, anyone who is interested may write to this same address or call AUTOVON 221-0207/08 or commercial (202) 325-0207/08.

RESERVE COMPONENT NOTES

AGR PROFILES

Some active duty U.S. Army Reservists with physical profiles now face board action that could reclassify them or even see them separated from the Army. This is all part of a new regulation designed to ensure that all soldiers can do their jobs under field conditions anywhere in the world.

This new regulation, AR 600-60, applies to most active duty members, including members of the Active Guard/Reserve (AGR) program. It does *not* apply to USAR soldiers who are ordered to active duty or active duty for training for periods of 30 days or less or to members serving on inactive duty training and active duty training under 10 USC 270(b).

In July, MOS/medical retention boards began screening all soldiers who hold "Level Three" physical profiles. These post-level screening boards now certify whether a soldier is deployable.

The initial screening board may either retain soldiers in their present specialties or reclassify them. It also has the option of putting soldiers on a six-month probation, in which case commanders submit evaluations after 90 days. While the board may refer soldiers to the physical disability system, it will make no decisions concerning their separation from the Army.

Soldiers who are found to be unfit for "worldwide deployability" could be reclassified into a different job or referred to the Army Physical Disability System for further evaluation and possible separation from the Army.

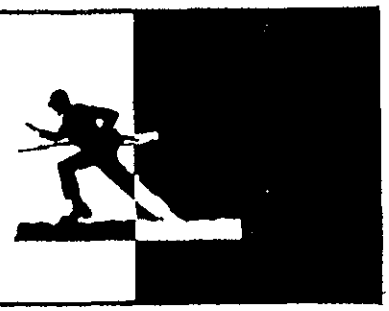
The results of a two-month evaluation of the new procedures show that most soldiers are retained in their current specialties. Only a few are referred for possible separation or reclassification.

The new system also ends the practice of allowing soldiers to sign medical condition statements that allow them to continue their present duty assignments within the limits of their profiles.

The board will review all soldiers who carry physical profiles with a numerical factor of three in one or more of the Army physical profile serial, or "PULHES," factors. Soldiers who receive physical profiles of four will still be referred for physical disability processing.

A physical evaluation board will determine physical fitness — a soldier's ability to do his job. The board may recommend separation from the Army if a soldier cannot reasonably perform the full range of duties required by his MOS/specialty.

BOOK REVIEWS



The Command and General Staff College's Combat Studies Institute has sent us its two most recent publications. Each is a well-done piece of research and writing that deserves the military professional's attention. The two are:

• AUGUST STORM: THE SOVIET 1945 STRATEGIC OFFENSIVE IN MANCHURIA. By Lieutenant Colonel David M. Glantz. Leavenworth Paper Number 7 (GPO S/N 008-020-00984-9. 1983 Edition. 252 Pages. $8.50, Softbound). This study describes the full scope of Soviet strategic and operational achievements in the Manchurian campaign, touches on the tactical level of combat, and discusses the tremendous scope of the operations.

• • AUGUST STORM: SOVIET TACTICAL AND OPERATIONAL COMBAT IN MANCHURIA, 1945. By Lieutenant Colonel David M. Glantz. Leavenworth Paper Number 8 (GPO S/N 008-020-00985-7. 1983 Edition. 208 Pages. $8.50, Softbound). This study describes Soviet Army operations against Japanese defenses in the heavily wooded, hilly, fortified eastern highlands of Manchuria. The author also describes in detail the intricate planning that the Soviet 5th Army had to do to penetrate the extensive Japanese defenses.

(As is the usual case, all orders to the Government Printing Office should include payment in the form of check or money order made payable to the Superintendent of Documents. Or payment may be made by VISA or Master Card if the account number and expiration date of the card are furnished.)

Here are a number of other books you should know about:

• THE PROFESSION OF ARMS. By General Sir John Hackett (Macmillan, 1983. 239 Pages. $24.95). In 1962 the author of this book delivered a series of lectures at Cambridge University. Extracts from those lectures were printed in two issues of MILITARY REVIEW the following year, and the United States Army eventually published the entire series in pamphlet form. This book is a dressed-up version of those lectures. Dozens of black-and-white photographs, three color sections, notes, and an index accompany what is basically the same narrative. Sir John's thoughts on military leadership and the military professional are still worth the infantryman's study. His historical presentation on the development of the military profession in the western world — primarily in Europe — illustrates his intellectual prowess.

• MARK CLARK. By Martin Blumenson (Congdon and Weed, 1984. 308 Pages. $17.95). A reader will probably finish this book vaguely dissatisfied. Something is missing; much more is needed. The subject's military character simply does not come through clearly. Mark Clark was and still is — although he died earlier this year — a controversial figure. The author, a noted historian, concludes that even though Clark may have had some failings, he "towered above his generation and helped to shape the events of his time." Blumenson goes on to call him "an authentic historical figure and an American hero." Not everyone will agree.

• MILITARY HERITAGE OF AMERICA. By R. Ernest Dupuy and Trevor N. Dupuy. Revised Edition (HERO Books, 1984. 875 Pages. $29.95). First published in 1956, this book unabashedly bills itself as one that provides "all Americans a military history presented from the American point of view." Keeping this point in mind, a reader will find in the book a number of reference features that can help make it a valuable addition to the infantryman's professional library.

• THE BANANA WARS: AN INNER HISTORY OF AMERICAN EMPIRE, 1900-1934. By Lester D. Langley (University Press of Kentucky, 1983. 255 Pages. $26.00). Every infantryman should read this book — several times, if necessary. The author, a professor of history at the University of Georgia, has written a solid historical account of our military intervention in the Caribbean — Cuba, Nicaragua, Hispaniola — and in Mexico between 1900 and 1934. Most important, he details the results of that intervention, and therein lie many valuable lessons for today's soldiers. Too many U.S. military professionals have tended to ignore (until recently, at least) our past relations with our neighbors to the south. This book clears away a good deal of that ignorance.

