



Infantry

THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN



THE BATTLEFIELD
 Fifth in a Series Page 6

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INFANTRY, published bimonthly at U. S. Army Infantry School, is supported solely by subscription. It provides current doctrinal information on Infantry organization, weapons, equipment, tactics and techniques. It serves also as a forum for progressive military thinking through thought-provoking articles. Unless otherwise stated, material does not represent official thinking or indorsement by any agency of the U.S. Army.

Subscription Rates: 1 year, \$4; 2 years, \$7; 3 years, \$10. For bulk orders of ten or more, deduct 10% from normal rate. On such bulk orders, remittance must accompany the order. Foreign (non-APO) subscribers add 85¢ per year postage.

Expiration of Subscription is shown by the first 3-digit number on address label. First two digits show month; last digit shows year. Example: 076 indicates 7th month of 1966 as terminal issue.

Correspondence: Address all correspondence to Editor, INFANTRY Magazine, Box 2005, Fort Benning, Ga., 31905. Please use full address. *Renewal, changes of address, or any correspondence concerning your subscription should be accompanied by an address label or by the numbers that appear on the label's first line.*

Manuscripts: Payment on publication at minimum rate of 1¢ per word. Acknowledged within 30 days. Manuscripts will not be acknowledged or returned unless accompanied by self-addressed, stamped envelope. Queries answered promptly.

Postmaster: Entered as second-class matter 11 June 1948 at Columbus, Georgia.

STATEMENT OF OWNERSHIP

1. Date of filing—29 September 1965
2. Title of Publication—INFANTRY Magazine
3. Frequency of issue—Bi-monthly
4. Location of known office of publication—Industrial Park, Box 2275, Tallahassee, Florida 32304
5. Location of the headquarters of the publishers—USAIS, Box 2005, Fort Benning, Georgia 31905
6. Publisher and Editor—Lt Col Ross L. Johnson, INFANTRY Magazine, USAIS, Fort Benning, Georgia
Managing Editors—Lt Charles W. Teague and Lt John T. Southworth, INFANTRY Magazine, USAIS, Fort Benning, Georgia



Vol. 56

JANUARY-FEBRUARY, 1966

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PRAISE FOR INFANTRY

• After circulating my copy of the September-October issue, I just don't have subscription forms to go around. Several people have requested I submit their names to you for subscriptions.

If you will send me a half dozen subscription forms, I'll try to solicit more subscribers.

Thanks again for a superior magazine.

Capt James L. Osteen, Inf
Co C, 3rd Bn, 3rd BCT Bde
Ft. Leonard Wood, Mo. 65475

• Vive "Route Step!" Vive Mauldin! When the Army becomes too stuffed-shirted to be able to chuckle at itself it will be a sorry day for all of us.

Col R. Ernest Dupuy (Ret.)
2558 N. Lexington St.
Arlington, Va.

"MOMENT OF GLORY" REVISITED

• A number of points to ponder and things to remember can be gotten from the article "Moment of Glory" by Capt Charles D. Bussey, INFANTRY, July-August.

First: Sam Wilkins was lucky. He drew an IG who was stupid and who had a first-rate know-nothing crew. It appears that Sam was able to hide his problems under paint.

Second: Sam was lucky in another area. Since his men did buy paint it indicates a true sense of dedication and a *HIGH esprit-de-corps*. There is nothing to indicate a command complaint or a letter to a Congressman. Sam and Bussey both know how quickly man can complain in this day and age. True, Johnny done without his roller skates. Sam was making the best look better and his men were helping him.

Third: Sgt Abrams has a pretty wonderful wife. She knows Sgt Abrams performs best when he is not confronted with her gripes. Abrams did not complain because he knew his company had to put the best foot forward and he knew his wife would understand. The results of his wonderful paint job can be gleaned from the inspection report.

Fourth: Sam need not lose sleep over the remaking of his training records. All he need do is check with his Training NCO; he has the old records carefully stashed away. Anyway, no one prepares for an IG and an ATT at the same time.

Fifth: Every charge sale processed and every clothing record remade was train-

ing for the personnel concerned. In the end Sam fooled no one. I am sure that the Quartermaster Officer, Finance Officer, and Personnel Officer let the old man know how much work Sam caused them while they were getting ready for inspection.

Sixth: Those weapons with a deficiency should have been turned in; otherwise Sam would have been skinned. As for those that did not reflect the newness Sam desired—well—let's give Sam credit, he fast-talked the S4 into a good deal for his company. Sam is the kind of guy who will feed his men ice cream in combat when the rest of the battalion forgets to go get C rations.

Finally: Let's put Sam and B Company to the test. I suspect they will make a pretty damn fine showing. With fine people like Abrams and Mrs. Abrams behind him he can't help but win. A man like Sam will work himself and his men just as hard preparing for an ATT and when the shooting starts B Company will produce. Mrs. Abrams won't write the President and ask him why her husband is in Vietnam nor will any of the other wives be members of a Peace Movement.

Let's don't convert Sam; let's leave him as he is.

Lt Col Glenn D. Snook, Inf
Hq., XIII USAC
Fort Devens, Mass. 01433

"FREEDOM TO FAIL" SUCCEEDS

• I believe that Captain Dawkins' award was richly deserved. I was particularly impressed by the statements made after the sentence, "What is this labyrinth?" Herein lies the nitty-gritty of the retention problem.

Lt Stephen E. Gregory, Jr., Inf
10 Woodland St.
Laurel, Md. 20810

"WHY DON'T WE" RETURN?

• In reviewing the January 1960 issue of INFANTRY, I noticed that the magazine carried a column entitled "Why Don't We," in which the readers wrote in ideas for some item or technique that would help the Infantry.

I would like to recommend that we continue this column. With the number of Infantrymen who have already served in Vietnam, and the ones presently assigned to Vietnam, there must be a wealth of ideas to be tapped. A column such as this would give both enlisted and commissioned Infantrymen an easy way of expressing their ideas.

In the January 1960 issue, I noticed that a Sgt Stephen H. Gregory, Jr. recommended "removing all insignia and identifying marks from the field uniform. . . ." I agreed then and I agree now. I would modify Sgt Gregory's recommendation, however. Rather than indicating rank by dull pins, adopt the U. S. Marine Corps' small metal rank insignia worn on the collar for all enlisted grades, thus eliminating the large yellow chevrons presently worn. Further, formally adopt the black lettering on OD name tape, and either stencil the U. S. Army on the uniform, or again utilize the black letter on OD similar to the name tape mentioned above. Finally, since the fatigue uniform is our combat uniform, there should be no need for unit insignia, whether it be a unit patch worn on the pocket or a divisional patch on the sleeve, and this includes jump wings and other badges.

I am firmly convinced that it is about time we made our fatigue/combat uniform work for us. We are no longer just garrison troops who can afford the luxury of a semi-class A fatigue uniform. The fatigue uniform can still be made to look presentable without all the paraphernalia we at present require our men to sew on it.

In addition, the adoption of the measures would save the individual soldier the cost of sewing on a multitude of patches and stripes every time he is either transferred or promoted, which is not a small consideration.

Capt Bryan J. Sutton, Inf
HHC, 1st SFG (Abn), 1st SF
APO San Francisco, Cal. 96331

We would be glad to resume this feature if the volume of suggestions warranted it. At present, INFANTRY carries them as separate articles or includes them in "Letters to the Editor." Ed.

REGIMENTS AGAIN

• The letters on "Regiment" vs. other names has caught my interest for several issues and hence I venture to throw one more thought into the hopper.

The term "Regiment" as used by our NATO allies is a very inexact designation. The extremes are that all U. K. artillery battalions belong to the Royal Regiment of Artillery, and that one French tank company in Berlin is the 11th Regiment of Chasseurs.

There is similar confusion about some of our traditional designations such as battle group, combat command, squadron, troop, and battery. The plain fact is that there are only four unit designations that are universally understood throughout the sophisticated armies of the world and these are company, battalion, brigade, and division.

Much as I personally like some of our old terms and the associated traditions, we have finally come close to words that our allies understand. I vote to keep it that way.

Lt Gen James H. Polk
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ASIATIC GUERRILLA MOTIVATION

CAPT JOHN M. LITTLE, Inf

THOUGH UNDERFED, poorly-equipped, ill-trained, and forced to inhabit the least desirable areas of a country, Asiatic guerrillas fight extremely well. What makes possible the achievements of these semi-literate peasants who lack air cover, high-speed mobility, artillery, and the other refinements of more sophisticated armies?

Promises or threats of terror do not seem nearly adequate in explaining why.

Most of our literature on counter-insurgency simply ignores the prime factor—motivation. We are much concerned with tactics and techniques for guerrilla fighters, but we seldom dig into motivation, the real soil from which successful military effort must grow.

The enemy pays considerable attention to combat motivation and discipline. Mao Tse Tung and Vo Nguyen Giap in particular emphasize and reemphasize it. Moreover, they do not just mention it in passing and then move on to tactics and grand strategy. Detailed concern with human behavior permeates their writing. Its effect in turning out first-rate regular and irregular fighters in Asia was seen in China, Korea, Malaya, Vietnam (*Viet Minh*), Laos, the Indian Frontier, and now again in Vietnam (*Viet Cong*).

We have attempted to rationalize their success at motivating their fighters, but not to explain it. The two favorite rationalizations are narcotics and on-the-spot executions. I have been unable to locate any concrete evidence of narcotics usage as a policy of enemy forces. As for

random occurrence, we must remember that in Asian cultures the use of narcotics as an intoxicant is not at all uncommon. With summary executions we automatically award to the enemy a huge cadre of highly-motivated individuals as leaders. In the small-unit nature of guerrilla operations it admits of high motivation right down to the 3- or 4-man fire team level, which seems like a lot of people holding pistols behind relatively few heads.

It would be more realistic to admit that they have achieved a significant success in motivation and attempt to explain it rather than excuse it. The explanation would be of value in improving our own posture, in the advisory role or complete commitment, while an excuse is only a negative position.

In describing motivation and discipline, the enemy speaks of it as "internal democracy" or "democratic centralism." Perhaps the use of such terms in a system so totalitarian as Communism causes us to overlook their real meaning. Being products of our system, a representative-type democracy, we immediately shrink from this as meaning that the troops will elect their officers and vote on which objective to hit or which column to ambush. We brush it aside as obvious propaganda. We must remember, however, that when Mao or Vo speak of democracy they speak of Communist democracy and not our system. Nor do they mean the ideal of Communism where the "utopia" is achieved and a "dictatorship of the proletariat" is the government. They mean democracy in the practical, present-day revolutionary sense of Communism where members are encouraged to criticize themselves and others, but within bounds of the party line. This is the meaning of the terms "internal" and "centralism." The individual is encouraged to participate critically in discussing the means, but is not allowed for a moment to consider the end. That has been decided for him. They have no concept of parliamentary balloting in the ranks, and the

performance of their armies should make this quite clear.

The enemy outlines this "democracy" as a critique, plain and simple, but with all unit members being encouraged to participate. Rather than a debriefing or critique by a superior to subordinates, it is a unit discussion group, guided by the superior, of course. Once again, grave doubts arise in our American minds for we visualize the pointless "gripe" session which many of us have seen tried, usually only once, by a well-meaning superior. This is not at all the case.

The discussion and criticisms are directed specifically toward the military soundness of actions and orders in an exercise, move, or battle. Though political results are the ultimate end and are given lip service in revolutionary slogans, the individual is guided toward constructive criticism of tactical decisions and choice or application of techniques. Though the guerrilla is expected to end his statement with something like "we must avoid petty-bourgeois individualism," "to crush the national and class enemies," or "in the process of its transformation (*Viet Minh*) into a regular and modern army, our army always remains a revolutionary army, a people's army," he is also expected and encouraged to give of himself to that "great cause."

Even if little value comes from suggestions made or errors brought out by privates, though this possibility should not be too readily discounted, the 5 or 10 or 15 individuals in the unit are made to publicly belong, almost completely. *This is the essence of their combat motivation.* Once recruited by whatever means, the individual strips himself naked before his comrades, admits his own weaknesses, and vows to strive for better accomplishment of the mission in the future. He has subordinated his individuality to the unit and is under much greater pressure to make good the vow "next time," since all his teammates have heard him make it. He is much more highly motivated now than if it was

Continued On Page 51



CAREER NOTES



Infantry Branch

The following is a current list of officers assigned to the Infantry Branch, OPO-OPD, and their sections or their area of responsibility.

**Infantry Branch
Office of Personnel Operations
Officers Personnel Directorate, Tempo A
Washington, D. C. 20315**

Chief—Colonel Don R. Hickman
Executive Officer—Lt Col John F. Sadler
Plans & Projects—Lt Col Edwin L. Kennedy
Chief, Assignment Section—Lt Col Thomas H. Jones
Lt Colonels Asgmts—Lt Col Benjamin L. Gunter
Lt Colonels Asgmts—Lt Col Stan McClellan
Majors Asgmts—Lt Col Selby F. Little, Jr.
Majors Asgmts—Major Paul R. O'Mary
Captains Asgmts—Lt Col William L. Mandie
Captains Asgmts—Lt Col Daniel Sharp
Captains Asgmts—Major Elliott P. Sydnor, Jr.
Lieutenants Asgmts—Lt Col Frederic T. Abt
Lieutenants Asgmts—Major Charles D. Sarkiss
Chief, Education Section—Lt Col Richard L. Anderson
Senior Service Colleges—Lt Col John L. Daniels
AFSC and Aviation Tng—Lt Col Joseph B. Starker
C&GSC and Graduate School—Lt Col William B. Steele
AC&GSC and Degree Compl—Major William W. Taylor
Career and TDY Courses—Major Paul B. Malone III
Chief, Personnel Actions—Lt Col Edward L. Morris
Extensions & Procurement—Major John O. Childs
RA Appointment (DMG, ROTC & Res Off)—Lt Col Sanders A. Cortner
Retention, Promotion & Retirement—Major Roscoe Robinson
Separations, OTRA—Major Frederick Van Deusen
Separations, RA—Major Howard G. Crowell, Jr.
Separations, Lieutenants—Major William H. Miller

US MAPS—Steppingstone to West Point

Many graduates of the United States Military Academy have come from the Regular Army enlisted ranks. The Army has long recognized that its enlisted members are a valuable source of officer material. That is why it constantly calls upon commanders to be ever alert to identify those soldiers having leadership potential, high ideals, and good morals and to inform them of the opportunity to become commissioned officers in the Regular Army.

Under Public Law 88-276, enacted by the 88th Congress in 1964, the annual quota of candidates from the Regular Army has been increased to 85; however, until the first phase of the USMA expansion program is completed in 1968, the number of candidates admitted from the Regular Army is expected to remain at 27.

Candidates from the Regular Army must attend the Preparatory School at Fort Belvoir, Va., before entering the Military Academy. The Preparatory School provides instruction and training to strengthen the candidates in academics, military aptitude, and physical aptitude; it will also eliminate candidates who obviously lack the academic potential. AR 350-55, "United States Military Academy, Enlisted Categories—Army," provides details on selecting and encouraging enlisted members of the Regular Army to apply for enrollment in the USMA Preparatory School and nomination to West Point.

Commanders can provide a needed assist to stimulate interest in and acquaint all eligible soldiers with this program. Suggested means of publicizing this opportunity include:

- Command-wide lectures by recent graduates of USMA.
 - Showing of West Point Films. (Films are available at U. S. Army Audio Visual Communication Centers.)
 - Use of locally designed questionnaires directed to potential prospects.
 - Display of locally designed posters.
- Primarily, the publicity campaign should be aimed at soldiers who:
- are members of the Regular Army.
 - are at least 17 years of age and will not be 22 years of age prior to 1 July of the year of proposed admission to USMA.
 - are United States citizens.
 - are single and have never been married.
 - have satisfactorily completed a college-preparatory high school course or its equivalent.
 - have military records free of convictions by court-martial, other than for minor violations of the UCMJ, 1951. (Also, candidate's records must show no conviction of a felony in civilian court, no history of venereal infection, or no habitual intemperance.)
 - have sufficient time on the present enlistment, or agree to extend enlistment until date of proposed entry into the Military Academy, plus 30 days.

The commander's personal attention and friendly encouragement place him in the most favored position to

aid prospective candidates in submitting applications. The application period for members of the Regular Army for the USMA Preparatory School runs from 1 January through 30 June of the year *preceding* appointments to the U. S. Military Academy.

The next step is to interview the candidate at the earliest opportunity to appraise his qualifications. The candidate should have copies of his secondary school records and college transcripts.

The candidate's academic standing in secondary school is an excellent indicator of his chances to complete the course at the Preparatory School. Special encouragement should be given to those prospects whose academic standings place them in the upper half, scholastically, of their classes in secondary schools.

Copies of all military medical records must accompany the candidate's application. However, it is not intended that the candidate undergo medical examination for this purpose.

Selection as a Cadet at USMA will be made by the Academic Board at West Point based upon the candidate's all-around ability, class standing in secondary school, academic record at the USMA Preparatory School, and the candidate's score attained in the USMA entrance examination. Candidates will face challenging academic competition.

The candidate should know that West Point is not typical of the civilian college. Although USMA courses include the sciences, the humanities, and rigorous military and physical training, attendance there is a way of life. This is symbolized through the use of an exacting disciplinary system and a Cadet Honor Code. While graduation from West Point confers a bachelor of science degree upon the graduate, it also entails an obligation to accept a commission in the Regular Army and serve a minimum of 5 years. And while the Prep School is one avenue to the Military Academy, the applicant should be aware that he may seek a nomination direct to West Point from his Senator or Representative.

With respect to the USMA Preparatory School, the candidate should be apprised of the following facts:

- Based upon the academic records and other information concerning the candidate, the Commandant, USMA Preparatory School, accepts or rejects the application for enrollment.

- If the candidate fails to demonstrate adequate academic or physical performance at the USMA Preparatory School, and is dismissed for this or any other reason, he loses his enlisted nomination to USMA and is reassigned to duty elsewhere.

- Successful completion of the USMA Preparatory School does not in itself guarantee qualification for, or admission to, West Point.

A full description of the USMA Preparatory School training program is to be found in the Preparatory School catalogue, (DA Pamphlet 350-3) copies of

which may be obtained through normal Adjutant General supply channels or from the Commandant, USMA Preparatory School, Fort Belvoir, Va. 22060.

Sources of nomination, entrance requirements, and many other details are contained in the USMA catalogue. Copies may be obtained free by writing either The Adjutant General, at the address below, or The Registrar, U. S. Military Academy, West Point, New York.

Enlisted applicants having further questions may write to: Commandant, USMA Preparatory School, Fort Belvoir, Va. 22060. Other West Point applicants write: Military Academy Branch, The Adjutant General, Department of the Army, Washington 25, D. C. 20315.

OCS Qualifications

Men who apply for Officer Candidate School must be citizens of the United States, or have been lawfully admitted to the United States for permanent residence, or be serving on active duty in the U. S. Army. Applicants may be married.

Enlisted men or warrant officers on active duty must have the following qualifications:

- Be at least 18½ years of age and less than 28 years of age.

- Be a high school graduate or have passed the General Education Development Test of the United States Armed Forces Institute. In addition, an artillery candidate must have credit for two years of high school mathematics, or equivalent credit from the United States Armed Forces Institute, or must have successfully completed applicable artillery school subcourses.

- Have a General Technical aptitude area score of 110 or better and an Officer Candidate Test score of 115 or better.

- Be of high moral character.

- Be medically fit.

- Obtain a minimum score of 300 on the Physical Combat Proficiency Test.

- Have completed or have credit for basic combat training and advanced individual training.

- Be recommended by an examining board with a qualifying composite score representing the traits and potential value as evaluated by the examining board.

Men who enlist from civilian life for Officer Candidate School (information available at local recruiting stations) must meet the same prerequisites as the enlisted man or warrant officer and in addition must have a baccalaureate or higher degree from an accredited college.

It is essential that all echelons of command take aggressive action to encourage qualified individuals to apply for attendance at an Officer Candidate School. As a minimal action, each individual, who is eligible to apply under the provisions of AR 350-50 as changed, should be interviewed. ■

TACTICS

AN ANALOGY

SIGNIFICANCE

RELATIONSHIP TO THE TACTICAL OPERATION

GEOGRAPHIC AREA OF OPERATIONS

1. ZONE OF ACTION
2. AREA OF INFLUENCE
3. AREA OF INTEREST

DEPTH OF THE BATTLEFIELD

1. OBJECTIVE OF THE TACTICAL ACTION
2. FORWARD AREA
3. REAR AREA
4. BASE OF OPERATIONS
5. LINE OF COMMUNICATIONS (LOC)
6. FORCE SUBDIVISIONS

WIDTH OF THE BATTLEFIELD

1. ZONE OF ACTION/SECTOR
2. AREA OF INFLUENCE
3. AREA OF INTEREST
4. FLANKS
5. FRONT
6. INTERVAL
7. FRONTAGE
8. GAPS

LINES OF COMMUNICATION (TYPES)

1. INTERIOR LINES
2. CONVERGING LINES

THE ENEMY

OWN FORCES

The Battlefield: A Gameboard?

COL J. H. BARNER, Inf
LT COL R. H. ROBINSON, Inf

PREVIOUS ARTICLES in the series on the Tactical Operations Handbook have provided a general picture of tactical doctrine and the pitfalls on the road to understanding which the contemporary teacher and student of tactics may encounter. In part, the thesis pro- pounded suggests that the science of tactics is readily classified under nine major headings,¹ which when considered together, constitute the "whole" of tactics as a science.

These classifications cannot be found neatly packaged in any existing field manual. Rather, they are a synthesis of various approaches to classifying or outlining that body of knowledge generally referred to as the science of tactics.

The series thus far has carried the reader down a single road. We now stand at the point where logical explanation requires that the science of tactics and the art of tactics be treated separately in greater detail. This article will deal with the first of the nine tactical classifications—the battlefield. Subsequent articles will discuss the additional eight tactical classifications. However, the reader will discover that the adage of "all roads lead to Rome" applies since our single purpose is to explain *tactical doctrine*, its *science* and its *art*.

* * * * *

AN ANALOGY

The title of this article implies that the battlefield can be likened to a gameboard or playing field, an analogy

¹*Tactics, The Science*, Lt Col M. W. Kendall, *INFANTRY*, Vol. 55, No. 5 (Sept-Oct issue).

frequently used by tactical instructors. The football field or chessboard is cited with squares and lines compared to the flanks, rear, and forward edge of a battlefield. The players or opposing teams are likened to the enemy and friendly forces with the "plays" representing the combat action and engagement of these forces. However, this analogy may be carried to an illogical conclusion. The battlefield, unlike the football field, has no referee to enforce the rules. In fact, no enforceable rules prevail. Little consideration can be given to the published rules of land warfare which are habitually violated. The single rule applicable to the battlefield is simply "kill or be killed."

The significance of the battlefield, and its relationship to the operation, has been discussed at some length in a previous article.² A brief review is in order before we undertake a detailed analysis of its characteristics.

SIGNIFICANCE

"Activity in war is a movement in a resistant medium. Just as a man in water is unable to perform with ease and regularity the most simple and natural movement, that of walking, so in war with ordinary powers, one cannot keep even the line of mediocrity."
Clausewitz—On War

While the battlefield essentially represents only the site where the tactical operation and resulting battle takes place, it is difficult to separate its physical characteristics and dimensions from the opposing sides who elect to engage their forces there. It is the presence of these forces in various dispositions and formations that converts the area of operations (battlefield) from a geographic area into a battlefield. Hence, study of the battlefield includes not only consideration of its physical properties but also the dispositions and actions of the opposing forces to accomplish a military mission. Such study is the origin of military doctrine. The tactician properly views the battlefield as a unit, yet recognizes that its overall configuration and component subdivisions affect the dispositions of the opposing forces. Comprehension of this relationship is essential to proper study, planning, and conduct of military missions.

RELATIONSHIP TO THE TACTICAL OPERATION

To understand fully the influences of the battlefield on the application of tactics, it is necessary to establish its relationship to the tactical operations and actions which occur there. This relationship has been described previously.³ It is sufficient to repeat here that in the broadest sense the battlefield represents any area

²*Ibid*
³*Ibid*

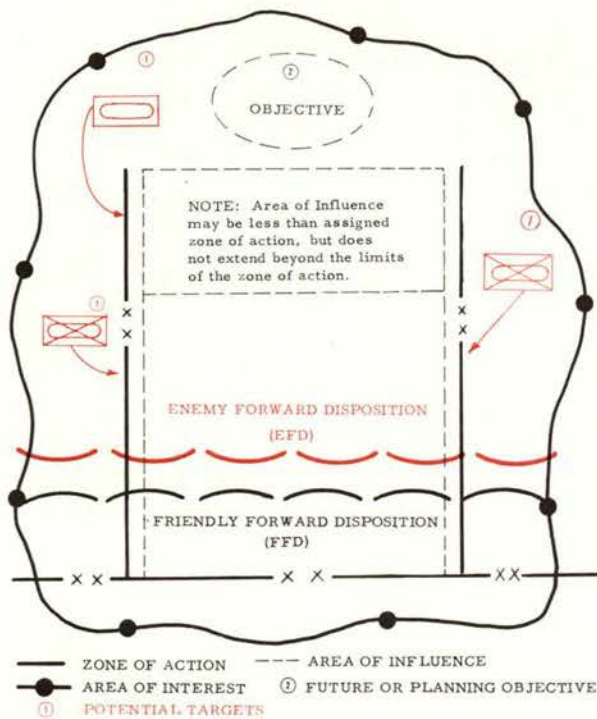


Figure 1. AREA OF OPERATIONS

of conflict, but from a tactical point of view it is best regarded as the specific area of operations necessary for a directed military operation, either offensive or defensive.

By way of summary, we have established that "characteristics of the battlefield" is but one of nine classifications for study of the science of tactics. We have established that the battlefield cannot be viewed in isolation; it must be conceived as part of tactical doctrine, the science.

GEOGRAPHIC AREA OF OPERATIONS

Of the several characteristics of a battlefield, the geographic area of operations represents the greatest variable, yet basically provides the overall framework in which the battlefield must be regarded. The area of operations is that portion of the area of war needed to accomplish a military operation. In a general sense, it is synonymous with the combat zone. It includes three significant and identifiable areas of tactical interest. Figure 1 depicts the relationship of the three areas to each other.

1. ZONE OF ACTION.

The zone of action is that portion of the area of operations for which the combat unit commander has been assigned specific responsibility. In defensive operations it may also be referred to as a *sector*. It may also be

described as the area of responsibility. Normally it is the terrain between two boundaries generally parallel to the direction of attack (or forward orientation of defense), with the forward and rearward limits of the boundaries specifying the limits of the zone. When assigned a zone of action, the commander is responsible for all military operations conducted therein except those specifically assumed by higher headquarters. He is free to fire and maneuver his units within the zone. The commander is responsible for locating and destroying the enemy in his zone consistent with the accomplishment of his mission and to the extent necessary to provide for the security of the command; in the offense he is responsible to clear his zone of action only if directed.

2. AREA OF INFLUENCE.

The area of influence is that portion of the area of operations or zone of action in which the commander is capable of directly influencing operations by the means available to him. Its size is limited by the dimensions of the zone of action assigned the commander, even though he may have the capability of projecting his combat power to a greater distance. It may be smaller than the assigned zone of action when the zone of action is a larger area than that in which the commander can directly influence operations by maneuver of his ground-gaining elements or by delivery of fire-power with the support systems normally under his control or command. Generally, its forward extension is limited by the range of the weapons systems available to a commander. When portions of a commander's zone of action extend beyond his area of influence, the commander may be forced to phase his tactical operation and place more reliance upon higher echelons to collect information of the enemy and conduct tactical operations in such forward areas until he can advance his force and bring his influence to bear.

3. AREA OF INTEREST.

A larger area of concern to the commander is the area of interest. It is that portion of the area of operations required to permit planning for extension of the area of influence or for the displacement of potential targets into the area of influence. Generally, its outer limits coincide with those of the area of operations. It includes the area of influence; the zone of action and adjacent areas; areas occupied by enemy forces which, if employed in the area of influence, could jeopardize the accomplishment of the mission; and, in offensive operations, extends into enemy territory to the objectives of current and planned operations. Its tactical significance is keyed to the actions of the enemy and his reaction to our presence in the area of operations. The commander is again forced to rely on higher headquarters and adjacent units to provide necessary informa-

tion which permits planning and may influence his tactical dispositions.

The area of operations must be regarded not only in its horizontal plane but also in its vertical dimension in terms of air space and the tactical actions which are possible there. Tactical air, airmobile, and joint airborne operations emphasize this third dimension of the battlefield. It is the battlefield to each of the opposing forces. The size, configuration, physical features, climate, weather, resources, population, and critical areas can all affect the organization and composition of the opposing forces and their tactical employment.

DEPTH OF THE BATTLEFIELD

The depth dimension of the battlefield is concerned with the space from the front (the direction of the enemy) to the rear of the area of operations. This space may be regarded either as a subdivision of the geographic area itself or of the forces which occupy the area. See Figure 2. Geographic subdivisions vary considerably depending upon the type of operation being conducted; however, there are certain subdivisions which are tactically significant and normal in all operations.

1. OBJECTIVE OF THE TACTICAL ACTION.

An objective is an end in view, or effect to be attained by the employment of a military force. Both the attack and the defense have as their purpose actions which will attain such objectives. While the overall objective is normally the destruction of the opposing force, usually it is expressed in terms of a defined geographical area within which the physical objective of the tactical action is located. Tactically, it establishes the forward orientation, or front, of either the attack or the defense. In the offense, even though the mission may be to seize an area or to destroy an enemy force, it is usually translated into specific terrain objectives, the seizure of which will permit control of the area or facilitate destruction

of the enemy force. It becomes the physical object to be captured or reached by the advance of the force toward the enemy. While there are many reasons why a force may assume the defense, generally it is designed to keep the enemy out of an area or position. In such cases, this geographic area or feature becomes the objective of the defense.

2. FORWARD AREA.

The area in proximity to combat is known as the forward area. It is sometimes further qualified depending on the mission of the force (*e. g.*, a forward defense area). The forward limit of the forward area coincides with the present positions of the opposing forces. These dispositions are known either as friendly forward disposition (FFD) or enemy forward dispositions (EFD). The line of forward dispositions may be the line of contact (LC) or front, if the forces are in contact, or the forward limits of the area occupied by a force and from which further tactical action may be taken. The attacker may use the line of friendly forward dispositions (FFD) or the line of contact (LC) as a line of departure for either his attack or reconnaissance force. The defender may regard either the positions of the security echelon or the forward defense echelon as his forward dispositions. The forward area is tactically significant as that area of the battlefield where the major combat elements of a force are deployed, and in which the commander moves, disposes, and maneuvers his combat forces with the ultimate purpose of engaging or disengaging from the enemy force.

3. REAR AREA.

The geographic space within the zone of action where the bulk of the combat service support functions are performed is known as the rear area. It is normally the area to the rear of the forward area and it extends rearward to the rear boundary of the force's zone. It should provide sufficient area for administration inci-

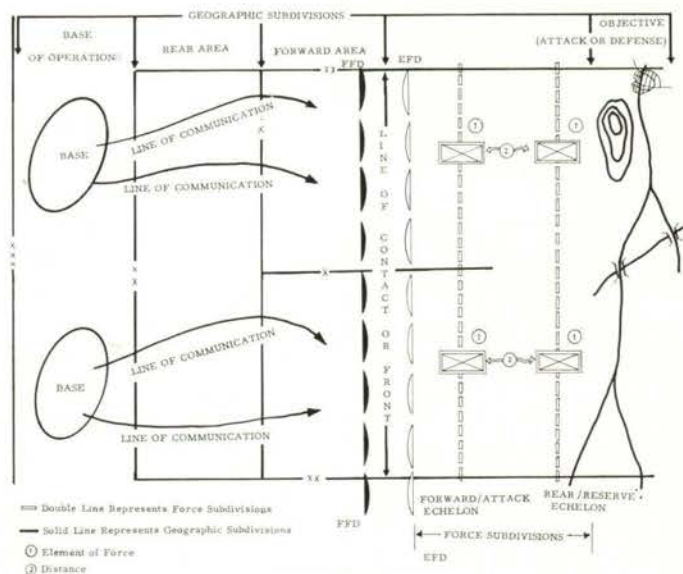


Figure 2: DEPTH OF THE BATTLEFIELD

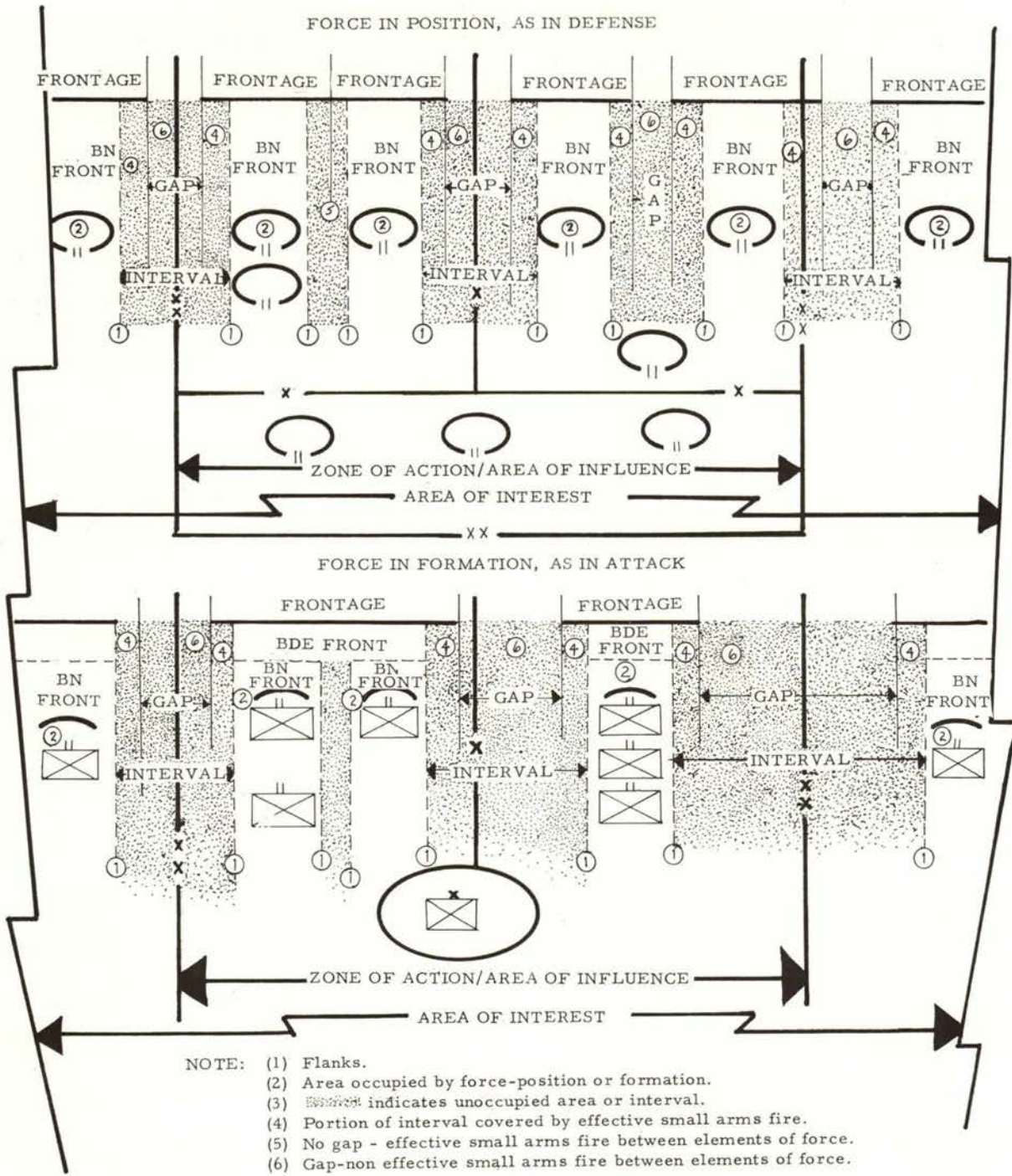


Figure ④ WIDTH OF THE BATTLEFIELD

dent to the tactical operation. It includes the vital line of communications from the forward area to the force's base of operations and may include the reserve combat elements of the force.

4. BASE OF OPERATIONS.

One of the most important characteristics of the battlefield is the base of operations—the source of the strength of the combat force. It is the area from which a military force normally begins its offensive operations and to which it falls back and defends. It contains the

vital base from which the tactical operation is projected or supported and includes the logistic and other combat support installations of the higher echelons of command supporting the operations.

5. LINE OF COMMUNICATION (LOC).

The land, water, and air routes which connect the deployed combat forces in the forward area with the base of operations comprise the line of communications. Supplies and reinforcements move along these routes through the rear area to the forward area. Since

a military force can neither move nor fight without combat service support, it follows that the security of its base of operations and the line of communications are of major tactical significance, either in the offense or defense. To the force with an offensive capability, the opposing force's LOC and base of operations may be the objective of the attack and will influence the offensive maneuver selected. In contrast, the defender may also consider his LOC and base of operations as the objective of his defense.

6. FORCE SUBDIVISIONS.

Subdivisions of the force in depth are referred to as echelons. Tactically, such subdivisions may concern elements of a force or formations in which elements are placed one behind another in various configurations. The distance between elements of a force in formation from front to rear should not be confused with supporting distance, a term of tactical significance, denoting the distance, laterally and in depth, by which two units may be separated, yet come to the aid of each other before either can be defeated separately.

WIDTH OF THE BATTLEFIELD

The width of the battlefield is concerned with the space from one side to the other of the area of operations. As in the depth of the battlefield, this space may be regarded as either subdivisions of the geographic area itself or the forces which occupy the area.

Lateral geographic subdivisions of the battlefield are generally identical with the lateral limits of those areas normally associated with the area of operations, specifically the zone of action or sector, the area of influence, and the area of interest. Of these areas, the zone of action or sector is the most significant regarding the employment of the force itself. See Figure 3.

1. ZONE OF ACTION/SECTOR.

The space between the lateral limits of the zone of action is sometimes incorrectly referred to as the frontage, a term which specifically applies to the force itself rather than the width of its area of responsibility. While the lateral space occupied or covered by a force may coincide with the zone of action, tactical considerations may not require it. The zone of action is properly described laterally in meters. It may further be described as wide or narrow in comparison to a normal zone for a type operation.

2. AREA OF INFLUENCE.

The lateral extension of the area of influence is limited by boundaries of the zone of action or by the capabilities of the means available, whichever is smaller.

3. AREA OF INTEREST.

The lateral limits of the area of interest are normally not specifically defined but reflect the mission of

the force and the operational environment present.

Lateral subdivisions of a force are of major tactical significance since they tend to reflect the capability of the force to accomplish its tactical mission.

4. FLANKS.

The right or left of a force in formation or occupied position as it faces the enemy, is the corresponding right or left flank of the force itself. Such flanks extend along the entire side of a force from its leading element to its rearmost element. Flanks are further described as either strategic or tactical flanks. The strategic flank of an army is the flank which, if turned, would force the army away from its line of communications. It is usually the flank that is nearest the line of communications. The tactical flank is the flank that is more accessible to an attacking force. It can be enveloped or turned with greater ease, usually because of terrain. If one flank rests on an impassable barrier and the other is open, then the latter is normally recognized as the tactical flank. Tactically, it may be regarded as an exposed or assailable flank.

5. FRONT.

The lateral space occupied by an element measured from the extremity of one flank to the extremity of the other flank is known as its front. The unit may be extended in a combat formation or in a position. Tactically, a force may be described as operating on a broad, normal, or narrow front, depending on the type operation involved. This and the term frontage are sometimes used incorrectly to describe the width of a zone of action or area of responsibility.

6. INTERVAL.

The unoccupied lateral space between the flanks of adjacent elements of the force, placed side by side, either in combat formation or position, is referred to as an interval. This space may or may not be covered by effective small arms fire. Portions of the interval not covered by such fires are regarded as gaps.

7. FRONTAGE.

The width of the front, plus that part of the interval covered by an element in combat is properly described as frontage. The area covered by a combat element is interpreted to extend from the area actually occupied to the limits of its effective small arms fire, or about 450 meters under ideal conditions.

8. GAPS.

Any break or breach in the continuity of tactical dispositions of formation beyond effective small arms coverage is known as a gap. Gaps may be created or caused by terrain conditions, by enemy action, by virtue of the size of the area assigned a unit, or they may be planned by our own forces as a means to accomplish or assist in

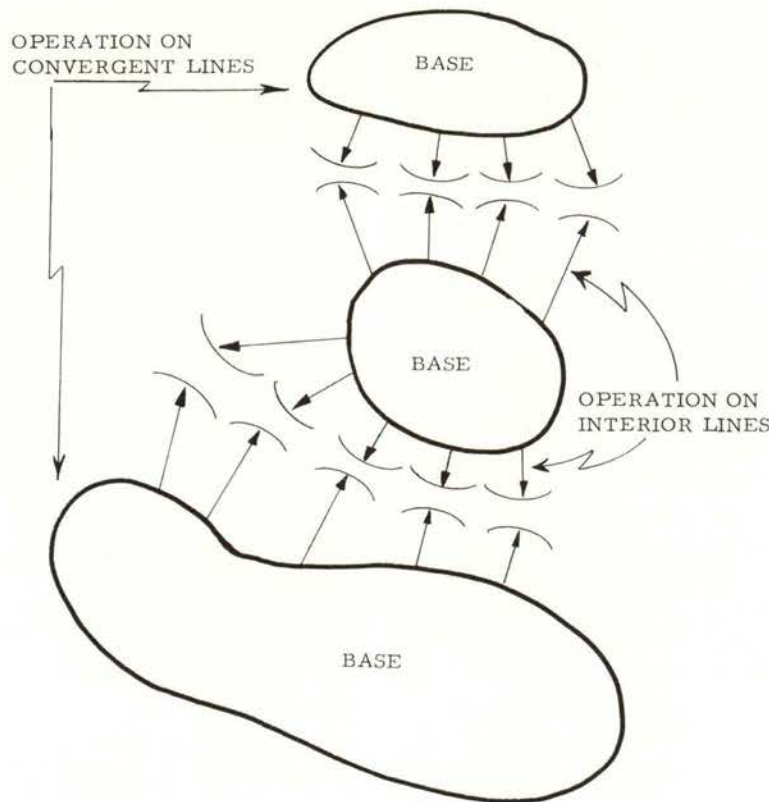


Figure ④ LINES OF COMMUNICATIONS

the accomplishment of the mission. Examples of gaps created by terrain are swamps and dense forest. Examples of gaps created by our own forces are those caused by: differences in momentum or divergent shifts in direction of adjacent elements in offensive operations; assignment to an element of a sector, or zone of action, greater than that which the unit can physically occupy and cover. Examples of gaps created by enemy action are those created by nuclear weapons or other offensive actions that destroy friendly elements in particular areas.