• PRELUDE TO OVERLORD. By Humphrey Wynn and Susan Young (Presidio, 1983. 154 Pages. $16.95). This book is also a solid historical account, but of military operations far removed from those of the "banana wars." Wynn is a British air historian; Young is a British aviation writer. Both are well qualified to discuss the matters that are contained in this combined historical-reference volume. Not only do they tell how the air plan to support the Normandy landings in June 1944 was developed (with all of the problems that strong personalities with opposing views can generate), they furnish biographical data on the top U.S., British, and German air commanders; a full air order-of-battle for both sides; a list of the types of aircraft used on both sides; and several interesting maps and appendixes.

• SOVIET TANKS AND COMBAT VEHICLES OF WORLD WAR II. By Stephen J. Zaloga and James Grandsen (Arms and Armour Press, 1984. 240 Pages). This is another

outstanding reference book and one that complements nicely the authors' previously published book on the armor camouflage and markings used on the Eastern Front during World War II. One of its two main chapters discusses mechanization in the Red Army between 1920 and 1940 and the other, the Soviet armor force — its equipment, tactics, and organization — between 1941 and 1948. The book contains five organizational diagrams; 24 tables (including one that details the number and type of lend-lease armored vehicles supplied by the Western Allies to the Soviet Army during the war); a bibliography; and an index.

THE MARSHALL CAVENDISH ILLUSTRATED ENCYCLOPEDIA OF WORLD WAR I. Brigadier Peter Young, Editor-in-Chief. 12 Volumes (Marshall Cavendish, 1984).

This 12-volume series is a truly outstanding effort by the publisher, the editorial staff, the contributing authors, and the production staff. It is not only a comprehensive and objective reference work on World War I aimed at the specialist and student, it is a work that will interest the general reader as well.

It contains more than 540 text entries with an average length of 3,000 to 5,000 words. In most cases, each has a short list of selected readings on the specific subject under discussion. Numerous four-color maps, photographs, tables, charts, and line drawings — more than 5,000 different graphic pieces — do much to complement the narrative.

The last volume has general and classified indexes, along with an extensive bibliography, a subject chronology, and other important reference data.

HITLER'S LUFTWAFFE IN THE SPANISH CIVIL WAR. By Raymond L. Proctor (Greenwood Press, 1983. 289 Pages. $29.95). Reviewed by Doctor Daniel Hughes, USAIS Historian.

This fine book, based on a wide range of archival, oral, and published sources, breaks new ground in the history of the Condor Legion. It is most valuable to those interested in the Luftwaffe, in the Spanish Civil War, and in air power used in the close combat support role.

Proctor's story abounds in tactical lessons that are still of value to the modern soldier, while his detailed accounts of the Legion's many combat operations also provide illustrations that attest to the benefits of combined arms operations. The versatility of the German 88mm antiaircraft gun clearly emerged in the Spanish Civil War, even though that lesson was not universally recognized until much later.

The Condor Legion, which was created by a personal decision of Adolf Hitler against the recommendations of Herman Goering and other German military leaders, originally found both resources and successes difficult to obtain. Only gradually did its leaders overcome their problems of obsolete aircraft, inadequate logistical support, personnel shortages, and enemy superiority. The author quite correctly attributes much of the unit's success to its determined and imaginative leaders, many of whom became fabulously successful during World War II.

Interestingly enough, the Legion employed more civilian technicians than officers, and sickness and vehicle accidents caused more deaths than did enemy action.

Overall, this volume is well worth careful reading. The final chapter on "consequences" especially suggests the need for a careful study of recent actions before a proper analysis of current and future tactical concepts can be made. Many wrong lessons, the author points out, are lurking in military history.

THE DEFENSE REFORM DEBATE: ISSUES AND ANALYSIS. Edited by Asa A. Clark IV, Peter W. Chiarelli, Jeffrey S. McKitrick, and James W. Reed (Johns Hopkins University Press, 1984. 370 Pages). Reviewed by Colonel James B. Motley, United States Army Retired.

The current military reform movement is an effort to bring about changes in U.S. military doctrine, strategy, weapons, and organization. As Samuel Huntington notes in the Foreword of this book, the present reform movement, which dates from 1980, is not unprecedented. Its predecessors included "the strategists of the 1950s, the systems analysts of the early 1960s, and the arms controllers of the mid-late 1960s and early 1970s."

This book, an outgrowth of the 1982 West Point Senior Conference, is divided into seven sections totaling 22 essays. These essays represent opposing views on a range of policy issues that deal with the U.S. military services. (Though excellent endnotes do accompany the essays, the addition of a selective bibliography at the end of the book would have given the serious reader an opportunity to further examine issues in a broader context.)

The individual authors include a number of experts closely associated with defense matters — Robert Komer, Richard Betts, Generals David Jones and Paul Gorman, and James Fallows. The major sections — Strategy Overview, Reforming the Defense Establishment, Doctrinal Issues, Force Structure Issues, Modernization and Weapon Acquisition Issues, Organization of Defense Policy Making, and Outlook for Defense Reform — address virtually all the issues with which the military reform movement deals. A number of illustrative figures provide valuable insights into such items as defense costs, weapon production rates, education levels, reenlistment rates, and military balances.

This book provides a valuable service and is a definite contribution to the defense community; its assessments, proposals, and alternatives require serious study by those who are in charge of the security of the United States. It should therefore be mandatory reading for all senior-level policy makers, military professionals, and serious students of national security matters.

THE CHINESE DEFENSE ESTABLISHMENT: CONTINUITY

AND CHANGE IN THE 1980s. Edited by Paul H.B. Godwin (Westview Press, 1983. 198 Pages. $23.50). Reviewed by Lieutenant Colonel C.T. Guthrie, United States Army.,

This up-to-date, highly readable volume analyzes future modernization and change within the Chinese defense establishment. The editor draws on a variety of well-known China specialists to develop his analysis of the changes being sought by the Chinese defense complex in light of recent international events. The recurring theme throughout this book is that changing international reality has caused China to view the United States as less of an enemy and more of a counter to Soviet expansionism.

Although there is little that is new in this book, the skill with which the available facts have been compiled and presented make it most valuable reading. And a reader need not have extensive knowledge of China or of its defense establishment to understand what is being said. But perhaps the strongest point in the book's favor is the fact that it is not limited to a discussion of military hardware. Rather, the relationships between history, international politics, national security, education, management, society, and the militia are compared and analyzed as they interact to form a coherent basis for understanding the overall Chinese defense directions in the 1980s.