LINES OF COMMUNICATION (TYPES)

There may be several lines of communication in support of the military force. Multiple lines of communication permit ease of movement and supply and facilitate support of the desired tactical disposition of the force. The deployment of the force (in width and depth) in relation to its base of operations and to the enemy force sometimes creates conditions which offer a significant tactical advantage to one force with respect to such LOC. These lines are either convergent or interior. See Figure 4.

1. INTERIOR LINES.

The term interior lines describes the situation wherein a force, owing to its position with respect to the enemy forces, or because of superior lateral communications enjoys advantages of time and space in the em-

ployment of its elements against the enemy. Operations on interior lines are usually conducted from a central locality against forces advancing along convergent lines. From a tactical point of view such a situation occurs in an airhead, bridgehead, or perimeter defense. The Pusan perimeter is a classic tactical example. The advantage of interior lines increases in proportion to the distances separating the converging forces.

2. CONVERGING LINES.

Converging lines refer to lines of communication from two or more bases of operation, directed toward a common, and usually centrally located, enemy force. Strategically, the Allies operated on convergent lines against the Axis in Central Europe. Tactically, the action taken against an encircled force or one occupying a salient is conducted along convergent lines when more than one base of operations is used. The advantage of converging lines is the opportunity to concentrate the force against a single locality while retaining dispersion of its elements and their bases of operations. They offer positive advantages to a mechanized or armored force in a nuclear environment.

Interior lines are generally preferred to convergent lines because of their superior internal communications and greater flexibility of movement. Maximum advantage occurs when the converging forces can be attacked and defeated in detail. Delay of one converging force

to defeat a second converging force becomes an objective of the commander operating on interior lines. In the typical tactical battlefield, where the opposing lines of forward dispositions generally parallel each other (which forms the basis for many tactical operations), the line of communications is normally a single line or some variation of interior lines.

* * * * *

Thus far we have been concerned with the characteristics and dimensions of the battlefield. The reader's image would be incomplete unless the opposing forces are visualized; for without these forces there is no battle, hence no battlefield.

THE ENEMY

When the enemy is located, immediate study is required to determine his strength, disposition, capabilities, and tactics. Knowledge of this enemy influences the course of action to oppose him and permits an assessment of the risks involved. This enemy may vary from well-trained, numerically superior forces to loosely organized elements. He must be viewed as a foe whose hatred makes warfare more like a duel than a game. He represents positive hostility aimed at degrading, neutralizing, or destroying the friendly force by whatever means are available or indicated by the situation.

The enemy employed in peacetime tactical instruction, field exercises and maneuvers, is Aggressor. Knowledge of his organization, equipment, and tactical doctrine permits realistic tactical evaluations and actions in training situations.

In war the most succinct advice to the tactician is embodied in another well-known slogan, **Know Your Enemy**. The corollary to this slogan is, **Know Your Own Forces**.

OWN FORCES

While the tactician studies the dispositions of the enemy force in order to arrange his force tactically with respect to his adversary, his tactics should not be a simple reaction to the enemy force. Rather he plans and executes positive combat actions, considering his mission, the battlefield (its characteristics and dimensions as discussed above), and his own forces available. Normally, the combat action will be either attack or defend. While not an accurate expression, there is significant truth in the common statement that "a commander who is not attacking is defending."

Knowledge of the capabilities of his own forces in terms of numbers, type of units, morale, etc., is essential if the commander is to make an astute determination of which type of operation or combat action he should execute. Of equal importance is the understanding that

the capabilities of our own forces are relative and only significant with respect to the enemy.

* * * * *

Successful military leaders have always regarded the battlefield in its total dimension, being equally aware of its depth as opposed to undue attention to the enemy immediately to his front. Today, alertness to the vertical third dimension is likewise essential to gain maximum efficiency from the means available. Comprehension of the battlefield in its totality, as a contiguous area of operations, and an awareness of its component parts and their relationship to each other, provides the tactician with an essential starting point to apply his art.

He should visualize occupied, unoccupied, and fire-covered areas, and gaps as a product of positions and formations and note their relationship to objectives, avenues of approach, and maneuver. Similarly, he should recognize the significance of distance and interval and their impact on mutual support, reaction time, fires, etc. His awareness of the sensitivity of flanks, lines of communications, and base of operations should cause him to seek out the enemy's and to protect his own, to the degree consistent with his mission.

Above all, knowledge of the battlefield will enable the leader to operate in a familiar environment and to recognize the relationship of his role and mission to other forces about him. While the familiarity of the environment is tempered by the ever-changing nature of the battlefield, recognition of the fact that the basic orientation of any force on the battlefield automatically establishes certain dimensions of depth and width, with inclusive fire-covered areas, flanks, LOC, etc., continuously provides the tactician with an important point of departure in his application of tactics.

Significantly, the characteristics and dimensions of the battlefield need not be described in the multitude of words and phrases which abound in the military jargon. In general, the battlefield can be described in non-technical terms or in terms which have long standing in the military profession and have precise definitions and meanings. These terms increase the ability of the tactician to master his professional field, to communicate with his associates, and to train new soldiers. Proper use of such terms as forward area, rear area, gap, and front preserve this advantage. Such usage is based on an overall appreciation of the battlefield and its included parts.

In this article we have presented a word picture of the battlefield with emphasis on its characteristics and dimensions. Threaded throughout our discussion has been a caution that study of tactics requires that the battlefield must also be conceived as one of three major areas of study—the other two being the actions of the opposing forces and the types of tactical operations in which the forces may be engaged on the battlefield. ■

the Thu Duc Reserve Officer School was officially designated the Infantry School.

The School insignia consists of a red flame burning around a silver sword pointing upward against a dark blue background. It symbolizes the indomitable spirit, the boundless courage, and the outstanding sacrifices made by its graduates in their struggle to keep South Vietnam free. The motto "CU AN TU NGUY" inscribed on the insignia means "to live in peace, prepare for war."

Mission

In keeping with this motto the Infantry School has the following missions:

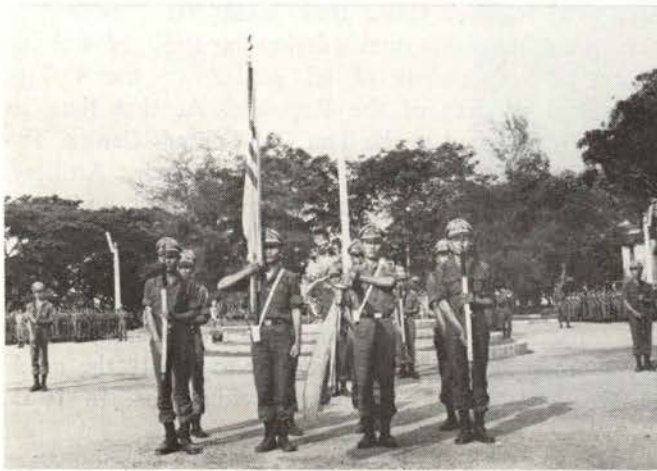
- (1) To train reserve officers for active duty.
- (2) To prepare Infantry officers for field duty as company and battalion commanders.
- (3) To train officers for regional command.

Courses

To fulfill these missions the Infantry School conducts four courses of instruction. The Officer Candidate



A Montagnard officer candidate takes up a firing position with Thompson submachine gun.



Color guard of OCS, Infantry School, Thu Duc, Vietnam during practice for graduation.

Course, the Company Commander's Course, the Battalion Commander's Course and the Regional Force Commander's Course. By far the largest and most important course is the officer candidate training program. The young candidate arrives at Thu Duc with high school diploma in hand with little or no previous military experience. A small percentage (6 percent based on the most recent class) rise from the ranks to attain their aspirant rank. Those who become Infantry officers face a tough 36-week program of instruction. All candidates receive 17 weeks of basic Infantry subjects, much like our basic and advanced individual training programs. On completion of the basic phase the candidate receives a senior status.

The potential Infantry officer, during Phase II, stud-

ies subjects that will prepare him to assume command of a rifle platoon in combat. During the entire 36 weeks of training, the candidates assume various positions of leadership and run their own companies and platoons. This practical aspect of leadership is particularly stressed in platoon tactics where the candidate physically commands a platoon on field training exercises.

Not all candidates are commissioned in the Infantry. Those who select a technical service or a combat arm other than Infantry leave the Infantry School during the 17th week and receive branch training at their respective schools. All candidates return, however, during the last week of training and graduate with the In-



Officer candidates charge across a rice paddy during platoon tactical training.



A tactical officer corrects a candidate on "present arms" at Thu Duc OCS, Vietnam.

fantry class at Thu Duc. The main emphasis in officer candidate training is placed on leadership and discipline, closely supervised by the platoon tactical officer. Over 4,000 candidates will complete the tough and demanding course in 1965 and be commissioned aspirants in the Army of the Republic of Vietnam. The aspirant rank can be best described as a temporary commission in the rank of Third Lieutenant.

Graduation is an important event in the life of the cadet. It is marked with a solemn ceremony highlighted with military pageantry. The Chief of State as well as the service Chiefs of Staff, foreign dignitaries and other important persons regularly attend.



Senior candidates at OCS, Thu Duc, Vietnam practice for their graduation parade.

The Company Commander and Battalion Commander courses are quite similar in nature, their only difference being the level of instruction taught. All students are members of line units in the field and are put on temporary duty to the Infantry School to learn the latest techniques in counterinsurgency warfare. The Company Commander course is designed for first lieutenants with approximately 4 years commissioned service. The Battalion Commander course, similar to our advanced course at Fort Benning, prepares the officer for command at the battalion and regimental level.

The Regional Force Commander's Course is designed as a refresher in basic Infantry subjects for those officers assigned to Popular and Regional Forces. In addition, more emphasis is placed on working with the civilian populace at district and province level. For this reason they receive detailed training in psychological warfare, civic action, pacification, new life hamlets and territorial intelligence. The training in tactics for these officers is geared to the Popular Force small unit level with emphasis on night ambush and hamlet defense.



An officer candidate takes up the "on guard" position while training in the field.

Organization

A school organization exists to support the instructional program and is quite similar to that of our own Infantry School organization at Fort Benning. The Commandant is assisted by three groups, the Deputy Chief of Staff for Training, the Chief OC's Group and the Chief Headquarters and Support Group.

The Deputy Chief of Staff for Training is in charge of all committees, selects programs of instruction, and supervises all classroom and field training.

The Chief of the OC Group supervises the discipline and leadership training of the candidates with his assigned platoon tactical officers. Additionally, he provides for messing and housing facilities.

The Chief, Headquarters and Support Group, has as

his primary mission supporting the training at the school. School troops and security forces come under his jurisdiction.

The security mission is an important task, not to be neglected. The Infantry School is located in an area which is constantly threatened by the Viet Cong. To reduce this danger the school troops physically clear the training area and roads each day and, together with the officer candidates, conduct combat patrols and ambushes each night. During all phases of training the candidate carries live ammunition for use should he run into the Viet Cong.

U. S. Advisory Effort

The American advisory effort supports the school organization and is composed of eight U.S. officers. The School Commandant is assisted by the U.S. Senior Advisor, a lieutenant colonel. The Commandant's Staff is assisted by a captain, staff advisor, who also serves as the detachment adjutant. A captain assigned to the OC Group Commander advises him on leadership, discipline, and training. Additionally, he assists the tactical officers in their daily supervision of the OC platoons. The largest segment of advisors, five in all, assist the Deputy Chief of Staff for Training. One major advises the chief of training on committee supervision, programs of instruction, and all facets connected with classroom and field training. He is assisted by four captains, three who advise the weapons, tactics, and general subjects committees and one who assists the scheduling and facilities officer. A great deal of background and experience is present in the advisory team. Both field grade officers have combat service in WWII and Korea and have held supervisory positions at the U.S. Army Infantry Center. All captains presently assigned are counterinsurgency veterans, having served with either Vietnamese Infantry or Ranger battalions.



An officer candidate utilizes camouflage as he takes up a firing position during FTX at OCS, Infantry School, Vietnam.

Facilities

Many facilities exist at the Infantry School that provide realistic training oriented toward counterinsurgency warfare.

The first is a VC mock village similar to many villages in rural Vietnam. The candidates learn how to effectively surround and sweep the village. Emphasis is placed on proper search techniques and the village has numerous booby traps, tunnels and hidden caches. Another effective training area is the transition range. Here the officer candidate learns to fire quickly at fleeting pop-up targets as he walks through the brushy jungle terrain. A confidence course similar to the one used in the USAIS Ranger program is employed. Here the candidate negotiates rope bridges, rappels from a 70-foot tower and takes a thrilling ride down the "slide for life."



Lt Col Lloyd R. Cain, senior advisor, follows a senior candidate across a rope bridge.

In addition to twelve firing ranges capable of handling the full spectrum of Infantry weapons, a swamp firing range is used to teach the student the effectiveness of fire and movement in open terrain such as that found in the Delta. Live ammo is used in this problem.

The war in Vietnam is an Infantryman's war and will ultimately and decisively be won only on the ground. Not only are Infantry leaders needed in Infantry battalions engaged in jungle warfare, they are required in every phase of the country's struggle to eliminate subversion and terrorism, from the Popular Force leader defending his own village to the province chief engaged in winning the hearts and minds of his people. The Thu Duc Infantry School with its varied programs, excellent facilities, latest counterinsurgency techniques and emphasis on leadership is producing motivated and dedicated men ready to step in and do their part to keep South Vietnam free. A proud tradition is written in the history of the Thu Duc Infantry School. An even prouder one will be written in the days to come. ■



COMMANDANT'S NOTES



**General
York**

The expression "a lieutenant's war" has often been used in reference to the exploits of American forces during the Philippine Insurrection of 1901. Pinning a label on any conflict is difficult, but I believe that if we sought one for our present situation we could, in viewing the overall picture, term the struggle in Vietnam as an "Infantryman's war."

Infantrymen are being called upon not only to prepare for unusual types of conflict, but at the same time to maintain readiness for what is termed conventional war. This calls for intensified training and an extremely high caliber of leadership.

You, the leaders, have a mission far beyond normal requirements, at times a burden perhaps almost overwhelming. We, at the United States Army Infantry School, cannot relieve you of your responsibility, but we can be of assistance in the accomplishing of that mission.

The Infantry School has a ready-made capability to support unit commanders in two specific areas: first, the advancement of individual proficiency through individual or group study in the Extension Course program; and, second, the provision of instructional packets to unit commanders to meet their particular needs.

Our Extension Courses range from the **NCO Leadership and Career Development** to the **Infantry Officer Career** Courses and cover a broad spectrum from Map Reading and Weapons to Infantry Brigade-level operations. In between are the **NCO Career Series**, the **Army Precommission Course** and the **Infantry Officer Basic Course**. We also offer an **Infantry Officer Tactical Refresher Course**. These are fully described in the Extension Course catalog published by the Infantry School and distributed to all units. Students may be enrolled in specific subcourses selected for subject content instead of an entire course. These courses are designed for individual study; however, the group study system offers advantages of group participation, instructor supervision, and a controlled progressive development of the class. I urge unit commanders to look through the Extension Course catalog, encourage their men to enroll in the course which fills the need, and consider establishing a unit class for group study. For further details on group study, write to our Deputy for Extension Courses.

Instructional material printed at the United States Army Infantry School evaluated as useful to leaders and units is published in the "Monthly List of Instructional Material" and disseminated to major divisional units in both the Active Army and Reserve Components. This list is prepared to help you in your training.

To further assist unit commanders, a complete recapitulation of all currently available instructional material at the United States Army Infantry School will be published as a separate inclosure to the January issue of the "Monthly List." From this recapitulation, unit commanders may select those items which might be needed and request one copy of each, which will be provided without charge. By this means the unit commander may tailor his own package. Should there be training problems that are not adequately covered, send us your request and every attempt will be made to fulfill your need.

A well-trained Infantryman is our highest goal; to this end we here at the Infantry School dedicate our complete resources.

A handwritten signature in black ink that reads "Robert H. York". The signature is written in a cursive, slightly slanted style.

ROBERT H. YORK
Major General, USA
Commandant

The M113 ARMORED PORCUPINE

CAPT THOMAS P. KEHOE, Inf

FIGHTING from their personnel carriers, the Infantrymen laid down a volume of fire heavy enough to impair the enemy's ability, or desire, to return effective fire as the task force advanced toward its objective against sporadic enemy resistance.

Was this incorrect or proper employment of armored personnel carriers? Today's commander of a mechanized Infantry unit would logically hesitate to use tactics such as those described above, but combat experience in World War II indicated that fighting from half-tracks was a role frequently assigned to, or assumed by, armored Infantry units. Is today's armored personnel carrier so underarmed and outgunned as to be ineffective except as a means of transportation to the battle area; are we merely allowing our capabilities to be influenced by our current hardware?

Sure, the M113 has a .50-caliber machine gun mounted at the cupola and has adequate periscopes for the driver and track commander to observe while "buttoned up." Certainly, one or two men can observe and

fire from the opened cargo hatch, but what happens when the cargo hatch must be closed? And what about the rest of the squad?

Consider the individual rifleman, riding to battle in an armored personnel carrier. He cannot know where he has been, or what the ground looks like around him. Should his vehicle come under surprise fire, he cannot return that fire. When the ramp is lowered and his squad leader commands, "Let's go" he is inadequately oriented for an immediate fire fight. No wonder commanders adhere to the cautious doctrine of dismounting at least two terrain features back. They fear any other choice!

While the success of our armored Infantry battalions in World War II was frequently spectacular, their half-tracks often were unable to operate satisfactorily over difficult terrain. Commanders recognized that greater cross-country mobility was needed—a mobility which would allow armored personnel carriers to keep pace with tanks. As a result a full-tracked personnel carrier,

The modified M113 armored personnel carrier with firing/observation ports open.



the M39 Armored Utility Vehicle (AUV), was designed, and saw limited service prior to the end of World War II and during the Korean conflict. But a serious drawback was noted early in the production of this vehicle—it lacked overhead armor. With the introduction of the VT fuze to the battlefield this consideration was of prime importance.

Our first full-tracked armored personnel carrier with overhead armor was the M44 Armored Utility Vehicle which carried 25 soldiers plus a two-man crew. This vehicle was lightly armored and mounted a .50-caliber machine gun which fired from its rear cupola, a .30-caliber machine gun, ball-mounted forward of the assistant driver's station, and another .30-caliber machine gun designed to be fired from one of four support brackets located at the top corners of the vehicle's side door frames. The M44 also had four observation ports mounted in each of its side walls from which personnel being transported could observe to their flanks. Although standardized, this vehicle was never produced in significant numbers. Late in 1945 the Army Ground Forces requested the development of an armored carrier capable of transporting 10 men in addition to its crew. From this requirement grew the M75 Armored Personnel Carrier.

The M75 was capable of transporting 12 men in addition to the driver. Protection for the M75 was furnished by all-around armor plate. It was armed with a .50-caliber machine gun mounted at the commander's cupola. Whereas the various models of half-tracks, the M39 AUV, and even the M44 AUV had afforded the transported squads a means of observing the terrain through which they were passing, as well as a limited fighting capability, the design of the M75 APC failed to provide these characteristics. Successor vehicles, the M59 APC and the M113/M113A1 APC, likewise failed to offer the squad a fighting capability or a means of observing the terrain through which they were passing, or in which they might have to fight.

It has now been 13 years since the standardization of the M75. These 13 years have seen the Army's inventory of armored personnel carriers reach new heights. Time has also caused many commanders of mechanized Infantry outfits to forget that we once fought from our armored personnel carriers when necessary. While Infantry doctrine tells us that "The mechanized rifle company may attack either mounted or dismounted . . . mounted operations include attacks against light or discontinuous enemy resistance and the exploitation of the success of other units or the effects of nuclear and chemical weapons; furthermore, they facilitate the expeditious employment of reserves to exploit success," the M113/M113A1 is not fully responsive to such opportunistic missions.

Today's M113 has performed admirably in Europe and in Vietnam. Indeed, it has covered itself with laurels wherever and whenever used. Our troops are confident that the M113 will get them to their destination, but it's

how they get there that counts! When they are confined inside this carrier, they are ineffective. Except for the driver, the track commander, and the air guard(s) no one knows much of what is going on around the vehicle. Further, no squad member can fire a weapon from a position inside the vehicle. Men cannot be expected to fight effectively when they dismount into a tactical environment that is totally unfamiliar to them. Small wonder that commanders of mechanized Infantry units hesitate to use this vehicle on fully mounted operations. Yes, our thinking has been influenced by our hardware!

Today's mechanized Infantrymen can neither see what is going on around their APCs nor fire their organic weapons from within the M113 troop compartments. We need not accept these "design limitations." Indeed, the XM701 Mechanized Infantry Combat Vehicle, an armored Infantry fighting vehicle now undergoing test, is provided with both firing and observation ports. So you see, we are analyzing once again the idea of giving the mechanized Infantryman this extra capability. Can this forward thinking be applied to our current M113 APC? Let's return two capabilities that were inherent in past APCs, and which may also be provided with our future APCs.

This idea is not as "far fetched" as it might appear. "Design limitations," which have been accepted for too long a period of time, can be remedied. The capability of the M113 for mounted operations can be improved.

The firing/observation port in the ramp provides fire capability to the rear.