This is recommended reading for the military professional, and it should be of great interest to those who are willing to spend some time with it.

BULLETS AND BUREAUCRATS: THE MACHINEGUN AND THE UNITED STATES ARMY, 1861-1916. By David A. Armstrong (Greenwood Press, 1982. 226 Pages. $27.50). Reviewed by Lieutenant Colonel David A. Rolston, United States Army.

This is an exceptionally well-written book by an author who obviously has a thorough understanding of his subject. It recounts the trials, errors, and frustrations that were encountered as the United States Army tried to adopt a suitable machinegun with an appropriate organization in the years between the Civil War and World War I.

The book is adequately illustrated and well footnoted. Its narrative flows smoothly and logically, covering all of the relevant issues yet remaining concise and interesting. The author avoids the trap many other writers fall into when they write about weapons — he does not substitute illustrations and data tables for meaningful narrative.

The author is also quite even-handed in his treatment of individuals. Even Brigadier General James W. Ripley, the Northern Chief of Ordnance during the first two years of the Civil War, who intentionally manipulated the bureaucracy to prevent the acceptance of a machinegun, is given credit for his other notable accomplishments such as interchangeable parts for small arms.

This book makes for informative reading for the military professional, whether his interest lies in procurement, military history, or machineguns. This is the author's first book, and we look forward to more.

CHIVALRY. By Maurice Keen (Yale University Press, 1984. 303 Pages. $25.00). Reviewed by Lieutenant Colonel John C. Spence III, United States Army Reserve.

After a careful reading of this book, the serious student of military history will recognize and appreciate the rich traditions of the medieval period. This period, from about 1100 to 1500 A.D., with its norms, customs, and social philosophy, has had an influence upon modern military thinking and organization.

In effect, the medieval institution of chivalry can be seen as an ancestor of today's modern armies. For example, the concept of heraldry was developed, with each knight or group of knights wearing a distinctive insignia or coat-of-arms (somewhat akin to contemporary unit crests or insignia). The development of more protective armor, too, caused changes in the tactical uses of mounted versus unmounted combatants. Tournaments, in which knights could joust with each other, as the author points out, were valuable in preparing the knights for actual warfare. Despite their lethal nature, such tournaments could be compared with modern command post exercises.

Keen, a fellow in history at Balliol College, Oxford, emphasizes the fact that one of the most important aspects of medieval chivalry was the development of a specific group ethic. Strong professional bonds were formed by individual knights. Collectively, they formed a cultural group that was separate from the rest of society. Such a group formed its own code of conduct, and central to that code was the concept of honor.

One of the more outstanding legacies of chivalry is the notion that there ought to be limitations on warfare. As a historian, Keen emphasizes the secular basis for the development of chivalry. But the medieval Church, as an institution of social control, tried to place humane limitations on the activities of knights in combat. Knights, themselves, would also impose limitations.

While many historians have deemphasized the importance of chivalry in the medieval period, Keen amply demonstrates that chivalry left an enduring legacy to Western civilization. His book is well researched, and it reflects his expert knowledge of the period. It is also well illustrated with prints and color plates that reflect the rich cultural heritage of a bygone era.

TO SAVE BASTOGNE. By Robert F. Phillips (Stein and Day, 1983. 274 Pages. $19.95). Reviewed by Captain Harold E. Raugh, Jr., 7th Infantry Division.

When the Battle of the Bulge is mentioned, one usually thinks of the "Battered Bastards of Bastogne" and of General Anthony McAuliffe's famous reply of "Nuts" to the German commander requesting his surrender.

Until this book, the full story of the aggressively executed delaying actions that permitted Bastogne to be held has not been told.

The German counteroffensive

began on 16 December 1944, with one of its major thrusts being made by the *Fifth Panzer Army* toward Bastogne. Against this onslaught stood two battalions of the 110th Infantry Regiment holding the 10-mile center sector of the 28th Infantry Division. For four days these two battered battalions of infantrymen delayed the Germans, thereby permitting all four regiments of the 101st Airborne Division and elements of the 9th and 10th Armored Divisions to occupy and prepare Bastogne — the hub of an all-important transportation network — for defense. Without the heroic action by these two battalions, Bastogne probably would have fallen to the Germans before the American forces could reach and occupy it.

Robert Phillips, who served with the 110th Infantry Regiment during the Battle of the Bulge, has written a fine narrative that is based on his own experiences, on combat interviews, and on material from the official records. It is well illustrated with maps and photographs and is recommended to those infantrymen who like to read of small unit combat actions and of exhibitions of gallantry in war by the American fighting man.

GRANT AND LEE: THE VIRGINIA CAMPAIGNS, 1864-1865. By William A. Frassanito (Scribner's, 1983. 424 Pages. $24.95). Reviewed by Captain Michael A. Phipps, 7th Infantry Division.

This is the author's third work on the Civil War campaigns in the East. William Frassanito is unique in that he is a photographic historian, and his books are not military history in its conventional form. This particular volume is not even a photographic history of Grant's campaigns but rather a history of the photographic coverage of those campaigns.

The author compiled, extensively researched, and critiqued photographs that were taken during the campaigns by the firms of Matthew Brady, Alexander Gardner, and the Anthony brothers, and by individual photographers.

His volume does not contain much detailed information on the actual military operations, but it does give a good general overview of Grant's Virginia campaign. Interestingly enough, the author concentrates on many of the forgotten actions such as those at Harris's Farm, Trent's Reach, and the vicious fight at Fort Mahone on 2 April 1865. Most of the photographs show Union troops; photographs of dead and captured Confederate soldiers and a single portrait of Robert E. Lee represent the only coverage the Confederate Army receives. This is not an oversight — there simply were no prominent Southern photographers working with Lee's army.

This is historical detective work at its best. Frassanito has undoubtedly established himself as the foremost photographic historian of the Civil War, and one must include him in the same category as Catton, Tucker, Dowdy, and Hassler.

WESTERN HEMISPHERE STABILITY: THE LATIN-AMERICAN CONNECTION. Edited by R. Daniel McMichael and John D. Paulus (World Affairs Council of Pittsburgh, 1983. 138 Pages. $7.00, Softbound). Reviewed by Doctor Joe P. Dunn, Converse College.