Soon after he arrived at Fort Benning, Georgia, Major General John Heintges, Commanding General, US Army Infantry Center, expressed the belief that the combat effectiveness of the M113 APC could be increased by providing firing/observation ports in its sides and rear. This item came up for further discussion at an Infantry Team meeting in late 1964.* It was then decided that the idea should be explored. At that meeting, Colonel Robert C. Williams, President of the US Army Infantry Board, agreed to construct a full-scale mockup of the right half of the troop compartment of an M113 APC and to conduct experiments to determine whether members of a squad could deliver fire effectively from various

manding General, US Army Materiel Command, to make appropriate modifications to an M113 APC. He also arranged for the Infantry Board to conduct the additional testing as a military potential test. An M113 APC was delivered to Anniston Ordnance Depot where sections were cut out of its right and left sides. The vehicle was then returned to Fort Benning, where the Maintenance Section of the Infantry Center fabricated various panels for insertion into the cut-out areas. Later, Infantry Board personnel also removed the ramp of the M113 and installed a wooden ramp containing panels similar to those constructed for the sides. Each of these panels had one or more firing/observation ports of various



Below: One of the safety features of the modified M113, a "deflector" for expended cartridges (on an M60 machine gun).



Right: Interior of the M113, showing the center seating arrangement.

Left: Fire direction by a team leader through the firing/observation ports.

types of firing/observation ports located in its side. Limited firing tests were conducted with this mockup mounted on a lowboy trailer.

Results of these tests were favorable enough for the Infantry Team to decide that additional tests of the concept should be conducted using an M113 APC modified with firing/observation ports. General Heintges then secured permission from General Frank Besson, Com-

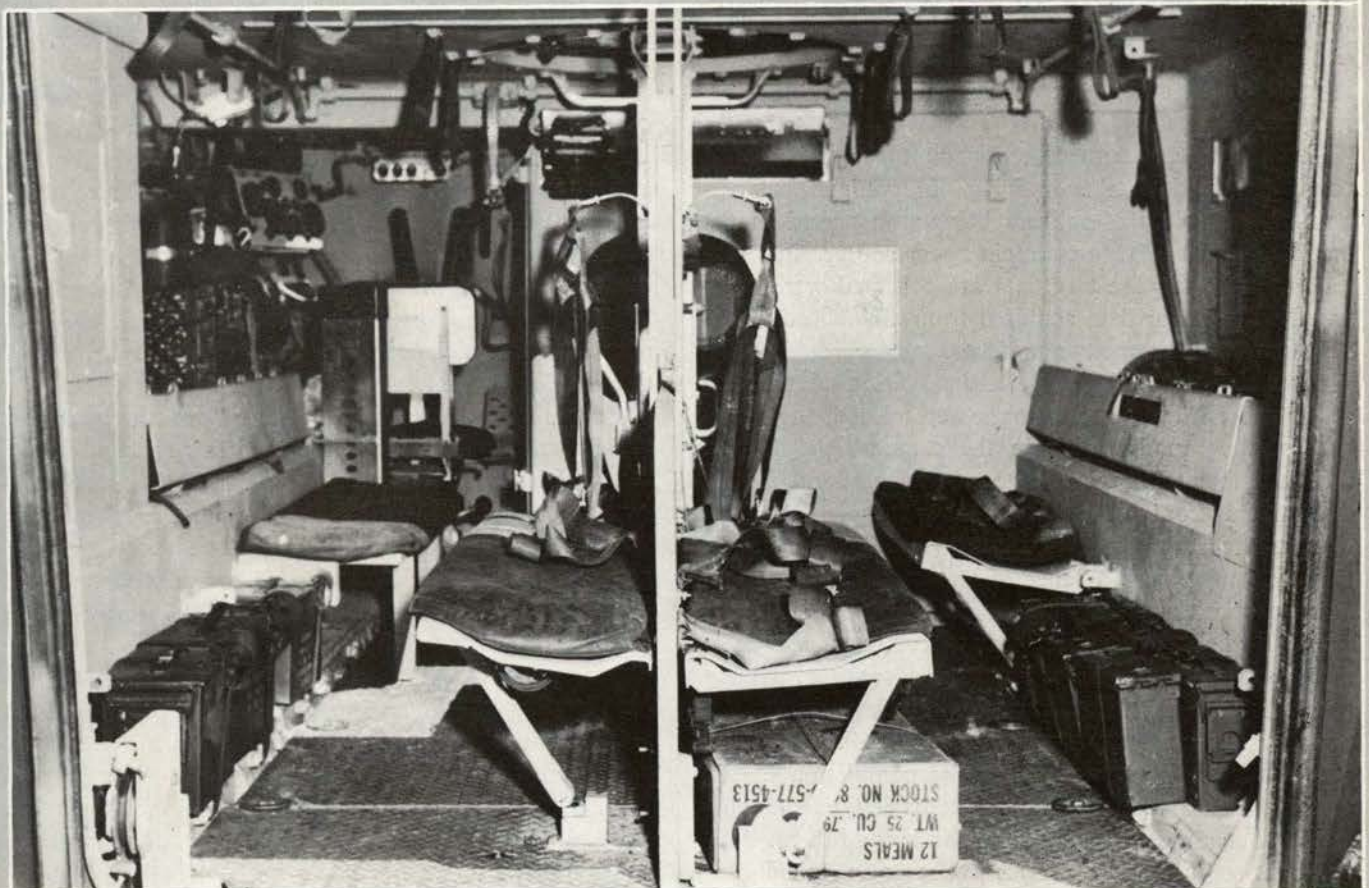
** The Infantry Team is the collective name applied to the US Army Infantry School, US Army Infantry Agency, and US Army Infantry Board at Fort Benning, Georgia. The heads of these organizations and selected members of their staffs meet periodically to discuss and take action on matters of importance to the Infantry.*

configurations. The most suitable of these was composed of a covered, one-man firing port designed to accept the M14 rifle, M14E2 automatic rifle, M16 rifle, M79 grenade launcher, and M60 machine gun. Directly above each port was a vision block through which soldiers could observe. The covered firing port was opened only to engage targets. An M113 APC thus equipped would permit nine members of the squad (four on the right side, two in the rear, and three on the left side) to observe and fire from within the vehicle. While the right-side wall and ramp of the M113 APC were readily adaptable to these modifications, some minor adjustments had to be made on the left-side wall.

To position soldiers more adequately within the M113, several different seating arrangements were examined. Of these, the most suitable was a composite arrangement in which two soldiers seated themselves along each side wall (standard location) on benches adjacent to the track commander's station. To observe or fire they merely rotated into a position from which they could best see through their ports and employ their weapons. The jump seat was removed from its location and folding benches constructed in the center of the vehicle to accommodate six men, three on each side. This arrangement afforded good observation and fields of fire to the flanks and rear, most nearly conformed to the human

inadvertently discharging it within the vehicle was considered. While the consequences of such an incident might have to be accepted in combat, during testing a rod-like device was attached at a right angle to the muzzle of each weapon to prevent unintentional withdrawal.

The second phase consisted of a series of firing exercises conducted while the carrier travelled over level terrain at speeds of 7 to 8 miles per hour. The gunners fired at a lateral array of silhouette targets at various ranges of 25 to 250 meters. Phase three was a series of firing exercises conducted with the vehicle moving cross-country, over rolling and rough terrain, at speeds of 5



engineering of the standard M113 APC, and afforded room on the center seats for two additional soldiers.

A progression of firing exercises was conducted to determine whether members of the squad, using squad weapons and machine guns, could deliver effective fire from within the carrier. In the first phase of these exercises they attempted to identify any safety hazards, while acquainting the test soldiers with the techniques of firing their weapons from within the vehicle. In this phase soldiers experienced no difficulty in learning the techniques of firing from, and observing through, the firing/observation ports. The possibility of an excited soldier withdrawing his weapon from the firing port and

to 25 miles per hour. The results of these last two phases indicated that:

1. Test soldiers firing M14 rifles, M14E2 automatic rifles, and M60 machine guns, singly or in various combinations could deliver fire and hit targets through all types of firing/observation ports tested.

2. The effectiveness of fire, measured in terms of the number of target hits in proportion to the number of rounds fired, diminished as the range of the targets and the speed of the vehicle increased, as the terrain over which the test vehicle travelled became rougher, and as targets were positioned diagonally (as opposed to perpendicularly) to the test vehicle's route of ad-

vance or departure.

3. The fire effectiveness obtained with the M16 rifle in the limited firings conducted was approximately equal to that obtained with the M14 rifle. Grenadiers firing the M79 grenade launcher were able to place approximately half their rounds within the target area (approximately 10 x 50 meters) when firing at ranges from 100 to 250 meters.

The final phase was conducted on a field firing range in which various pop-up type silhouette targets had been placed at ranges of 50 to 350 meters. This phase was included in testing primarily to confirm the suitability of the firing port/vision block configurations and the composite seating arrangement to the tactical employment of the vehicle. In this phase, test supervisory personnel confirmed that the firing port/vision block configurations and the composite seating arrangement were suitable and superior to all other port configurations or seating arrangements tested.

Two 30-mile, mounted, cross-country marches were conducted to determine if firing/observation ports increased the ability of soldiers being transported in the modified M113 APC to maintain a sense of terrain orientation and to acquire targets. Data collected were compared with similar data acquired from a standard M113 APC making the same two marches.

Since the standard vehicle had no firing/observation ports, and all doors and hatches were closed, the members of the squads riding in the standard APC were unable to maintain a sense of terrain orientation. As they dismounted from their vehicle they required several moments to accustom themselves to the daylight conditions and to acquire a sense of terrain orientation. The firing/observation ports in the modified M113 APC provided daylight within its troop compartment. The members of the squads maintained a sense of terrain orientation by observing through the firing/observation ports. In addition, they were able to pick out likely targets as the vehicle travelled. At the completion of the motor marches they immediately adjusted to the outside light conditions and to the terrain around them.

Target-acquisition exercises were also conducted wherein the ability of a fire team to pick up and engage targets while mounted in the modified APC was compared with a dismounted fire team's ability to acquire and engage the same surprise targets. In this exercise, members of the dismounted fire team and members of the mounted fire team acquired and fired at targets at approximately the same time.

From these exercises it was determined that firing/observation ports in the M113 APC substantially increased the ability of soldiers being transported to maintain a sense of terrain orientation and to acquire surprise targets.

To determine whether provision of firing/observation ports and center seating in the APC adversely affected the stowage capabilities of the vehicle, modified and un-

modified M113s were loaded with troops, supplies, and equipment for three days of operations. While both the vehicles could accommodate such loading, the personnel compartment was quite crowded in each case. The crowding in the modified M113 was considerably greater than in the unmodified vehicle, due to the loss of stowage space along the side walls.

The amount of supplies carried in each M113 APC was then reduced to provide for one day's operation. Both vehicles were relatively uncrowded when so loaded. The soldiers kept their prescribed "on individual" ammunition in pouches on their pistol belt and stored additional ammunition directly in front of them without undue crowding. While center seating did not contribute to the reduction in the stowage capability of the modified M113, it did limit the amount of leg room available to the soldiers.

The troop and command acceptability of the firing/observation port concept was evaluated by soliciting the opinions of all 41 soldiers who participated in the test, and by inviting members of the staff and faculty of the Infantry School—who observed, rode in, and fired from the modified vehicle—to express their opinions as to the overall value of the concept. All personnel expressed favorable opinions as to the increased combat effectiveness that firing/observation ports would contribute to the M113/M113A1 APC.

From the Infantry Board's testing I am convinced that considerable merit is to be found in this concept of correcting "design limitations" of the M113. While all testing was conducted by firing through ports cut in wooden panels and observing either through open ports or plexiglass vision blocks, Infantry Board personnel ascertained that actual ports could be fabricated with vision blocks that provide protection equal to the M113 aluminum armor, and firing ports could be sealed prior to the vehicle's water entry. Once sealed, the firing port's armored cover would also provide protection equal to the M113's aluminum armor.

Having discussed the advantages of modifying our standard M113/M113A1 vehicles, mention must be made that these modifications are not entirely without problem areas. So far I have spoken only in terms of a concept. Actual firing/observation ports have not yet been produced. Secondly, our Infantrymen have not been trained in how to fire from a moving vehicle, or what formations such vehicles should assume; as a result, the training implications to this modification must be recognized. Finally, we must ask ourselves whether mechanized Infantry can accept a reduced stowage capability for our standard M113 APC. The logistical aspects of these modifications have yet to be explored. They must be the subject of further study.

Analysis of this project is continuing through various command channels. It is possible that in the near future we will have an M113 capable of permitting the Infantry to fight mounted, should it be required to do so. ■



Answers to quiz may
be found on page 51.

Infantry Quiz is a regular feature of INFANTRY Magazine and is prepared by the Department of Non-Resident Instruction of USAIS.

We heartily recommend that you test your technical proficiency with this feature, and if any questions regarding the quiz arise, direct them to:

Chairman, AEC Committee
DNRI, USAIS
Fort Benning, Ga. 31905

Answers to the quiz may be found
on page 51.

1. **The best means of ascertaining reliable information on jungle terrain is by (Select ONE.)**
 - A. map reconnaissance.
 - B. using helicopter scouting parties.
 - C. using native guides.
 - D. vigorous, active patrolling.
2. **The need for engineer support is increased when operating in jungle terrain because (Select MORE than one.)**
 - A. roads and trails deteriorate swiftly.
 - B. bridges to accommodate military loads are rare.
 - C. unstable soils make road construction difficult.
 - D. there is a lack of materials suitable for road construction.
3. **The accuracy and effectiveness of mortar and artillery fire is reduced in jungle terrain because (Select MORE than one.)**
 - A. accurate target location will be difficult.
 - B. the effective burst radius is limited by heavy growth.
 - C. the effective observation distance is reduced.
 - D. of difficulty in adjustment sensings.
4. **The battalion medical platoon requires augmentation when operating in jungle terrain. This is because (Select MORE than one.)**
 - A. of the high temperature and humidity.
 - B. of the location of supported units.
 - C. of the difficulty in traversing terrain with casualties.
 - D. evacuation is always by Army helicopter.
5. **In establishing the perimeter-type defense when halting for the night in the jungle (Select MORE than one.)**
 - A. critical jungle approaches are patrolled.
 - B. observation posts are established well forward of the outer edge of the perimeter.
 - C. maximum security is provided to reduce surprise attacks from any direction.
 - D. the defender insures that the position will not be infiltrated.
6. **Organizational maintenance performed at battalion level includes the periodic preventive maintenance service (PP-MS). During this service, the operator or crew will assist the mechanic. This service is**
 - A. a nonscheduled service.
 - B. conducted every two months or 750 miles on all wheeled vehicles.
 - C. conducted every four months or 3,000 miles on all tracked equipment.
 - D. a scheduled service.
7. **Direct support maintenance is provided by division to the brigade and this facility is located in or near the brigade field trains. The organization that provides this support to the brigade is the**
 - A. area support company.
 - B. forward support company.
 - C. forward area support company.
 - D. forward direct support company.
8. **The Equipment Daily and Monthly Log (DA Form 2408-1) records both daily and monthly maintenance information such as hours and/or miles operated, the fuel and oil added during operations, and the number of days the item was NOT operational. When used as a daily log this form is filled out by the**
 - A. equipment operator.
 - B. motor sergeant.
 - C. senior track vehicle mechanic.
 - D. motor officer.
9. **The Equipment Maintenance Record (Support Echelons) (DA Form 2408-6) provides an historical record of support maintenance performed on the equipment. You know that**
 - A. this form is destroyed after the vehicle returns from the direct support agency making the repairs.
 - B. all maintenance data required to complete this form will be extracted from the Maintenance Record (DA Form 2407).
 - C. repair entries will be made by the battalion mechanics when the repairs are made.
 - D. this information serves as an historical record and is used by the commander to further evaluate his equipment.
10. **The Equipment Serviceability Criteria (ESC) evaluation color categories are well known as far as the names are concerned. What needs particular emphasis is the meaning of these categories. Combat equipment in the RED category is combat equipment which**
 - A. is free of any condition limiting the reliable performance of its primary mission for a period of 90 days' sustained operation.
 - B. possesses limited conditions which may restrict the reliable performance of its primary mission.
 - C. is unable to perform its primary mission immediately, or possesses an unacceptable reliability for sustained performance (90 days) of its primary mission.
 - D. cannot be evaluated due to extended dispatch or maintenance requirements; such equipment is given this category rating until it is available for evaluation. ■



THE SENTRY

CAPT JAMES J. WALDECK, Inf



BOOK DEPARTMENT

UNITED STATES ARMY INFANTRY SCHOOL



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|--|--------|--|--------|
| 1. Map case, green vinyl cover, snaps, 21"x24" | \$3.75 | 6. Magic Marker (red, blue, yellow) | \$.50 |
| 2. Map case, clear plastic, 24"x30" | 4.10 | 7. Major Accent (pink & yellow) | .37 |
| 3. Map case, clear plastic, zipper, 16"x20" | 2.25 | 8. Pentel felt tip pens (asst. colors) | .34 |
| 4. Grease pencil, (red, black, blue, green) | .20 | 9. Insignia, cloth | — |
| 5. Grease pencil refills, box of 4 | .10 | 10. Ball point pens | — |

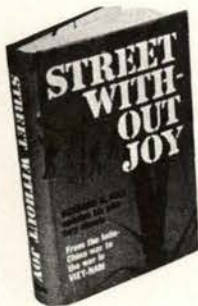
LEADERSHIP GUIDES

- | | |
|---|--------|
| 11. Field Expedient Handbook | \$.30 |
| 12. Infantry Leaders Handbook | .30 |
| 13. The Army Notebook (12th Ed. 1966) | 1.40 |
| 14. Pointers for Infantry Troop Leaders | 1.50 |
| 15. Combat Leaders Field Guide | 1.50 |
| 16. Guidelines for the Leader & Commander | .80 |
| 17. US Army Area Handbook for Vietnam | 2.00 |



MILITARY READING

- | | | | |
|---------------------------------------|--------|---|--------|
| 18. Vietnam Witness, Fall | \$5.45 | 21. New Face of War, Browne | \$4.00 |
| 19. Here is Your Enemy, Cameron | 3.25 | 22. Green Berets, Moore (paperback) | .80 |
| 20. Why Vietnam?, Trager | 3.95 | 23. Dateline—Vietnam, Lucas | 4.00 |
| | | 24. Vietnam War, Why?, Sivaram | 2.85 |
| | | 25. Modern Guerrilla Warfare, Osanka | 7.30 |
| | | 26. Counter Guerrilla Operations, Valeriano | 4.80 |
| | | 27. Yoke and the Star, Gamez | 4.75 |
| | | 28. Defeating Communist Insurgency, Thompson | 3.85 |
| | | 29. Fundamentals of Guerrilla Warfare, Nasution | 4.40 |
| | | 30. Vietnam Diary, Tregakis | 4.90 |
| | | 31. Street Without Joy, Fail | 6.40 |



SPECIAL REDUCTIONS

The Expert Infantrymans Digest, 414 pages, formerly \$1.75, reduced to \$1.00. An excellent reference book.
Follow Me Record Album, formerly \$3.65, reduced to \$3.50, add 25 cents for postage.
INFANTRY Magazine Binders, hard covers, blue, heavy spring, formerly \$1.50, now 50 cents, limited supply.



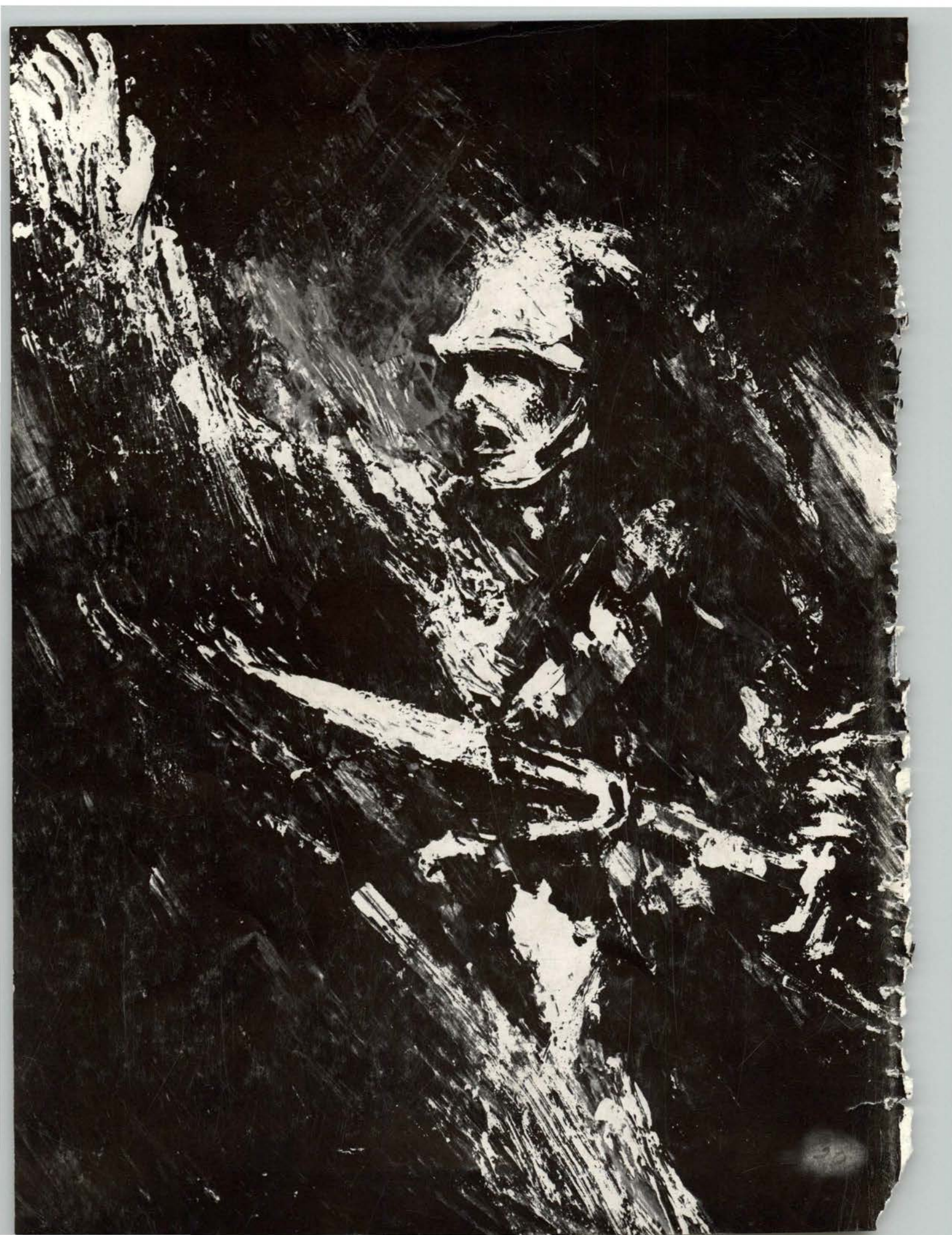
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SWEAT DRIPPED from them as they marched, but they knew they had no time to rest. "Old Jack" was in a hurry, and this meant a forced march to their final destination.