The World Affairs Council of Pittsburgh has sponsored forums since 1951. The 1978 and 1980 conferences produced published volumes that attracted some attention in academia. This 1983 volume brings together the commentary of 18 Latin American experts from academia, business, government, and the communications media to address the economic, political, and security issues of the region.

While the participants obviously disagree on various matters and see them from different perspectives, the degree of consensus is the most apparent characteristic of the book. All agree that Latin America has long been a low priority item in U.S. foreign policy and that this must change. The participants agree that a Soviet-sponsored threat does exist and that it must be aggressively confronted. The area is essential to U.S. security and our status in the world.

The participants also call for a clear U.S. policy, the rejection of a past legacy of prejudice toward and disdain for the region, an economic commitment, and a NATO-like security mentality. While various security threats exist in the area, most consider Mexico the central focus and, ultimately, the gravest problem to be addressed.

This is not a monumental book, but it is a useful collection that brings together many of the issues of this explosive region.

RECENT AND RECOMMENDED

CITIZEN SOLDIERS: OKLAHOMA'S NATIONAL GUARD. By Kenny Franks (University of Oklahoma Press, 1984. 224 Pages. $24.95).

THE FACTS ON FILE DICTIONARY OF FITNESS. By Ardy Friedberg (Facts on File, 1984. 158 Pages. $14.95).

AIR WAR SOUTH ATLANTIC. By Jeffrey Ethell and Alfred Price (Macmillan, 1984. 262 Pages. $17.95).

THE FRENCH ARMY AND POLITICS, 1870-1970. By Alistair Horne (Peter Bedrick Books, 1984. 122 Pages. $12.95).

THE SECRET ARMY. By David J. Bercuson (Stein and Day, 1984. 278 Pages. $17.95).

ORDEAL IN THE VOSGES. By Donald Pence and Eugene Peterson. Transition Press, 1981. 345 Pages.

THE END OF THE LINE: THE SIEGE OF KHE SANH. By Robert Pisor. Norton, 1982. 319 Pages.

THE MARCH OF FOLLY: FROM TROY TO VIETNAM. By Barbara W. Tuchman. Knopf, 1984. 447 Pages. $18.95.

CAVEAT: REALISM, REAGAN, AND FOREIGN POLICY. By Alexander M. Haig. Macmillan, 1984. 367 Pages. $17.95.

TUMULT IN THE CLOUDS: A STORY OF THE EAGLE SQUADRON. By James A. Goodson. St. Martin's, 1984. 238 Pages. $13.95.

THE UNITED STATES AND THE PERSIAN GULF: PAST MISTAKES, PRESENT NEEDS. By Alvin J. Cottrell and Michael L. Moodie. National Strategy Information Center, 1984. 50 Pages. $3.95, Paperback.

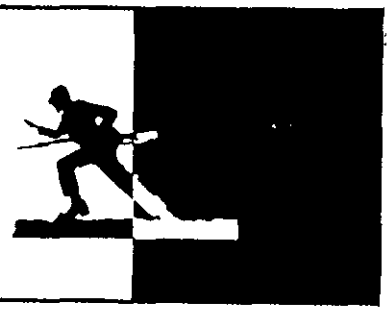
WORLD MILITARY EXPENDITURES AND ARMS TRANSFERS, 1972-1982. U.S. Arms Control and Disarmament Agency, April 1984. ACDA Publication 117. 121 Pages, Softbound.

HERMAN THE GERMAN. By Gerhard Neumann. William Morrow, 1984. 269 Pages. $15.95.

LITTLE SHIP, BIG WAR: THE SAGA OF DE 343. By Edward P. Stafford. William Morrow, 1984. 336 Pages. $17.95.

U.S. POLICY AND LOW-INTENSITY CONFLICT: POTENTIALS FOR MILITARY STRUGGLES IN THE 1980s. Edited by Sam C. Sarkesian and William L. Scully. Transaction Books, 1981. 221 Pages. $9.95, Softbound.

INFANTRY LETTERS



TRAINING ANALYSIS

Major Andrew J. Bacevich, author of "The Way We Train: An Assessment" (INFANTRY, May-June 1984, page 25), is to be roundly cheered for his effort. He has, in my opinion, hit at the very core of training problems that have existed in the Army for many years, problems that Major General Foss, Chief of Infantry, alludes to in his Commandant's Note in the same issue, and which, hopefully, he can begin to correct.

Specifically, the remedies for these problems would include conducting efficient and effective individual training with emphasis on "hands-on" training; training or retraining NCOs to be trainers and leaders, not managers; and, most importantly, having platoon leaders, company commanders, and battalion commanders resume their traditional roles as trainers and leaders and, again, *not* managers. (This last item should be given the highest priority possible.)

Bacevich's observations on the difference between training and testing and between "doers" and managers are especially great. Here, he pinpoints problems that have plagued the Army ever since its inception, and clearly the *primary* problem since Korea — personnel turbulence.

His treatment of ITEP (Individual Training and Evaluation Program) should make *all* policymakers take note. There was once a person in the Army known as the professional private. Maybe we should resurrect this soldier, who had those qualities Bacevich describes as "enthusiasm, initiative, loyalty, a willingness to learn, a knack for operating the machines of war."

Finally, Major Bacevich's article ties in dramatically with the D-Day article in the same issue (page 2), which shows how excellent training pays off in combat. I quote from page 11:

But even as early and discouraging reports regarding the progress on Omaha Beach flowed back to General Bradley's command ship, the crisis was bit by bit dissolving. Among the groups of scared, tired riflemen huddled along the beach were a few bold leaders — officers, NCOs and privates — on whose individual backs the big responsibility at that moment lay.

They began by example and exhortation to prod the men to get up, leave such poor shelter as they had found, and walk or crawl across the beach flat and up the hills, where the Germans were dug in.

What else made this possible but leadership and training at its finest?

A copy of Major Bacevich's article should be made mandatory reading for training policymakers at all levels all the way up to the Pentagon.

LEROY DOPPEL
COL, USA (Ret.)
Lilburn, Georgia

CONSTRUCTIVE

The article "The Way We Train: An Assessment," by Major Andrew Bacevich (INFANTRY, May-June 1984, page 25), was of great interest to me. It is constructive and well-presented. It merits serious consideration by senior commanders who determine training policy and develop training programs.

His recommendations will certainly be of benefit to battalion and company level leaders.

ROYAL REYNOLDS, JR.
BG, USA (Ret.)
Arlington, Virginia

USMC LAND NAVIGATION

In "Land Navigation: A Common Task, Not Commonly Understood," (March-April 1984, page 25), Noel J. Hotchkiss, who apparently has not researched the approach the Marine Corps takes to teaching land navigation, does the USMC a disservice.

He incorrectly states that Marine Corps training commands favor the techniques of dead reckoning as the only accepted method of teaching navigation. The Marine Corps has recognized for several years that more than dead reckoning is involved in land navigation, and the program of instruction at The Basic School illustrates this.

The instruction currently given to all new officers in the Marine Corps has been proved effective, and it places considerable emphasis on terrain association to supplement the use of the lensatic compass. This emphasis is shown in prerequisite classroom instruction followed by practical application in the field. This application forces students to go into unfamiliar training areas to identify terrain features and correlate their maps with the actual terrain.

During navigation training, the students choose their own routes, attack points, limiting features, and steering marks on the basis of the location of their objective and the lay of the land. The training areas require the students to use terrain association and dead reckoning in close harmony, because for every objective there are distracters in nearby terrain. A student does not graduate from The Basic School until he has passed a comprehensive series of tests. (These methods are not unique to training officers; they are equally stressed with the enlisted ranks.)

For many years, Marines have recognized the need for proficient

navigators because this skill relates to most military occupational specialties, and the USMC has taken much care in developing a comprehensive and effective instructional program.

C.W. SCHMIDT
1st Lt., USMC
Land Navigation Instructor
Quantico, Virginia

TAKES EXCEPTION

I take exception to this statement in "Infantry Division (Light)" in INFANTRY's March-April 1984 issue, page 16: "The simplicity of the design of the rifle platoon is intended to match the experience level of the platoon leader."

This is a non-statement, and if in fact the platoon was developed to accommodate experience rather than ability to command and control in accordance with the mission capability of the unit, then we have missed the boat. An analagous statement, as ridiculous as it sounds, could be applied to the battalion commander. Frankly, the command, control, maneuver, and execution of a 34-member platoon isn't any easier than the problems associated with a 44- or 24-member unit.

I trust we are providing the necessary training at Fort Benning to provide the skills and the resultant experience to platoon leaders and that any design recommendations receive the best of our thinking.

PHILIP F. KEARNS
LTC, Infantry
Navy War College

MORTARS TOO HEAVY, TOO FEW

I noted with interest and surprise that the only type of mortar to be included in the new light infantry battalion is the 107mm (INFANTRY, March-April 1984, page 14). But the 107mm is certainly unsatisfactory in terms of the "man-portability" criteria General Wickham stated in his recent white paper (published in the 7 May 1984 issue of *Army Times*) and would thus appear to be out of place in any truly "light" infantry unit. Certainly, the 81mm would be a better choice. (Interestingly enough, the *Army Times* editors chose to illustrate General Wickham's letter with a photo of 82d Airborne Division troopers firing an 81mm mortar during a 1981 exercise at Fort Bragg.)

Of further interest is the fact that there will be only four mortars of any type in the entire light infantry battalion. Because the division's elements will be required "to operate on a decentralized basis on close terrain against other light infantry forces," it would appear desirable to equip the rifle companies with at least two 60mm mortars. These would give the company commander a limited but highly responsive capability to mark targets with white phosphorus, to illuminate, and to reach beyond the 1,000-meter range of his direct fire weapons to attack the enemy with high-explosive rounds.

I would like to see a short article detailing the thinking behind the decision to equip the light battalion with only four mortars, and 107mm mortars at that. I'm sure the many mortarmen in your readership would also find it interesting.

JAMES A. HALES
CPT, Infantry
Ft. Myer, Virginia

HEAVY MORTAR

Reference Captain Arthur A. Durante's article "A Heavy Mortar for a Light Division" [January-February 1984, p. 11], I applaud his analysis and only wish he had talked about replacing *all* 4.2-inch mortars with the 120mm.

The current 4.2s are worn out, parts are difficult to get, and any product improvement program would take years. Some additional points in favor of the 120mm: It is a smoothbore weapon, which makes the most of training transfer to other mortars; it offers adequate expansion capability for future developments; and it offers fast set-up with a high degree of accuracy.

I should also point out, however, that I believe a light infantry battalion needs a weapon system more like the Soviet 122mm rocket or the U.S. prototype "slammer" concept. Such a system offers the dispersion, flexibility, range, volume, lethality, and mobility that the future European scenario will require. One salvo from even a 2.75-inch slammer system can reach out 14,000 meters and disperse several hundred submunitions to attack an entire armored unit, while the gunner displaces to a fresh site before counterbattery fire can engage him.

Given the wide range of possible warheads (smoke, chaff, HEAT, HE, mines, thermal seeking), fusing options, and direct fire capability, the slammer makes for an interesting comparison with any one-round-at-a-time mortar system.

JAMES E. LARSEN
Hampton, Virginia

MACHINEGUNNERY NEGLECTED

My sincerest compliments to Major Harlie R. Treat on his article "Machinegunners," in your November-December 1983 issue (page 38). Formerly, as an Infantry battalion executive officer and commander, and now as a National Guard advisor, I have fought and am fighting my own battle against an Armywide trend toward neglecting the firepower of the machinegun, or subverting its effectiveness through ignorance.

Some of our major problems are:

• FM 23-67, Machinegun, 7.62mm, M60, will be 20 years old this year. It's about due for retirement — not because it's old (many chapters in it are still applicable) but because it is not an up-to-date source of information on the various mechanical problems, checks, and fixes that have been instituted primarily through *PS* Magazine. These include safety wires, leaf spring change, new bolt plug,

check for gas piston facing proper direction, and emphasis on changing barrels during firing and properly identifying barrels with specific guns.

• Task 071-312-3007, Prepare a Range Card for an M60 Machinegun, is now a common task. If wishing could make it so, we would soon have every clerk and medic in the Army up to speed on range cards, but it's not going to happen. For one thing, the task bears no relation to what really goes on in a light machinegun position — an assistant gunner is not even mentioned under "conditions," although "someone" is supposed to walk the final protective line. At least the current task is better than the creative drawing task (with a 15-minute standard) that it replaced. If you find any non-infantry unit rigorously testing this task, promote the first sergeant immediately!