At 0600, they were face to face with "Fighting Joe" Hooker's Army. Now they were marching away from him "Where are we going, sergeant? Ain't like 'Old Jack' to run away from all these Yankees without even puttin' up no fight."

"Shut your mouth, boy. We're goin' somewhere. 'Old Jack' don't run us like this if we ain't."

Hour after hour passed, and the long, gray column of troops hurried to their unknown destination. The men cursed the pace, spit hot dust from their dry, cracked lips and shuffled to stay up with the man in front. Now noon, and no halt. Six hours of marching and still no relief.

The roar of distant cannon broke the monotony, but it was too far in the rear of the column to worry about. "I guess the Yankees finally got after us, sergeant. Sure never thought 'Old Jack' would show our heels to 'em."

"Don't you worry, boy. 'Old Jack' knows what he's doing. You just keep your feet a 'flappin' instead of your mouth and keep up with us."

The sun was now just peeking over the forest in the west. That damned forest of tangles, roots, vines, and trees where a man couldn't walk five steps without los-

ing his cap or getting a slap in the face from the brush slipping off the man in front. And still they marched on—more quickly now for somehow, that mysterious sixth sense warned them that danger was near at hand. The mounted officers were doubling up and down the column more frequently. As they passed they leaned from their saddles and, with barely controllable calm, kept saying, "Press on. Press on, men."

At 1800, the column passed the old farmhouse and paused. The thin sounds of sabres being unsheathed cut the silence. Once more the officers doubled the column and this time they turned the troops on line to the right. Now they knew this was their destination. "Okay, boys. Fix bayonets and keep on line. We can't have far to go cause it's almost dark."

The bearded man, his blue eyes flashing with intensity, looked at his soldiers. That ragged mass of tired, dirty, hungry men had marched all day and hadn't eaten a decent meal for two days. Usually they cheered him as he rode by, but today they didn't. Maybe they didn't recognize him. It was the first time he had worn the new uniform that Jeb Stuart had so proudly presented him. Normally, they recognized the old VMI cadet cap he wore pulled down over his eyes. He turned to the general riding beside him and asked, "Are you ready, General Rodes?"

"Yes, sir."

"You can go forward then."

The long, gray line broke into the woods. Rabbits and deer scurried ahead as if to warn the blue-clad troops who were peacefully preparing supper. Bugles blared the charge and the thousands in tattered gray and butter-nut brown split the reverie with the yell which chilled the blood of those who had not heard it before. Volley after volley of rifle fire splintered the leaves and shattered the once peaceful night as the gray line crept, then surged through the woods known as the "Wilderness." "Come on, boys," yelled the sergeant. "We've got 'em runnin' again. Faster, boys. Faster. They ain't got no guns. Faster, boys. We done caught 'em again."

The line of gray wove through the dense forest and split itself into many segments while pursuing the frightened, fleeing enemy. Now the firing was punctuated by the roar of cannon, and then by the "whoosh" of grape shot flying through the air and tearing great gaps in the lush, green foliage and blue coats. It was now dark, and the men in gray rushed on and on, ever deeper into the dense tangle of forest. Shots sounded all through the woods as men fired indiscriminately at the now fading, fleeing blue forms.

Then they were gone, and the terrible sounds ceased. The forest was still once again, and dark. Men groped for their units as the officers desperately attempted to re-form their once near-perfect lines. "Rally, boys. Rally here. Carolina boys over here. 18th Carolina, rally here."

The sudden quiet was gradually disturbed by frantic

and seemingly futile shouts of the officers who were trying to re-form the lines. "Come on, boys," yelled the sergeant. "Get those sentries out. Those Yankees ain't too far off."

The sentries reluctantly crept out in front of the lines until they heard the sounds of Yankee axes felling trees for their abatis. There they stopped and waited—waited for the inevitable counterattack from the men in blue.

"Watch out there, boy. The lieutenant said the Yanks are musterin' some cavalry after us," warned the sergeant. The sentries strained to see as far as possible through the dark forest.

"Sergeant," whispered the sentry, "here they come! Look at 'em—see 'em coming toward us?" Slowly the horsemen neared the nervous sentries. Slowly, but steadily they came as their horses stepped cautiously over the unfamiliar thickets and holes.

"Hold your fire, boy. Wait 'til the lieutenant gives us the word."

The horsemen were now so close that one could hear their horses breaking the underbrush as they approached. "Give it to 'em, boys," yelled the lieutenant.

Again the words echoed with the sharp crack of rifle volleys. And as suddenly as it began it stopped. Only the anguished cries of the fallen horsemen could be heard.

"We got 'em, sergeant," yelled the sentry. "We done drove 'em off again!"

"Don't fire. Stop firing, men," shouted an unfamiliar voice. "We're coming in with some of our wounded." Gradually the gray-clad forms emerged from the night as the sentry saw several men struggling with the familiar, dead weight of a wounded comrade.

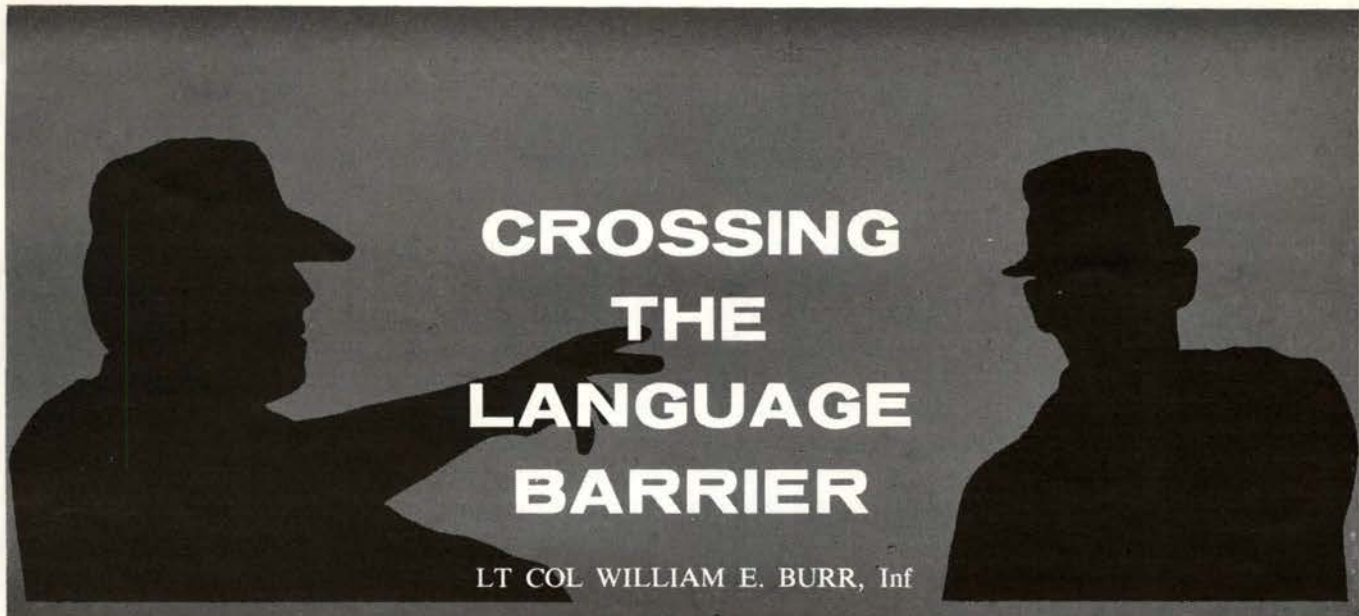
"Why all those people after that one man, sergeant?"

"Shut up, boy," growled the sergeant. "Ain't it bad enough we done shot up our own much less you askin' me questions all the time." They watched the men slowly approach their position, carrying their inert burden ever so tenderly. As they passed through the lines, soldiers curiously gathered around the wounded man and strained to see who he was.

"Just a Confederate officer, men," was the constant reply, as the bearers now hastened rearward. "Just a Confederate officer."

Now the group passed by the sentry. He saw the wounded man, bareheaded with an ugly gash on his forehead. He saw the blood trickling from his arm as it filled the limp, gloved hand and overflowed onto the leaves. Again he saw the gashed forehead and noticed the bright, red blood, reflected in the moonlight. It crept onto the officer's cheek, then down his throat. There it oozed over the wounded officer's collar and merged into the gold bullion insignia—the three stars surrounded by gold oak leaves.

"My God! No! It's General Jackson!" ■



CROSSING THE LANGUAGE BARRIER

LT COL WILLIAM E. BURR, Inf

THERE IS LITTLE DOUBT that the language barrier mentioned in a recent article in *INFANTRY* exists. The article claimed that the primary cause for this barrier is indolence. This may not be the case; it may be ignorance of an effective method of learning a foreign language. If the latter is true, there are certain steps the individual can take to correct the situation.

What to Learn

The first step for a person who is about to learn a language is to decide his purpose. The average Infantryman usually learns a foreign language in order to speak to and understand foreigners. Grammar, vocabulary, reading, writing, and spelling are all valuable, but the Infantryman must learn to *converse*.

How to Learn

There are many ways to learn a language. The methods vary according to the results desired, but in the last analysis it's pretty much the same as with any other skill that a soldier acquires. You aren't taught many things; you learn them. You do it yourself. At certain times in the learning process you need competent guidance, but most of the time you learn by doing.

Learning to converse in a language by doing means speaking and listening as much as possible. As with every other learning process, the instruction should begin with the known and proceed to the unknown. There must be provisions for review and testing—even if only self-testing. How can this be accomplished in do-it-yourself language training?

If you are able to sign up for a course in the language at your Education Center, or at a nearby school or college, you are fortunate. If you cannot find a class available, you can still learn the language. In either case you will need a tape recorder. Of course, a tape recorder

is not a magic teaching machine, but it is an essential aid. If you learn to use it properly, it will be the most important training aid in your language program. With a tape recorder you can imitate the teacher whenever you want. Also, you can record your own attempts and compare them with the teacher, determining your progress and weaknesses.

Technique

Basically you need a book of grammar and a tape in the language. The most practical and economical way to get a tape is to ask your teacher to record pertinent portions of your classroom text in the foreign language. If this is not possible, talk to the Education Officer or the person in charge of the Language Maintenance Facility at your post and explain what you need (a beginner's tape in Vietnamese—a tape for someone who had one year of high school French, etc.). He should be able to secure a prepared tape and trade it to you for an equal length of blank tape. In many cases Language Maintenance Facilities can furnish textbooks to accompany tapes.

If no Language Maintenance Facility is available, a choice must be made between buying a commercially manufactured language tape, or purchasing a phonograph record and making a tape from it. The choice depends largely on availability and cost. Your teacher, if you have one, or a local educational institution is a good consultant in this matter.

Most bookstores carry language instruction materials. If a phonograph record course is the only thing available, buy it and tape it. Taping it gives you a very important advantage—you can play an element back accurately whenever you want, as often as you want, without harming the tape. An accurate playback of a sentence or a phrase on a long-playing record is impossible—the stopping and starting of the motor are hard on the

that all services "buy" the services of the Military Sea Transport Service—reimburse the fund for goods and services, with the fund using these "profits" to operate the ships and facilities.

Instead of having the quarters allowance money as an item that is just not paid to anyone when a soldier occupies government quarters, this money could be credited to a "revolving fund" for military housing. The fund could use the money to perform maintenance on the existing housing, and for the construction of new housing on a more flexible basis than the current system permits.

Thus far the proposed approach is startling enough, but there is more. The use of a revolving fund does not introduce too many factors not already found in one area or another of government finance today. This portion of the scheme might permit more quarters to be constructed, and that in itself would be adequate justification.

However, we are interested in creating the most favorable situation possible to retain personnel in the service. To provide adequate housing is a good start, but there is an additional step which would add a great deal to the personal incentive of the individual soldier.

This additional stipulation is based on a comparison of the civilian who settles in one place, buys his own home, and pays for it over a period of 30 years—the same length of time as a full military career. If we compare the two at the end of 30 years, the civilian has acquired a paid-for piece of property on which he may live during his years of retirement, while the soldier has either paid rent or just lost his quarters allowance, with no gain in capital to show for his efforts at the end of the same 30-year period. The cause of the difference lies in the constant moving which a soldier must expect; this makes any investment in personal real estate a very great risk, a risk most military men must avoid.

Therefore, in addition to establishing a revolving fund to apply quarters allowances to the maintenance and construction of housing, additional incentive to stay in service can be obtained by adding the stipulation that the quarters allowance which the individual channels into the fund should be considered an investment on the part of the soldier. This would recognize the fact that the rental allowance is, indeed, a portion of the reward that a soldier receives for his service. The quarters allowance would not be written off when the soldier occupies government quarters, but would be an investment for the future, in direct proportion to the size of the quarters allowance.

Perhaps there is a parallel in the Roman Legions, where the soldier enlisted for 20 years, and was rewarded at the end of his service with a piece of land and a few slaves to provide for him in his "retirement." The slaves do not seem too practical today, but a revolving fund with the individual's quarters allowance considered as an investment would at least provide the "piece of land." ■



"The enemy must be in force out there . . . that's the tenth patrol that failed to come back!"



"Ohhh, three years in Europe, two years in Korea, eight months in Vietnam . . . where did YOUR wife serve?"



"This weapon is filthy, Crenshaw . . . ALL your equipment is filthy . . . better exchange everything!"

In 1855 a young British officer was captured by the Russians. Among the letters in his pockets was one from his fiancé which he tried hard to keep. His captors, unable to read English, were more determined than ever to have it, and thinking it must have some military value, sent it to their commander, Prince Mentschikoff.

The young lady, hoping to raise the spirits of her loved one had written in part that she hoped he'd take Mentschikoff prisoner, "and if you do, mind and send me one of his buttons."

The young officer was amazed some days later to get the letter back with a note that said, "Though things have not turned out quite as your lady-love expected, here is one of Mentschikoff's buttons for her, send it to her."

In a letter from Major Henry Clifford, V. C. dated January 31, 1855.

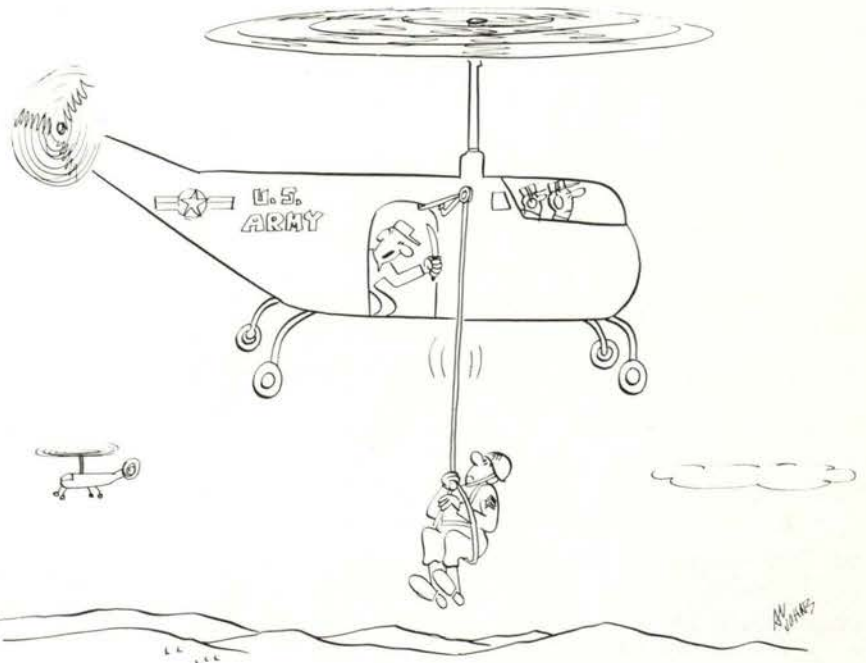


I'm a little confused about what brand to smoke, but I'm sold on INFANTRY!

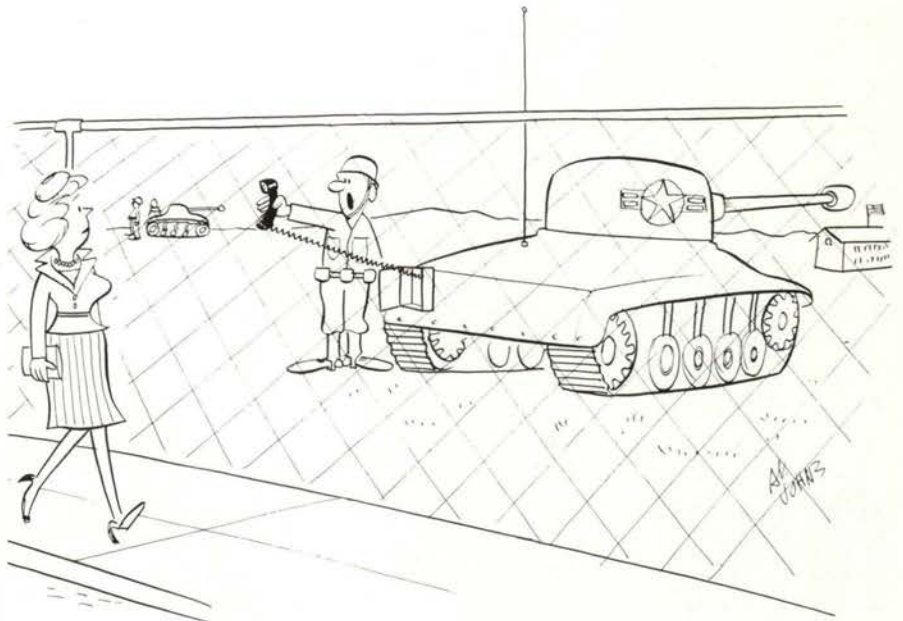


"Ohhh . . . is it time to go, lieutenant?"

ROUTE STEP



"Hey, Sarge! Do you have me on K-P tonight, by any chance?"



"It's for you."

Below. AR-18 rifle with the stock folded. Overall length is reduced from 38 inches to only 28¾ inches. The weapon is capable of being fired fully automatic with the stock in the folded position.



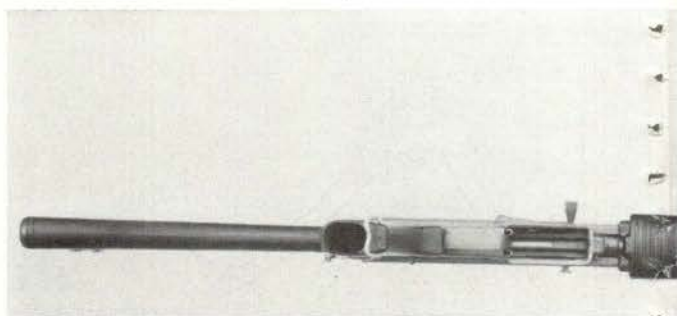
Below. AR-18, detail stripped.



Right. Removing the operating parts.