• Our current doctrinal machinegun position is poorly conceived, self-contradictory, and impractical. The inverted "T" is the worst possible choice for a machinegun position. It requires useless work, has a potentially unstable firing table, and does not provide adequate protection. It encourages the concept of "dig first and we'll figure the FPL later," and it cavalierly neglects the unalterable fact that, because of its left-side load feature, light machinegun positions cannot be symmetrical.

• There is a remarkable trend toward leaving the tripod and the traversing and elevating mechanism behind. Most gunners do not know how to read elevation, and few know how to mount the T&E for full elevation/depression or how to adjust the traversing knob. Almost none think to use white paint or typewriter "whiteout" to make the elevating screw and the traversing bar easier to read.

(The M16 rifle can easily kill targets out to 250 meters in the hands of a minimally skilled rifleman. After plodding through waist-deep snow for two days checking targets during my battalion's forced march/live fire exercise, I was amazed at the lack of large, 7.62mm holes in the targets. Luckily, though, the 5.56mm had done the job. I found that, although carrying the tripod and T&E was required, most units used their bipods for firing. My dictum after that was, "A machinegun without a tripod and T&E is just another automatic rifle!" Although experts may question this, I found that the maximum effective range for the bipod-mounted gun was 200 meters!)

Now, if anyone out there really cares about the state of machinegunnery in this man's Army, I have a handy checklist for platoon leaders and sergeants on how to inspect a machinegun position; a quick study on the evolution of the LMG position from the old horseshoe into the "T" and a very good, simple suggestion called the "Lazy L" with all necessary explanations; a fun live-fire game that challenges a bipod to match a tripod firing against a simple target made from a salvage wheel, four engineer stakes, and some chain; and a variation on Task 071-312-3001, Load, Reduce a Stoppage, and Clear an M60 Machinegun.

JULIAN M. OLEJNICZAK
LTC, Infantry
New York, New York

REQUIRED READING

Kudos to Platoon Sergeant Mark S. Wafler for his great article on the Advanced NCO Course at Fort Benning (March-April 1984, p. 6). It was very well written and perceptive, and it could easily be required reading for the NCOs who will attend the course in the future.

To accentuate a couple of Wafler's points: First, given a positive attitude, a soldier can be trained to the highest achievements imaginable; and second, a *critique* must be specific and must cover both criticisms and plaudits.

PETER E. BOGDAN
SFC
Massachusetts National Guard
Methuen, Massachusetts

MISUSED ACRONYMS

In my assignment as Deputy Director of Deployment at MacDill Air Force Base, Florida, I have observed that there is a worldwide misuse of three related but distinctly different acronyms associated with the management of deployments. Perhaps this letter will help to clarify them.

The JDC (Joint Deployment Community) consists of the headquarters, commands, and agencies that are involved in the planning, execution, and sustainment of deployments of U.S. forces and materiel to a theater of operations or objective area.

In plain English, the JDC consists of the players — ranging from the Joint Chiefs of Staff (JCS) to the airlift and sealift commands and the Joint Deployment Agency (JDA) — required to deploy forces and materiel in support of military plans.

The JDS (Joint Deployment System) is a command and control information management system that supports the worldwide deployment of U.S. military forces with their equipment and supplies. JDS provides deployment planning and execution support to all unified commanders and joint task force commanders within the Worldwide Military Command and Control System (WWMCCS).

Simply stated, the JDS is a command and control information system that is used by all the players in the JDC. Although it is an operating system today, the JDS is still under development and will achieve full operating capability in Fiscal Year 1985.

The JDA (Joint Deployment Agency) is a field operation agency of the Joint Chiefs of Staff, with the mission to coordinate deployment activities among the services and commands, and to develop, maintain, and operate the JDS.

The JDA, which is located with the U.S. Readiness Command at MacDill AFB, Tampa, Florida, is a separate and distinct organization and serves the U.S. Readiness Command (like all the other CINCs) as a member of the JDC.

The JDA acts as a focal point for deployment-associated transportation management and decision-making information; for providing data on deployment estimates and on the implications and alternative courses of action to the supported commander and the JCS; and for formulating recommendations to the National Command Authorities. While an extension of the JCS, the JDA provides assistance to the Joint Deployment Community worldwide.

JOE J. BREEDLOVE
BG, USA

HONORS ARMED FORCES

I am a member of the Infantry Association and the editor of my Lions Club's bulletin. In that bulletin we have saluted several Infantry groups: the Infantry School, the 1st and 3d Infantry Divisions, and the 27th Infantry (Wolfhounds), as well as other military branches.

Each of these salutes contains a detailed history of the group from its beginnings to the present, one or more Medal of Honor stories, the group's song, and some photographs, when they are available.

I am looking for more Infantry stories, especially on active or inactive divisions and regiments. If you can help me honor our armed forces, please write to me at P.O. Box 12353, Dallas, Texas 75225.

RALPH W. WIDENER, JR.

BATTALION S-4

Captain Harold Raugh, in "The Battalion S-4: Lessons Learned" (INFANTRY, May-June 1984, page 22), presents an overview of the responsibilities of the battalion supply officer but ignores several issues that should be addressed.

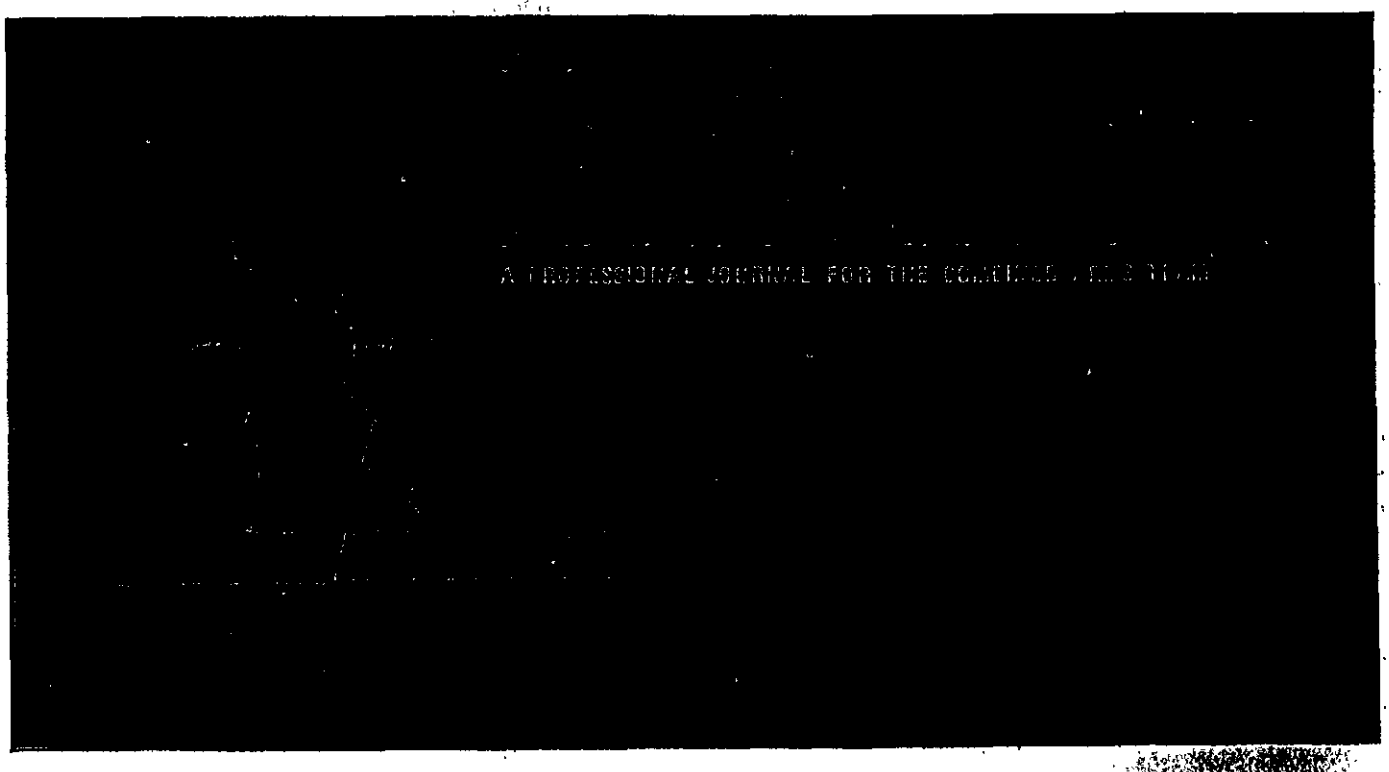
Traditionally, field manual writers have described the administrative, tactical, organizational, and technical responsibilities of the battalion supply officer without explaining the effect of the personal relationships between the key leaders of the battalion.

Raugh incorrectly asserts that the battalion supply officer works for "six bosses: each company commander and the battalion commander." The battalion supply officer works for *one* boss, the battalion commander, who, through the battalion executive officer, establishes priorities and provides guidance. The S-4's relationship with the company commanders should be that of a technical expert who provides the resources and information they need to accomplish their missions. A relationship in which the supply officer worked *for* the company commander would be an organizational nightmare that could lead to disaster.

Another problem that is inadequately discussed in current field manuals is the supply officer's relationship with the battalion operations officer and the headquarters company commander; these relationships often complicate the S-4's job. The operations officer's constant requests for information and logistical support, for example, can be a source of frustration and confusion, particularly when operational demands exceed logistical capabilities.

The headquarters company commander's responsibility for the health, welfare, discipline, training, and maintenance of the various headquarters sections can overlap with the responsibilities of the battalion supply officer. To prevent confusion and animosity, these two officers must establish a close relationship and must clearly delineate their responsibilities.

Although Raugh correctly interprets the current literature in describing the relationship between the battalion supply officer and the battalion motor officer, he fails to stress the



complexities of the motor officer's job in the Division 86 organizations, particularly in the mechanized infantry battalions. With the increase in personnel, tools, and vehicles, the motor officer has become a separate staff officer. Perpetuating the older system, with the supply officer responsible for the motor officer, might work in a light infantry or an airborne infantry unit, but it is ineffective in a mechanized unit.

Raugh does not discuss the supply officer's responsibilities with regard to the dining facility and Class I support in a tactical environment. Although the battalion supply officer is normally responsible for this operation, some units use the headquarters company commander, who is responsible for personnel and supply accountability, to fill this role. Through his executive officer (if he has one), the headquarters company commander can ensure that the dining facility meets high standards in garrison and that it properly supports the units in the field. This also permits the supply officer and the support platoon leader to concentrate on logistical planning and other areas of tactical resupply.

This technique illustrates using available personnel in an imaginative manner to accomplish battalion logistical requirements. Besides those normally associated with logistical operations in the battalion, others that can be used include the headquarters company commander, the executive officer, the first sergeant, and the members of the headquarters section. These additional people can expand the foundation for the battalion's logistical operation.

Throughout his discussion, Raugh stresses that the battalion supply officer position lacks prestige and is "one of the least desired." Yet the problems he articulates are often caused by unimaginative, nonassertive officers who may occupy this critical position and never quite measure up to the job.

All infantry officers must recognize that operational requirements create logistical demands and that an officer's inability or failure to meet those demands can result in the unit's failure to accomplish its assigned missions.

R.J. KOLTON
CPT, Infantry
Austin, Texas

VOLAR CADENCES

I am preparing an official history of the Army's transition to the all-volunteer force. I recall that while I was a student at IOAC in 1971-72, Fort Benning was a VOLAR post, and there were some VOLAR and MVA cadences making the rounds. Perhaps if someone there remembers any of them I could incorporate one or two into my chapter on the VOLAR experiments.