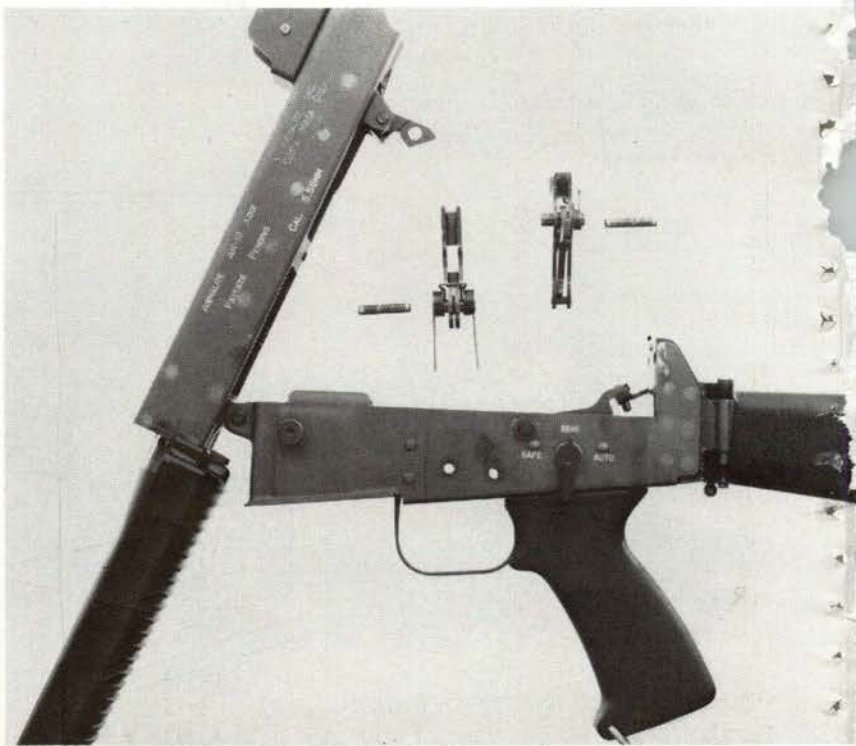
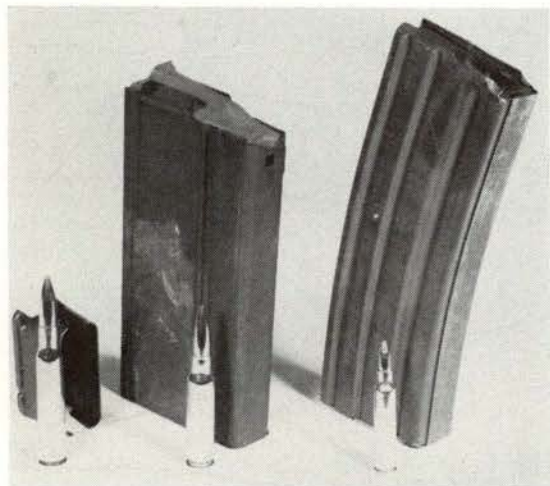
Below, bottom view of AR-18 Rifle.



MR. STRAIGHT-LINE

Right. Upper receiver pivoted away from the lower receiver and the trigger group removed.

Below. "Smaller round/larger feeding device." From left to right: the M2, .30-caliber cartridge and M1 rifle clip (capacity—eight rounds); the M59, 7.62mm NATO cartridge and M14 rifle magazine (capacity—twenty rounds); and the M193, 5.56mm cartridge and a 5.56mm test magazine (capacity—thirty rounds).



Right. "Mr. Straightline:" The AR-18; Overall length—38 inches (28¾ inches with stock folded); overall weight (empty) —6.4 pounds; method of feed—20-round detachable box magazine; rate of fire—approximately 750 rounds per minute.



greatly reducing muzzle jump and, consequently, instability during automatic firing.

Let's examine "Mr. Straight-Line" from front to rear. A flash suppressor on the muzzle assists in the dissipation of gases, reduces flash, and serves as a launcher for antitank and antipersonnel grenades. As we move back along the 18¼-inch barrel, we come to the front sight assembly which includes a rotating post that is adjustable for elevation, a bayonet lug, and a sling swivel.

The upper and lower handguards, constructed of a heat-resistant fiber, serve a dual purpose by protecting the firer's hand and dissipating the heat from the barrel. The rear of the handguards is contained by a unique receiver assembly. This assembly is a single, welded fixture which comprises the upper receiver, rear-sight ramp, bolt carrier guide and barrel extension. The rifle is constructed by making use of sheet metal stampings and automatic screw machine operations wherever possible, holding milling machine operations to a minimum.

The rear sight is a "flip" peep sight that can be adjusted for windage and elevation. The diameter of the aperture decreases when the long range setting is utilized. The distance between the front and rear sights (sight radius) is 20⅞ inches. Although this rifle has no carrying handle or telescopic sight mount, the AR-18 has an Army-desired low line of sight which assists in the use of the "pointing" technique utilized in quick-fire training and night firing.

A selector lever which can be thumb-manipulated without removing the hand from the weapon is on the left side of the lower receiver.

The selector lever can be set in one of three positions that can be observed from either side of the rifle: SAFE (safety), SEMI (semiautomatic), and AUTO (full automatic). A 20-round detachable magazine fits into the bottom of the lower receiver. Located under the lower receiver is a pistol grip with the rear sling swivel at its base.

The stock, made of a lightweight glass fiber, has a rubber recoil pad on the butt. From front to rear, the AR-18 is 38 inches long and has an empty weight of 6.4 pounds. The combat-loaded weight (with loaded magazine and sling) is 7.1 pounds.

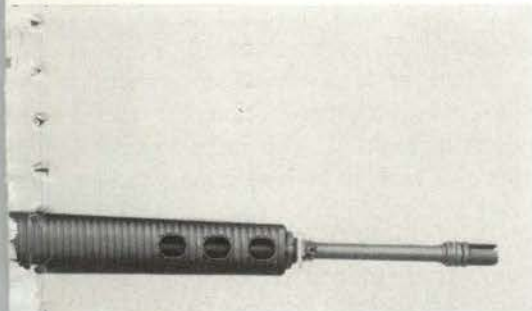
Disassembly of the rifle for purposes of normal maintenance is indeed simple. The withdrawal of a single pin allows the weapon to pivot open, similar to the XM16E1, exposing the interior parts.

Although the AR-18 is not a member of a small arms family, it does have a modern carbine feature—a folding stock. With the stock folded, the rifle has an overall length of only 28¾ inches and is ideally suited for use in tanks, aircraft, and armored personnel carriers, where space is a major consideration.

Armalite offers in the AR-18 a simple, effective, and inexpensive weapon with which to engage the enemy. Three considerations prompted the design for the AR-18: to attain the absolute maximum of performance; to achieve the utmost in simplicity so as to reduce training of combat and maintenance personnel to an absolute minimum; and to reduce cost. According to Armalite, the AR-18 can be produced at a cost substantially lower (approximately 50 percent) than any other rifle in its class. ■



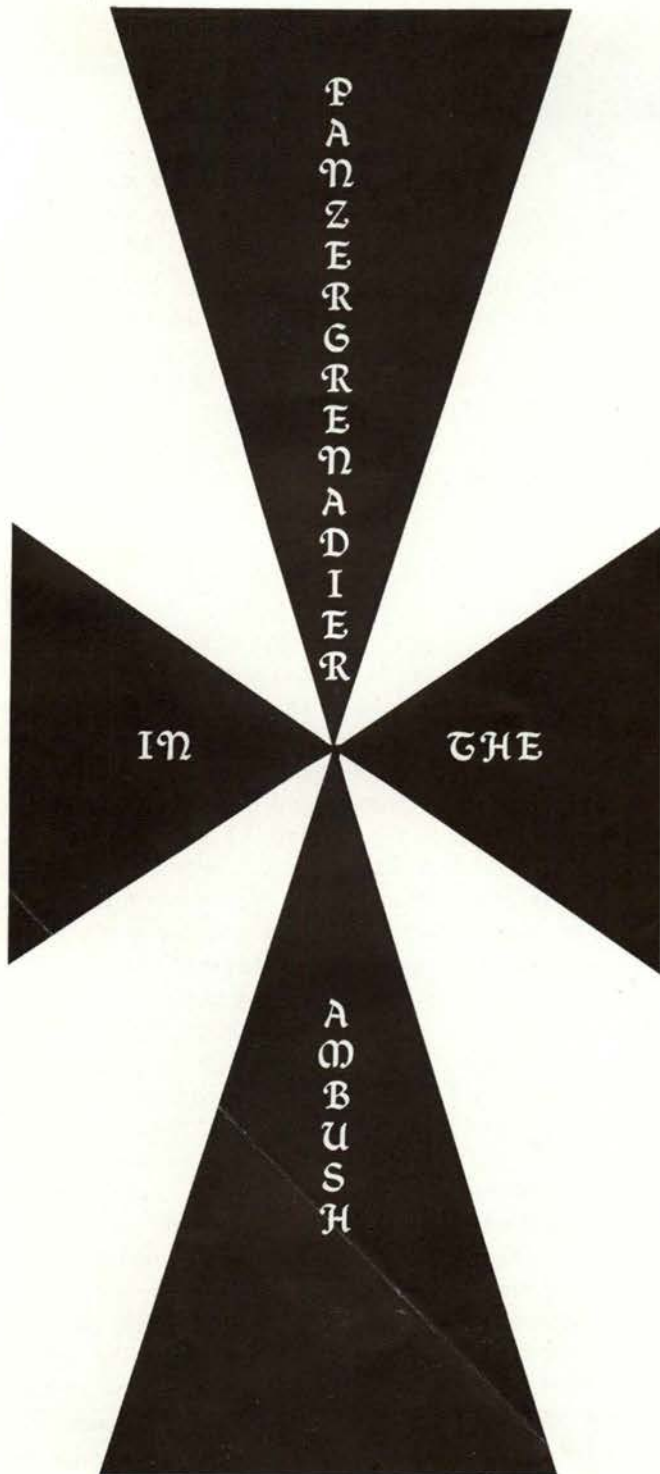
Above, top view of rifle. Note streamline construction.



CAPT THOMAS M. JOHNSON, Inf

THE DEVELOPER of the AR-15 (M16) rifle, Armalite, Incorporated, has produced a new military rifle. This rifle, the AR-18, has been included in the extensive small arms weapons testing currently being conducted by the Army. Like many of the other rifles and systems, the AR-18 fires the 5.56-mm round. This lightweight, high-velocity round is ⅝ inch shorter and 50 percent lighter than the standard 7.62mm NATO cartridge. The 5.56-mm ball cartridge (designated the Cartridge, Ball, Caliber 5.56mm, M193) is loaded with a 55-grain, metal-jacketed, lead alloy core bullet which achieves an approximate muzzle velocity of 3,250 feet per second.

The most striking feature of the AR-18 is its unmistakable straight-line stock and receiver construction. This construction allows the movement caused by recoil to be channeled along a single axis, thereby



Capt Raymond Bell, Armor

THE BUNDESWEHR is usually discussed in terms of its almost total commitment to NATO. Less discussed is its development of tactical doctrine, one facet of which, mechanized Infantry battle techniques, is of particular interest to the American Infantryman. As the following example shows, their doctrine differs in several respects from that of our mechanized Infantry.

The example is drawn from a "Gefechtsausbildung"

or battle training exercise in the March 1962 issue of *Wehrausbildung in Wort und Bild*. This magazine, a monthly publication for the Bundeswehr, published articles on training techniques, battle exercises and military sports activities.

Exercise's Purpose and Prerequisites

The purpose of the exercise is to train mechanized Infantry platoons how to engage and destroy a small combined-arms group. Not stated, but understood, is that close combat techniques are to be employed and emphasized.

As background to the exercise, the authors state several prerequisites a mechanized Infantryman should meet. He should have good nerves and personal courage. He should be able to react rapidly and to adapt himself quickly to various situations. He must be a master of his weapons.

An essential part of the Infantryman's training is his orientation on the tank. Every mechanized Infantryman must ride in a tank at least once. This orientation enables him to gain an appreciation for the strengths and weaknesses of tanks. It also helps to dispel the impression that the tank is invincible and cannot be destroyed.

In addition, the platoon is prepared for the exercise by ensuring that its members are trained to:

1. Recognize different types of armored vehicles.
2. Know the strength and weaknesses of different types of tanks.
3. Employ close range antitank weapons and techniques confidently.
4. Know the weapons' capabilities and the penetration capability of the various types of ammunition.
5. Overcome the effect on morale of approaching tanks.

Situation

The situation is a meeting engagement between a

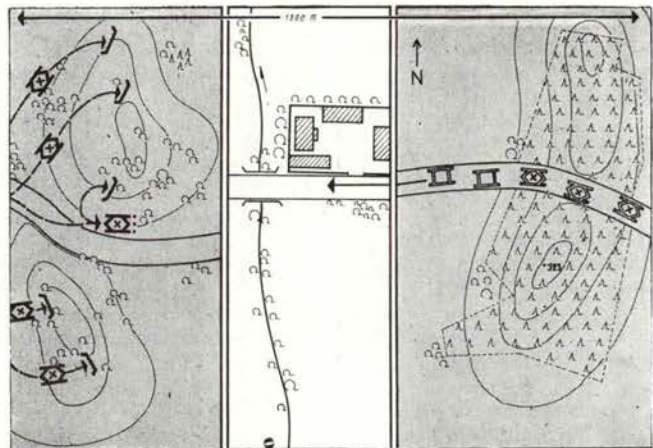


Figure 1. Friendly platoon deploys to engage advancing enemy.

platoon of mechanized Infantry and two enemy tanks followed by three armored troop carriers. A mechanized-Infantry battalion advances in march column. The lead platoon of five armored personnel carriers reaches a ridge overlooking a stream and a group of buildings. As he is about to cross the ridgeline, the platoon leader observes the mechanized enemy force emerging from a woods 1600 meters away (Fig. 1).

The platoon leader must immediately make an estimate of the situation. His advantages are his early

thought of retiring on the main body. He decides to ambush the enemy and then seize the terrain feature on which the enemy was first sighted.

His battle plan is as follows (Fig. 2):

"Allow the enemy to come into the range of the rocket launchers; fire all weapons together in a surprise attack and then completely destroy the enemy in a mounted attack. Simultaneously engage the tanks and the mounted Infantry to prevent them from supporting each other."

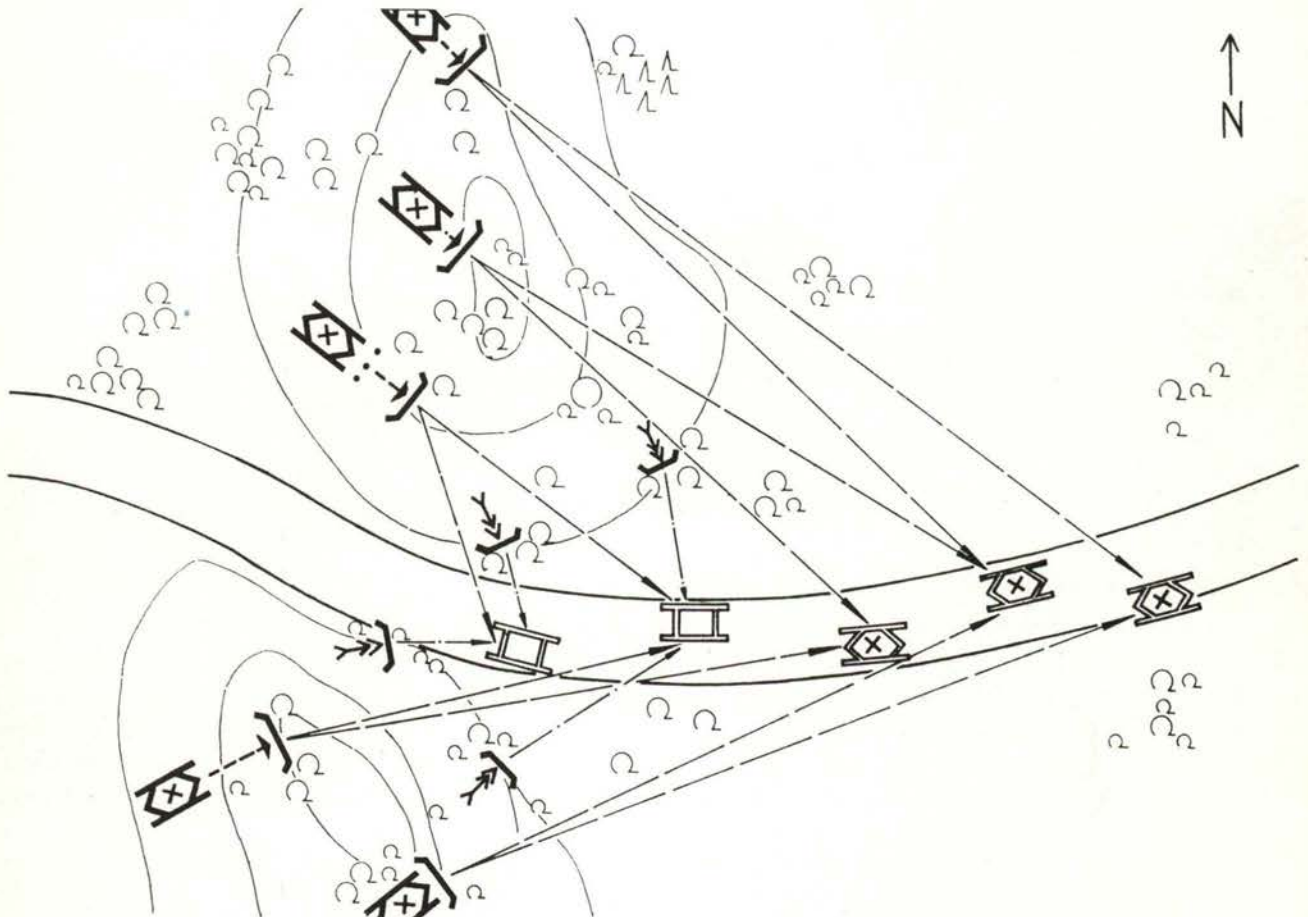


Figure 2. Simultaneous firing at selected targets by all weapons.

recognition of the enemy, the opportunity to select positions for the impending battle, and the possibility of utilizing surprise.

The disadvantages, however, weigh heavily against the platoon leader. He must consider the short range of his antitank weapons (rocket launchers and rifle grenades), the mobility of the enemy armor, its restriction of his own movement and the difficulty of platoon control. In addition, he has neither artillery support nor tanks to assist him. The authors of the exercise recognize that this situation may appear difficult to the platoon leader, but they insist that it must be mastered.

Decision and Battle Plan

In making his decision the platoon leader rejects any

Defensive Phase

The platoon leader sets up his defense as illustrated in Figure 2. The armored personnel carriers with their on-board cannon are positioned on either side of the road. The cannon and the mounted Infantry will deliver flanking fire on the enemy. The rocket launcher teams and grenadiers are placed closer to the road and forward of the armored personnel carriers. (Fig. 3). Positions providing hull defilade are selected and targets are allocated to the various fighting elements of the platoon.

The platoon leader positions his forces so that they will deliver flanking fire if the enemy continues to advance in column formation (which it will in this exercise). The on-board cannon are used to make the

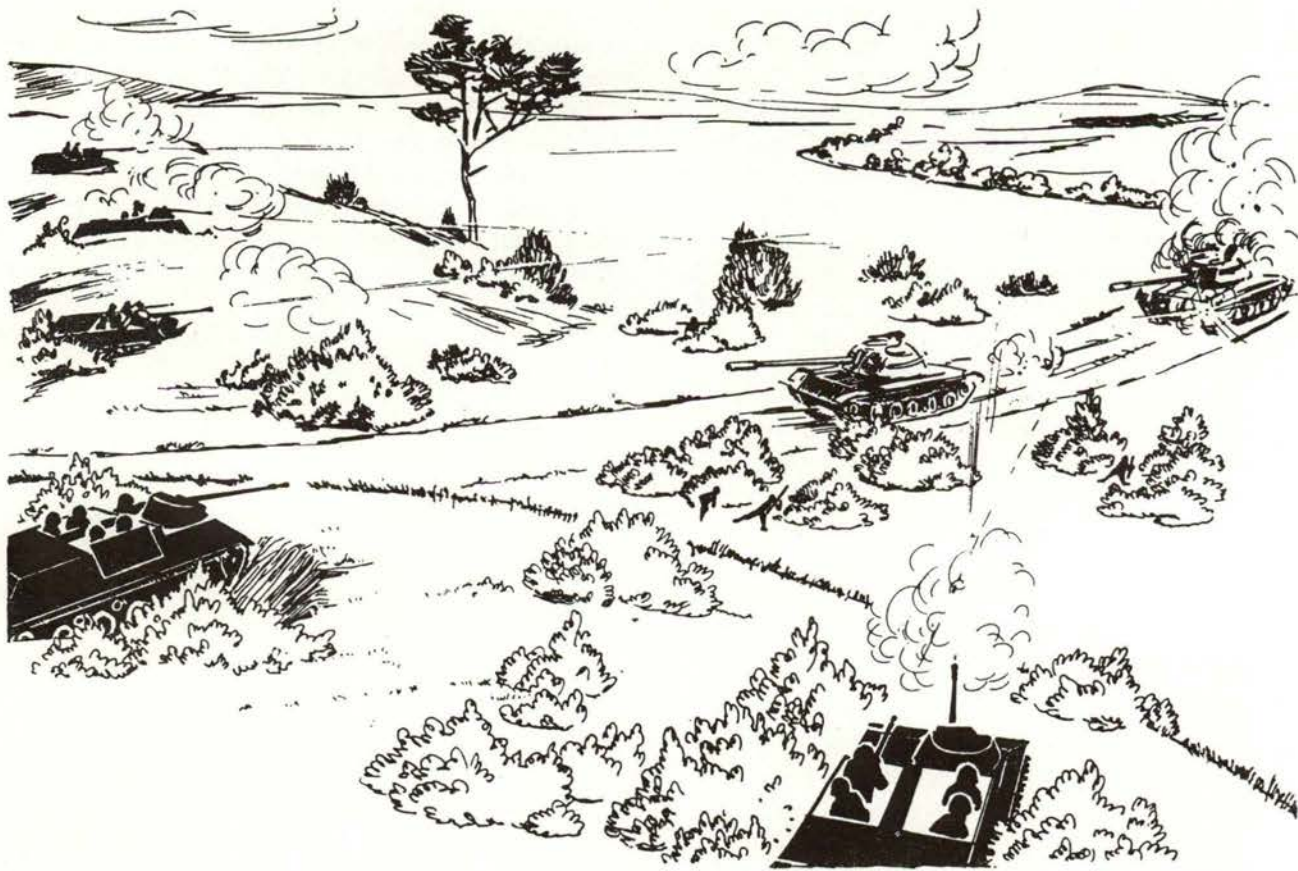


Figure 3. Close-in anti-tank weapons are employed against the most dangerous enemy—The tanks.

enemy button-up, smash sighting devices, and hit vulnerable points on the tanks. The tank-killer teams will destroy the tanks with their close in antitank weapons. The machine guns carried on the carriers will be used to fire on the enemy Infantry as it dismounts from its vehicles. The fire is then shifted to the more vulnerable parts of the tank. The riflemen fire at the enemy Infantry or, if they are out of range, engage the tanks or armored troop carriers with rifle grenades. All this fire is to commence simultaneously.

Conduct of the Defense

The platoon leader has established his hasty defensive position and awaits the reaction of the enemy to the surprise concentration of accurately delivered fire. Three logical further courses of action are considered by the authors for this problem. The first is the complete destruction of the enemy through the initial heavy concentration of fire. The second is the destruction of the enemy after a prolonged fire fight. The third is the employment of tank-killer teams against smoke-screened enemy tanks. The success of the initial concentration of fire determines which further course of action will be taken.

For the purpose of this discussion, only the second possibility will be examined. It is assumed that the

tanks cannot move but are still able to fire after the initial attack.

The conduct of the defense occurs in the following manner after the initial delivery of fire. The rocket launcher teams and grenadiers continue to attempt to destroy the tanks (Fig. 4). The accompanying enemy troop carriers are fired on by the on-board cannon. The enemy Infantry is held down by the machine guns and rifles of the mounted Infantry.

Continuation of the action against the enemy requires flexibility of mind and the use of deception. The leaders



Figure 4. Tank destroyer teams attack the two enemy tanks.

must use short radio transmissions, employ hand signals, and issue short comprehensive orders. Close coordination between the rocket-launcher teams and the cannon crews is vital. Application of deceptive measures like decoying a tank into firing at a carrier while a grenadier approaches from the blind side must be used to confuse the enemy. Further confusion of the tank gunner is obtained by compelling him to frequently switch targets. The objective of this intensive combat is to bring the situation to a stage that allows an attack by the mounted Infantry (Fig. 5). The platoon leader



Figure 5. Rocket launcher teams and grenadiers destroy the foremost enemy tanks as the carriers attack with mounted Infantry.

strives to destroy the enemy to the extent that it cannot present organized resistance. He destroys the long-range AT weapons and as far as possible annihilates the enemy portable AT weapons.

Attack Phase

The right moment arrives. The platoon leader launches his attack. Three carriers on the left side of the road carry the mounted Infantry down along the road with all weapons firing. The mounted elements concentrate on the light-skinned enemy vehicles, pouring fire into them and the dismounted enemy Infantry. Simultaneously the two carriers on the right-hand side

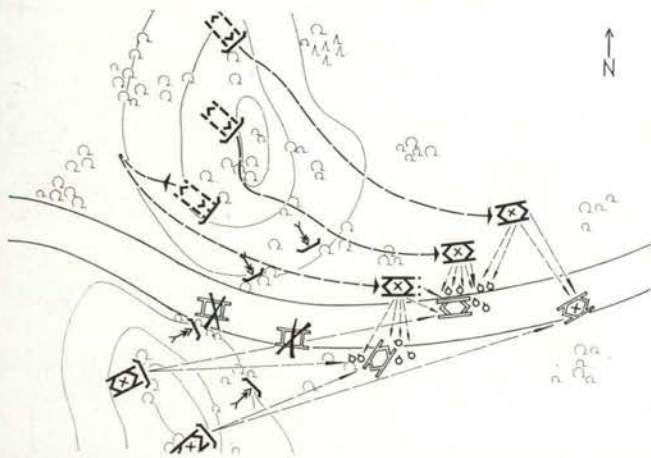


Figure 6. Attack of the three left armored personnel carriers, supported by the two right carriers and the anti-tank weapons.

of the road stay in place and the crews hold down the enemy by providing direct fire support to the attacking troops (Fig. 6). The attacking carriers do not stop or dismount their Infantry but rake the enemy with fire and pass on to their objective. There they dig in to stop any enemy rushing to the aid of the ambushed force. This whole movement to the objective is observed by the two carriers on the right side of the road which remain in position. When the ambushed force is annihilated, the two carriers rejoin the platoon leader on the hill (Fig. 7). They then take up po-

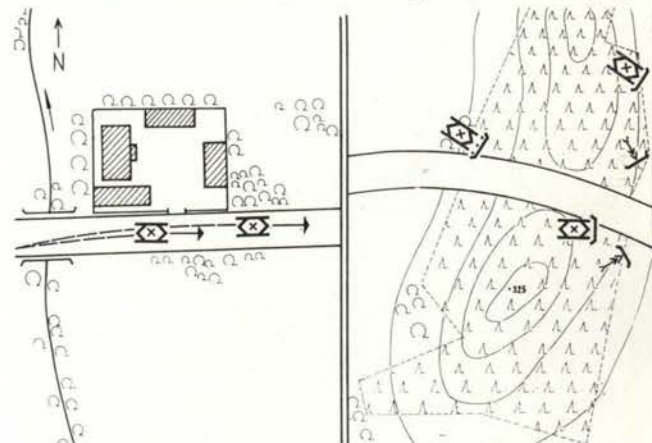


Figure 7. The three carriers dig in on the objective to be followed by the other carriers after mopping up.

sitions with the other carriers awaiting the order to continue the attack. In the exercise this plan is executed on the command of the platoon leader when the time is appropriate.

It must be understood that what has been described is only one part of the training situation and a relatively straightforward one at that. It could hardly be expected that the enemy would walk right into such a situation as portrayed. But the authors of the exercise state that the situation could be further complicated. This could be achieved by having the enemy advance on the hasty defensive position in open order. Or the enemy could outflank the position either left or right, or the tanks could stay back and observe as the enemy troop carriers advanced. These various situations give the instructor numerous possibilities to work with. The variety of possible situations makes the training not only more interesting but constantly challenging to all members of the platoon.

SUMMARY

This ambush exercise is an example of the West German trend of thinking on the employment of mechanized Infantry. The two phases of the exercise provide an insight into both defense and attack doctrine. But of particular interest is the demand put on the individual soldier to perform under disadvantageous conditions. The emphasis is on the quality of the individual soldier, the weapons team and small-unit leader. ■



MOBILITY

THE POLITICAL IMPERATIVE

LT COL WILLARD E. CHAMBERS, Inf

The views expressed in this article are the author's and not necessarily those of the Department of the Army, Department of Defense, or the U.S. Army Infantry School.—Editor.

WAR IS A POLITICAL ACT. It is entered into by political leaders, for political purposes, to achieve political ends, and it is fought under rules established by the political community.

This being true, it follows that armies are political instruments and that military action is a means to political decision, not a separate action that is its own reason for being.

It therefore follows that the best military philosophy is that which is most responsive to the purposes of the political community. We may state this truism in reverse by saying that to the degree that military action is politically unacceptable, to that same degree the military forces have failed in their reason for existence.

In this article the author will contend that:

- Force, or the credible threat of force, is essential to effective political leadership.
- Force will be acceptable to the political community, and credible to our enemies, in inverse ratio to its destructiveness and indiscriminate lethality.
- Destructiveness and indiscriminate lethality are not essential to the successful application of force at any level of war.

Basically, the author will contend that the military philosophy which has dominated the world for at least the last 200 years has been self-defeating. Improved



military effectiveness has been sought by means which have rendered military action less and less acceptable as a political instrument.

To us in the military, this is at once the measure of our past failure and the essence of our present challenge.

Under the American system the military man, happily, is excluded from the political decision-making process. While he personally is excluded, the machine which he has created is a vital consideration in every political decision on the international level.

Political decisions must often be made on the basis of the capability of the military forces to enforce a preferred decision and to do so in ways which will not lead to more difficult decisions at a later time.

Much has been written about the need for discriminate use of force in international affairs. The military man appreciates the requirement for such discrimination and has acknowledged the requirement in his written doctrine. Acknowledging the requirement is not, however, tantamount to understanding. His tendency is to acknowledge the requirement but to object to its application. Once engaged in military action, he will object strenuously to any political limitations on that action. He will object with great vigor to the political decisions which grant the enemy protected sanctuary or which prevent the use of whatever weapons are at his disposal.

The military leader who raises such objections is indicating his own lack of understanding of his problem

and he is acknowledging that he has failed to create a military machine which can have the required effectiveness despite political limitations upon his action.

It would be presumptuous and obscene to contend that war is, or should be, a desirable first choice of political actions. The capability to conduct war is an essential choice if only because the more desirable courses of negotiation and political accommodation cannot be effective unless the parties to negotiation understand that war may be the alternative to the failure of negotiation. Political negotiation, without credible possibility of enforcement, is futility.

On the other hand, the existence of massive force is as unsatisfactory as no force in the political field. When both negotiators have a clear understanding that the other has the capability to inflict massive punishment on the other, each will appreciate the other's reluctance to employ force. Thus, by opposite routes we experience the same political futility.

We must understand that in referring to discriminating force we are referring to a *type* of force and not a *level* of force. The tendency has been to think of military action short of all-out war as being military action limited in its effectiveness. If this is true, it is because we have failed to create effective methods of applying discriminating force. Our problem is not a problem of reducing our military power to the approximate level of the enemy's. Our problem is to learn how to apply overwhelming force against the enemy, but to do so by means which minimize destruction and indiscriminate slaughter attendant on war.

In the final analysis, all war is a judicious application of fire and maneuver. While the military system acknowledges this truism, there can be no question that we have pursued developments in firepower with considerably more enthusiasm than we have pursued developments in maneuver, or the mobility which makes it possible.

This is a decisive consideration when we acknowledge that firepower is lethal and destructive. The higher the level of lethality and destruction, the less acceptable war becomes as an instrument of political action. It is understandable that we have pursued more effective firepower. For one thing, it has been easier to achieve; and for another, firepower has been an essential element to the maneuver of land forces. Land forces must fight two enemies in executing maneuver. One enemy is the land itself; the other is the human enemy on the land. Of the two, the human enemy has been the least troublesome.

Today our army, like all others, moves across the face of the land impeded by rivers and mountains, by mud and snow, by swamps and forests, frustrated by every accident of terrain which an indifferent nature or a pernicious enemy can create. Our traditional approach to this battle with the land has been twofold. First, we challenge our Engineer Corps to alter the face of the land to permit the movement of forces; and second, we multiply our firepower in order to keep the enemy busy while we fight the land.

Thus, while firepower has been essential to maneuver, we have forgotten that there is another side to the coin. Every improvement in our mobility capability can be reflected in a decreased requirement for firepower. If,



Mobility developments lag behind firepower technology.

Maneuver must be executed against men and the land.

As mobility improves, requirements for more devastating firepower decrease.

through mobility, we could eliminate the battle against the land, we could take a whole new approach to the question of firepower. I will exaggerate in the interest of making a point. If the American commander could instantly place one, two, or more American soldiers within arm's reach of each enemy soldier, there would be no requirement whatever for firepower. I submit that this statement is ridiculous only in its extremity.

In the airmobile concept a tentative but improbable effort has been made to minimize the battle with the land. This concept will, in my opinion, never be more than marginally successful for two reasons:

- Present aerial vehicles contribute absolutely nothing to the mobility of the individual soldier during the battle. They enable him to reach the vicinity of the battle more quickly, but there he is unloaded to fight on even terms with an enemy who has a head start.

- Present aerial vehicles are bulk transporters. The Civil War was the last war in which soldiers could approach their enemy in bunched groups. Since that time our emphasis has been on dispersion. With the advent of such concepts as the armored personnel carrier and the airmobile concept, we are attempting to fly in the face of history and logic. Once again we are packaging our soldiers in tight bunches for easy destruction.

Technology has now provided us with the means by which we may be responsive to the historical and political imperatives.

The only weapon which we have that can be totally discriminating in the application of force is man himself. While the mind of man provides him with this unique quality of decision and discrimination, his body is not adequate to support the decisions his mind would like to make. He travels too slowly, sees too poorly, has little inherent strength and is vulnerable to the the enemy's weapons, the environment, and his own fears.

It would be useful to ask ourselves if it is possible to provide man, as an individual, with mechanical or other means of alleviating his natural limitations while still retaining his unequalled capability to discriminate.

This question has occupied the bulk of the author's efforts over a period of nearly two years. The result of this effort can be stated as a forceful affirmative.

There are four major requirements that must be met if the individual Infantryman is to be the basis for our application of unquestioned but discriminating force. They are:

- A realistic capability for strategic deployment of the Infantryman to the battlefield in practical terms of time and the air fleet that is available.

- Strategic deployability to the place of need rather than to the convenient air field, and at the time of need without regard to weather conditions.

- A tactical capability to move, as an individual, at very high speed, in any kind of terrain, in any kind of weather, and to do so without sacrificing his unique qualities as a person.

- A mechanical and compatible means of moving his impedimenta at the same speed in the same weather and under his personal control.

Simply stated, the requirement is to move troops individually or collectively with little more effort than simply making a decision to move. They must be able to move to the desired point, at the desired speed and at the desired time. Nothing in the present inventory of military hardware even approaches such a capability.

Since we have decided that the air is the most promising medium for movement in the forward area and since we have decided that bulk transportation is not a promising concept of air movement, it therefore follows that an individual air machine is required. To be fully useful, such a machine should not inhibit the Infantryman's use of his own hands, arms and legs nor in any way inhibit his capability to function as a human machine.

The air assault concept is not the answer.

Man is the only discriminatory weapon.

In order to make the man a truly effective weapon, four requirements must be met.

Air is the medium for movement in the future.

Fortunately, industry has provided us with a vehicle ideally suited to these conditions. This is the so-called "Flying Belt" or its more technical name, the Tactical Individual Transporter (TINT).

While the TINT will provide the required level of individual mobility, a second machine will be required to perform the essential functions of support of the individual soldier, resupply and function as an assault weapons carrier. Once again, industry has provided a capability to develop such a machine which will exceed in effectiveness and responsiveness any air machine ever available to forward area units. This is an unmanned rotary wing aircraft technically known as the Tactical Assault/Cargo Transporter (TACT). The TACT is intended to be a vehicle which can be freely risked or even expended on the battlefield when required by the mission. It will normally be flown by an operator sitting on the ground watching a television monitor and flying by the same methods used by the on-board pilot. As an alternate, this machine can follow a beam of directed light, either infrared or laser. As a second alternative, it can be slaved to be operated by a ground handler or can be slaved to follow an operator flying with the TINT.

A forward area unit equipped with the TINT and the TACT vehicles would be able to operate in any terrain, against any enemy, in any level of war and in any level of visibility.

In addition to the vastly improved tactical mobility provided by these machines, the strategic mobility of the unit would be improved by several orders of magnitude. The Infantry battalion, which currently requires 65 C130 aircraft for strategic deployment, would require only 25 for strategic deployment of a unit so equipped.

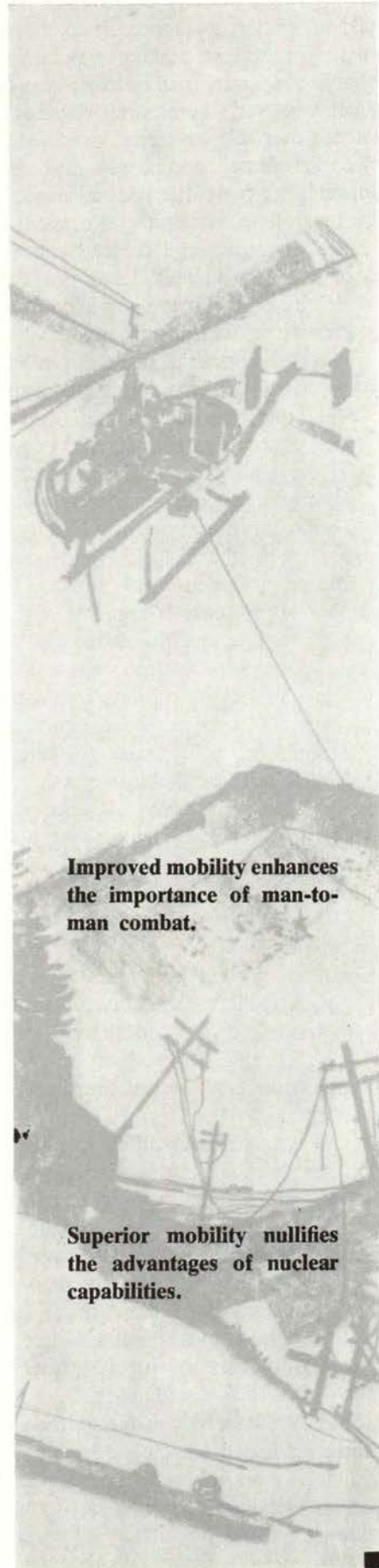
The author does not wish to suggest that the vehicles envisioned are on the shelf ready for purchase. Every essential requirement for such vehicles has been actually demonstrated using available hardware. The requirement is to put the demonstrated components together in such a way as to provide the systems required.

Battlefield mobility based on high-speed transportation of the individual soldier can place a whole new connotation on military action. In warfare against the unsophisticated peoples, the perversity of the terrain would no longer be a matter of concern. Since the soldier would engage his enemy individually and on terms decidedly favorable to himself, war would tend to revert to the soldier-to-soldier combat of medieval and ancient times rather than the soldier-against-impersonality concept of recent wars. More important, the amount of force required in a given situation can be available to the commander on an almost instant basis. If conventional forces are ever to be successful in combating insurgent forces, it is essential that they be able to take the insurgent under attack while he is actually attacking. Otherwise, the insurgent simply melts into the population where he cannot even be identified, much less attacked.

At the opposite extreme is the sophisticated level of general war or nuclear war. The unit equipped with the vehicles mentioned will, for the first time, be able to disperse to the degree required by these weapons and will be able to assemble on a nearly instant basis when required. There would be no need to concentrate through defiles, across bridges, or even to have a road net, much less be bound to one.

The individual soldier who can approach his enemy at 125 to 150 miles per hour will have little requirement for mass supporting weapons. A baseball bat or at most a pistol will often represent the limit of force which he will require.

Thus, since the individual soldier can selectively find, identify and engage enemy soldiers and military targets and has no requirement for mass firepower, war could become, in fact, the police action that history requires and that we have often claimed but never practiced.



Improved mobility enhances the importance of man-to-man combat.

Superior mobility nullifies the advantages of nuclear capabilities.



CERTAINLY one of the most significant developments in the conflict in Vietnam is the employment of the armed helicopter. Any advisor in a tight situation who has had occasion to call, "UTTs overhead this is _____," will attest that the armed helicopter plays a vital role in his fire support plan. Every advisor at regimental level or below should know both the capabilities of the aircraft and pilots supporting his unit and how to convey information and requests to obtain armed helicopter support.

ORGANIZATION

The armed helicopter teams in direct support of you, the ground advisor, are organized with your mission in mind. The basic armed helicopter unit is the light fire team. This team is commanded by a lieutenant who knows your tactics, techniques, the current ground maneuver plan, and has at his command two armed UH-1Bs, equipped with the M6 weapons system, 28 aerial rockets, and 12,000 rounds of 7.62mm machine-gun ammo. If he happens to be reinforced by another UH-1B equipped with the M3 all-rocket system he has at his disposal 48 more rockets for your target area. He can support by fire within 100 meters of your front. During periods of intense combat you may be supported by a platoon of five armed "Hueys," com-

YOUR CLOSEST AIR SUPPORT

LT DAVID H. PRICE, Inf

manded by a captain. The other armed helicopter pilots are all highly skilled warrant officers. Armed helicopter tactics are oriented toward the offense and the casualties sustained by these unique units clearly emphasize that they are in the thick of the fight from start to finish.

ROLES AND MISSIONS

The very organization of an armed helicopter team makes it suitable for use in many varied situations. Armed helicopters are employed frequently in an overhead cover role in support of a ground operation. Depending upon the tactical situation they may or may not be employed directly over friendly troops. The Viet Cong fear the UTTs and during ground movement to contact, with armed ships present, they often vanish. During movement to contact in order to find, fix, and destroy the VC,

and at the same time not have your position detected, it is best to utilize the gunships as a reaction force, minutes away, in a fairly secure area awaiting your radio call when you need them. In the overhead cover role, the supporting fire team leader will have a Vietnamese observer in direct communication with the fire team leader's counterpart on the ground. The fire team leader can obtain artillery support, within range, and adjust it for you, freeing you for other advisory duties. In his aircraft, the fire team leader has radios that net with USAF-VNAF fighter-bombers and he has the capability of requesting an airstrike. If a forward air controller is not available, the fire team leader can adjust and direct that same airstrike. He can be your link with fighter-bomber support. He can supplement your communications channels and relay messages when the situation requires. His capabilities are as unlimited as his imagination in the overhead cover role. The use of his weapons systems and how you direct the strikes by his aircraft will be discussed at length later.

Convoys are in constant danger in most areas of Vietnam. Ambushes are frequent. UTTs are often employed to cover convoys to deter ambush. Seldom if ever have the VC ambushed a convoy with armed helicopters overhead. The fire team leader will reconnoiter the route and

report to you the things you need to know such as road blocks and possible danger areas. He will coordinate with you as to what to do if you're attacked while enroute, visual signals to be used, and your unit's ambush S.O.P.