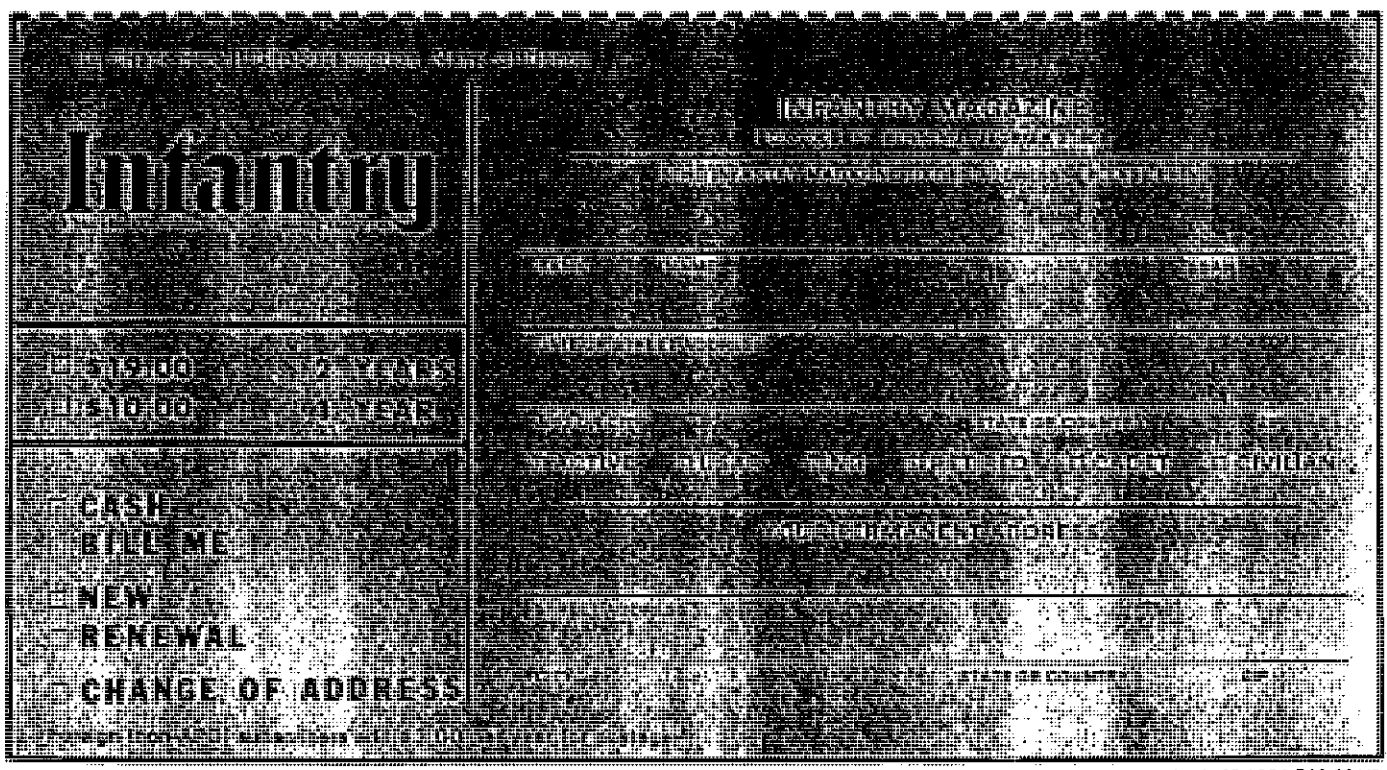
ROBERT K. GRIFFITH, JR.
LTC, Armor
Center of Military History
Washington, DC 20314-0200

BASIC INFANTRY MANUAL

One point brought out during the Commanders Conference at Fort Benning last spring was the need to reduce the number of manuals available to the infantryman. While my infantry experience is rather dated and limited, I have felt for some time the need to have one Infantry manual.

After that basic manual, more specialized manuals could be made available to the soldier, depending on need. Everyone in the Active Army and the Reserve Components would then have available to them a basic and common reference point for ground combat.

RICHARD VAN HORNE
Tucson, Arizona



★ U.S. GOVERNMENT PRINTING OFFICE 1984-746-084/6

From The Editor

On this page in the September-October issue, we discussed our recent readership survey and concluded with the point that many of our readers are also our writers. We encouraged you to write for *us* and said that you need not be writers — we would help you get your articles into print. We'd like to explain now what we meant by "help you" — what our major aim is in editing an article for publication.

What prompts us to do this is that, although many of our authors say they appreciate the work we have done on their articles, occasionally one does not like it at all! (One of the officers who responded to our reader survey — who must have been a former author of ours — said, for example, that we "take too many liberties" in our editing.)

The amount of editing we do depends on several things. We have a number of regular contributors whose writing is quite good. On their articles, we do very little editing. But most of our authors are not professional writers, and we don't expect them to be. They are mostly professional *soldiers*, which is what we do expect them to be — and need for them to be. This means that we accept many articles that another publication might reject. Although we know such articles are going to need lots of help before we can publish them, we accept them because they contain information we think is worthwhile. (If we rejected all the articles that needed some rewriting and cutting, we would rarely get together enough material to put out an issue.)

We take one of those articles and first try to isolate the major point the writer wants to make. Then we often rewrite the beginning to set up that point, if the author has not done it clearly enough. Then we proceed to cut out all the sentences and paragraphs that do not really support that major point — painful as that may be for the one who wrote them.

Our chief aim from there on is to make the article clear, easy to read, concise, and consistent (in such things as tense and pronoun references). Along the way, we also convert uniquely "Army" constructions and terms to more commonly understood language. (Our readers — especially our subscribers — vary greatly in their backgrounds.)

INFANTRY is not unique in its editorial policies. No writer who submits a manuscript for publication anywhere should expect to see it come out in print exactly as he wrote it — unless he's a highly respected (and highly paid) professional who has put that stipulation in his contract. (We, as writers, have even had it happen to us! We don't especially like it either, but once we have submitted a manuscript to another editor, it *belongs* to him, and he is free to edit it for his particular publication any way he chooses. He knows his readers, while we do not.)

Perhaps we do take liberties at times and, if we do, we're sorry. But whatever we do, we do in the spirit of putting out a magazine that will be helpful to Infantrymen everywhere and, at the same time, clear and readable for all those other people who are interested in what Infantrymen are doing.

So keep in mind that your *ideas* are our major interest — not your writing skills. As long as you can communicate those ideas to us, you write and we'll edit.

OUTSIDE BACK COVER:
Pamphlet for Bastogne. By Olin Dows.
Belgium, 1945. (U.S. Army Art Collection)


BASTOGNE