Visual reconnaissance is an ideal mission for armed helicopters, within their capabilities. When considering employment areas for visual reconnaissance by armed ships, tell the element leader what you need to know. He will provide what you ask for and more. Use discretion when assigning areas for reconnaissance. Always weigh the proposed results of the mission against the hazard to the helicopter crew. The fire team leader will aid you in planning your reconnaissance mission and will advise you of his capabilities and limitations. Supporting artillery fire and USAF-VNAF air support should be incorporated in the planning phase. The

weapons on his ships are but one of the means at the fire team leader's disposal to destroy the enemy.

Frequently, you may find yourself at a remote outpost where all the area you control extends only 100 or 200 meters from your C.P. You will generally be resupplied by helicopter and if the area is "hot," a fire team will provide armed escort for the "slick" (unarmed) resupply ship. Prior to entering your area, the armed element leader will establish communications on FM and advise you that resupply is inbound. There are several things the fire team leader needs to know. He needs to know the enemy situation, your troop dispositions, location of the landing area, and obstacles within that area. You should mark your position and announce your perimeter with colored smoke. If the "slick" receives ground fire the armed escort will provide suppressive fire and every crew

member must know the friendly troop locations. If your perimeter is quite large, several marking smokes around it may be necessary to clearly locate your troops. The fire team leader will be your link with the "slick." He will be communicating with him on another radio and together they will plan the approach and take off. The "slick" will land to discharge its cargo and the armed ships will stay airborne. Keep in mind that an armed helicopter is of no use whatsoever on the ground.

In emergency situations, the fire team may provide medical evacuation of casualties if no other aircraft are available. Seldom does an active ground operation go by that a medical evacuation is not made by armed ships. The best time for an armed helicopter to take out a casualty is when its ordnance has been expended and its fuel is low. It will be leaving station anyway for refueling





and its destination will probably be a fixed base where some medical treatment is available. On larger operations a helicopter ambulance will be available to your unit. Your fire team on station will be advised of its whereabouts through aviation channels. If the medical evacuation ship is available, then it should be utilized.

DIRECTING AN ARMED HELICOPTER STRIKE

The direction of a UTT strike is not difficult. The fire team leader and his crew conduct strikes in close support on a day-to-day basis. There are some essential elements of information that the armed helicopters must have. First, to avoid confusion, direct all radio calls to the fire team leader. In the second aircraft, the "wingman" is monitoring all your transmissions, and if he has any questions he'll ask the leader on another frequency. You'll find that the fire team leader will speak in ground tactical terms and has been briefed

thoroughly on your scheme of maneuver prior to the operation.

Upon arrival in the operational area the fire team leader may ask you to identify your position by either panels or colored smoke. If smoke is to be used, throw the smoke when the fire team leader tells you, and then ask the fire team leader what color smoke he sees. The Viet Cong have what seems to be an unlimited supply of smoke and radios. If the color of the smoke is accidentally transmitted prior to being thrown, then four or five smokes of the same color are likely to appear, and not from the "friendlies." Prearranged smoke codes are good, but care must be taken so they are not compromised.

After successfully identifying your position to the armed ships, give an azimuth and distance to the target. Describe the target as you see it. If the fire team leader is not sure of the target, he will have you repeat it. Also, give him any other information he needs to know in order to conduct an effective strike.

The fire team leader will inform you of the direction from which he will conduct his attack and when he begins his target engagement. He will, under very few circumstances, attack over your head. The falling brass and rocket caps from the helicopter weapons systems have caused panic with the ground troops when falling in and among their positions. It appears to the uninformed soldiers that the helicopters are shooting at them. You should advise your counterpart of the impending strike so he can alert his personnel. The fire team will engage the target in much the same manner as you employ your ground weapons, attempting to make the beaten zone of the aircraft weapons correspond as closely as possible to the long axis of the target. Let the fire team leader judge how much of his ordnance to expend on a given target. He is aware of the aviation support plan, and if armed aircraft are limited, he may have to retain his ordnance for future support. Also, advise him of the effectiveness of his strike, and if more fire support is required, tell him immediately so that he can call on artillery or air support. In all situations the fire team leader will keep you up-to-date on the happenings around you. Many times he is the most informed man on the scene, due to his communications facilities and his assigned mission of staying abreast of the ground situation in order to furnish instantaneous fire support.

Army aviation, while becoming more and more sophisticated, is becoming less and less complicated for you to understand, control, and direct. The armed helicopter team can be your link to your supporting arms. It is your reconnaissance element. The pilot knows your problems and how to meet them. Armed helicopter aviators are the leaders in the aviation field just as the regimental and battalion advisory teams are the best the Infantry has to offer. Together they are a formidable combined arms team. Remember this and don't hesitate to call "UTTs Overhead!" ■

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IS BACK

LT COL CHARLES J. MILAZZO (Ret)

THE U.S. Army must be mighty unhappy about the way the term “GI” has bounced back into our everyday vocabulary.

And it has good reason to be—considering the time, effort, and money spent enlightening the public on the responsibilities and achievements of the **Man in Army Green**.

The term’s current rebirth stems from its widespread use among the nation’s newspaper headline writers. Plagued by tight space, editors have found it a handy tag for individuals as well as large groups in uniforms. From headlines it is creeping into the bodies of news and magazine stories.

Although the Army would like to wave a permanent goodbye to “GI,” it is helpless to stop the term’s return to popularity. As a servant of the people, the Army has no power to enforce a ban of the word among civilian writers to whom “GI” has become synonymous with “soldier.” It can only hope the term’s revival doesn’t detract too much from the image of the soldier that the Army has tried so hard to build during the past decade.

But with the term’s reappearance in newspaper headlines and its in-

creased use in news stories and columns, the time appears ripe to take the wraps off the Army’s silent anti-GI campaign.

* * * * *

When the word “GI” first reared its two-lettered “head” it stood for galvanized iron—as a “GI” can or boiler. From that source it grew to mean anything that was government issue, implying lack of individuality. As thousands of citizens enlisted or were drafted for World War II, the expression became a catch-all to describe servicemen in general.

By the fall of 1943 it had acquired a number of other meanings:

- A person adhering to orders, regulations, or manuals was “strictly GI.”
- The scrubbing and inspection cleanup of dayrooms and barracks became known as a “GI party.”
- The greeting of servicemen, at home and abroad, was a “Hi, GI!”
- An intestinal upset was referred to as “the GIs.”

The press and radio early latched on to the term as a convenient expression to lump citizen soldiers with professional soldiers. The “citizen soldiers” accepted this facelessness

goodnaturedly while the professionals winced every time “GI” was used, the way a policeman would if called a “cop” or “flatfoot.”

During the war years, 1941 to 1945, the word was used so often and so promiscuously that often it was impossible to determine which of the services it represented—Army, Navy, or Marines. The Air Corps was then part of the Army.

The person most responsible for adding some semblance of character to the word was Ernie Pyle, America’s famous chronicler of World War II’s frontline fighter. His news stories, consolidated under the title, “The Story of GI Joe,” dramatized the problems faced by individual soldiers and created a sympathetic rapport for the foot soldier’s job and the war he was helping to win. Pyle gave names and hometowns of most of the GIs he met, and it was this identification that made his column widely read.

In a 1946 movie called “A Foreign Affair,” featuring Marlene Dietrich, Jean Arthur, and John Lund, the word’s use got one of the show’s best laughs. In one scene, an American Army colonel, welcoming a

group of junketing Congressmen at a German airport, is greeted by one of them with these words, "Always happy to meet a GI!"

Exactly when the Army's anti-GI campaign started is hard to pinpoint, but evidence shows it began shortly before the Korean War. Early in 1950, a top Army information bulletin brought up the subject of the word, suggesting that "GI" as a synonym for "soldier" was unrepresentative of the new soldier concept. The bulletin compared it with such terms as "dumbjohn" and "dogface," and recommended it be replaced by the more respected and traditional "soldier."

By June of 1950, the term had been dropped almost entirely from official Army press releases and camp publications. The general press revived "GI" for brief periods during the Korean War, but because it looked crude as a designation for the fighting soldiers of the more-than-a-dozen UN members on the battlefield, it never recaptured its World War II currency.

After the truce at Panmunjom, the term gradually faded from public consciousness and passed into a temporary limbo of obsolescence. Its use by press and magazine writers was limited mainly to references of the "GI Bill" and in copy for movie ads and book blurbs.

It was not until 1957 that the Army put its "approval" stamp on the democratic image of the new soldier. Through its character guidance program instruction, Army chaplains wrote and lectured that "You call a man of science a scientist, a man of letters or music or art an artist. But a man of the Army, from private to general is a soldier; and proudly so, if he is as skilled in his tasks as the others are in theirs."

During the next few years, aided by what it saw of the soldier as a neighbor and a man-of-arms, the public acquired an unprecedented awareness of the soldier's many military skills, brought on chiefly by America's entry into the missile-space age.

Late in 1959, one of the Army's public information objectives was to publicize the "soldier is tops" theme, a concept that reflected the public's acceptance of a professionally adequate Army supported by combat-ready "reserves." Two other slogans have since been created to back up that acceptance, namely, "the ultimate weapon" and the "key to land-power."

If the majority of today's news and magazine writers are aware of the Army's aversion to the word "GI"—that it detracts from the soldier's new posture—they've shown no indication to abide by it. One thing can be said in their favor: a close study of the word's use in many headlines and stories around the country shows no attempt to belittle the soldier. A good example of this is a hot lead from a feature article in a leading national magazine which reads: "Man," a frightened GI said as bullets zinged around him, 'this is just like war!' 'Soldier,' his sergeant shouted, 'this IS war!'"

The Army's fight to bury the word GI with traditional honors appears a losing battle, the editor of a top civilian military magazine recently wrote me. "Many officers, especially older ones, use it and that doesn't help."

Nevertheless, the official public information policy on the word's use permits scant compromise. According to the Armed Forces News Style Guide, "Soldier" refers to any member of the U.S. Army regardless of rank. Do not use such terms as GI, jarheads, boys, brass, flyboys, swabbies, girls when writing about service personnel. This policy is borne out by letters to editors of military publications over the past ten years—letters that overwhelmingly indicate members of the "One Army" team prefer "soldier" to "GI."

Yet, as long as servicemen make the news with any degree of regularity, as long as "GI" covers a multitude of meanings and fits easily into a headline, outstanding Army public relations will be needed to get the news fold to replace GI with soldier. ■

Continued From Page 3

a personal, secret vow made to himself while a superior was chastising him in a standard debriefing. Each individual in turn faces his fellow soldiers and speaks out, sharing with them the very personal fears, anxieties, and emotional reactions or physical failing experienced under fire or in a gruelling march. They share these experiences and in so doing they weld themselves together. As most combat veterans in our own ranks will agree, the bonds between men who have been under fire together are strong indeed.

In this way the enemy draws his small units together into tight, cohesive groups that strive toward what we frequently call "fanatical" performance. They fight like this because they know that their comrades' eyes are upon them and they are going to have to face up to their conduct publicly at the first break in the action.

They fight like this because the semi-literate peasant of Asia has recognized quite clearly what our highly-educated researchers have been telling us since early in World War II. Namely, that men fight, whether enlisted or drafted, primarily for the men they fight beside and for the image they present to their fellow soldiers. All the tactics and techniques and training in the world won't move a man against enemy fire with firm purpose if he doesn't care what his buddies think. He is not an unthinking, Prussianized robot. He is very, very conscious of the group and his place in it. ■

Infantry Quiz

Answers to Infantry Quiz on page 27.

1. D	6. D
2. A, B, C, D	7. B
3. A, B, C, D	8. A
4. A, B, C	9. D
5. A, C	10. C

Water from Your Pocket

PARCHED DESERT SOILS can yield enough pure water for emergency survival with a pocket model "solar still" developed by scientists of USDA's Agricultural Research Service.

A six-foot-square plastic sheet, a container to catch water, and some elbow grease are all that's required to make the still, an outgrowth of basic research by the Soil and Water Conservation Research Division of ARS. A shovel and some plastic tubing, while not absolutely necessary, would make the still easier to construct and more convenient to operate.

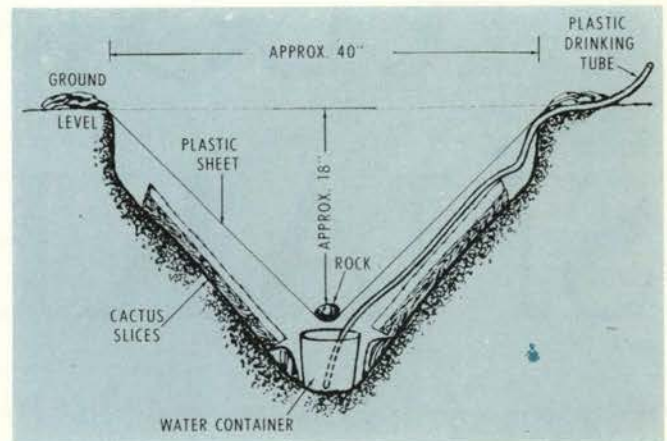
The still, which is made by covering a small pit with the plastic film, uses the two most abundant resources of the desert: sun and soil. As much as two or three pints of water can be obtained daily. Two of these stills should produce enough water to keep a man alive indefinitely.

A man-portable method such as this for obtaining water is of value in situations other than in desert survival. Water obtained from this device is distilled and can be consumed even though the source of the water is suspected of being polluted. It can be used to obtain drinking water from ocean beaches or other places with moist soil but no fresh water.

Photos accompanying this article show a step-by-step method for constructing the solar still.



Courtesy USDA, ARS

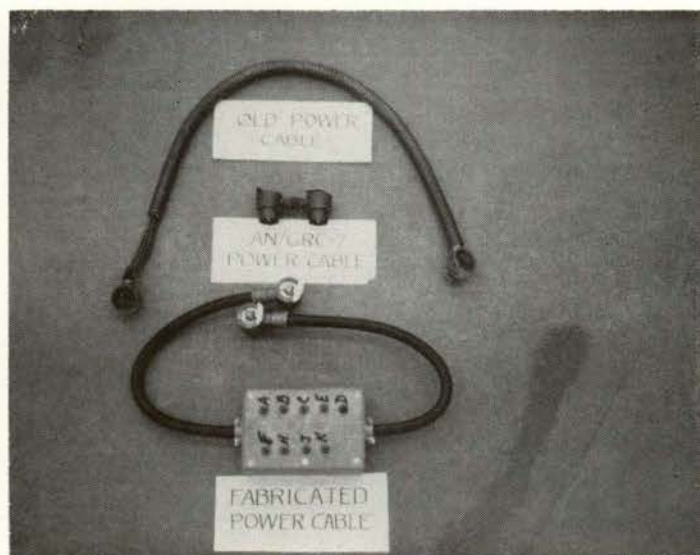


HOW THE SOLAR STILL WORKS

The above diagram shows a side view of the solar still. Sunlight shining through the plastic heats the area underneath, vaporizing the moisture in the soil and plant material. As soon as the air inside the still becomes saturated, water vapor condenses on the underside of the plastic cover. The droplets thus formed run down the plastic and into the water container. The plastic should be of a "wettable" type so that water will cling to it and not drop off before running to the lowest point. The water container should be wide enough to catch all drops.

About one hour is required for droplets to start to form on the plastic after the still is completed. It will then produce continually through the day and for a short time in the evening. Moist soil will yield about three pints of water a day, but if the soil is very dry, fleshy plant material will be needed to produce a two to three pint yield. Polluted water can be purified by pouring it on the soil under the plastic.

There are more efficient solar stills—some of them available commercially—but none as inexpensive or as easy to construct.



THE PREGNANT SNAKE

S/Sgt JAMES H. LORRORN

"MAINTENANCE MAN, my radio is out," the CO yelled above the explosion of the last mortar round that almost took the Company Headquarters with it. Through the dust and smoke, the radio repairman made his way to the commander's jeep with his maintenance kit. He proceeded to check the radio the best he could under the present conditions. After performing his checks on the AN/VRQ-3, he said, "Sorry, sir, but your radio will have to be sent back to the shop." Put yourself in the CO's place—his communication link knocked out when it is most essential. How can valuable time be saved in restoring communications?

With the advent of the Army's new equipment, many great strides in communications have been made. The range of new radios has increased; they are lighter, more effective and certainly much more rugged. But what of maintenance, the lifeline of communications? Many maintenance techniques have been left far behind. The repairman, who has the responsibility of maintaining all his unit's radios, is a highly trained and

skilled man. But even with this high degree of proficiency and knowledge many radio sets that come to him to be repaired cannot be fixed because of the maintenance techniques involved. Recently new ideas in this field were explored in the Communications-Electronics Department, the United States Army Infantry School at Fort Benning, Georgia.

The AN/GRC-7, which is vehicular-mounted, uses power cables approximately four inches long. This prevents the repairman from separating the equipment; therefore he is limited to just the front panel checks of the radio. No repairs can be made on the equipment without removing it from the vehicle and taking it to a shop with facilities for individual component checks. Even in the maintenance shop the cables used are usually constructed from pieces of wire and connectors which offer the repairman only one thing—the ability to separate the equipment. He still does not have a means of measuring any of the power supply voltages. The need for a cable to allow the repairman this capability

was realized, not only for a school situation, but for maintenance shops and the repairmen in the Infantry company.

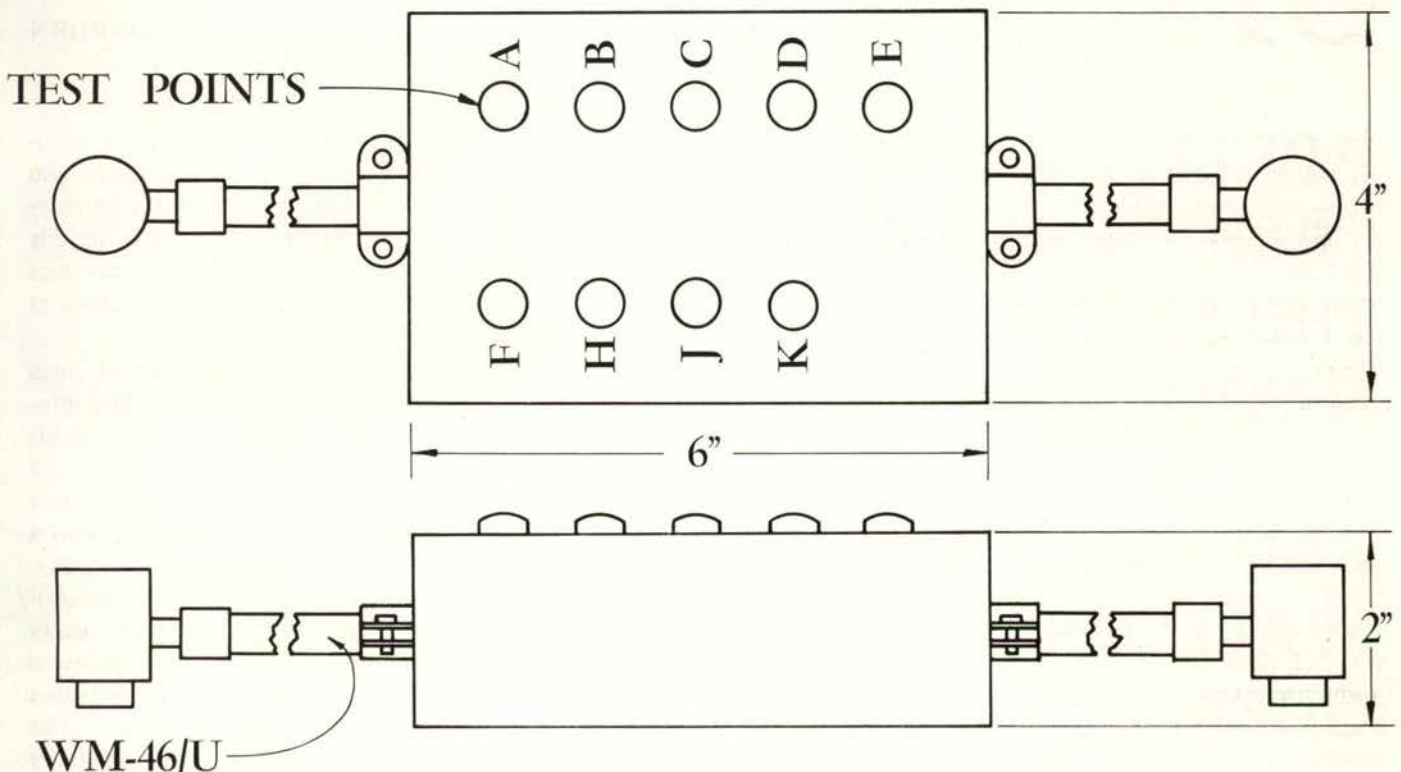
The first step in our study was to check the Army's inventory of equipment to determine what was available for our use through regular supply channels. A test set was found that fit our needs very nicely. However, it costs more than \$300 and there were several test items included in the set that were not needed at the unit maintenance level. It was determined that one test cable of the set could be almost duplicated using receiver-transmitter control cable from salvaged MT-297 mounts, scrap lumber and test jacks that can be purchased in any electrical store. These test jacks cost approximately ten cents each. Basic construction of the power cable consists of connecting each test jack in series with the pins of the connector—hence, test point A is in series with pin A of the connector, etc. These test points and series connections are housed in a box—the hump—fabricated from scrap lumber, metal, etc. Test cables were fabricated by the maintenance personnel of the Communications-Electronics Department. They were used on a trial basis by the students of the Infantry Radio Maintenance Course and proved to be a valuable troubleshooting aid.

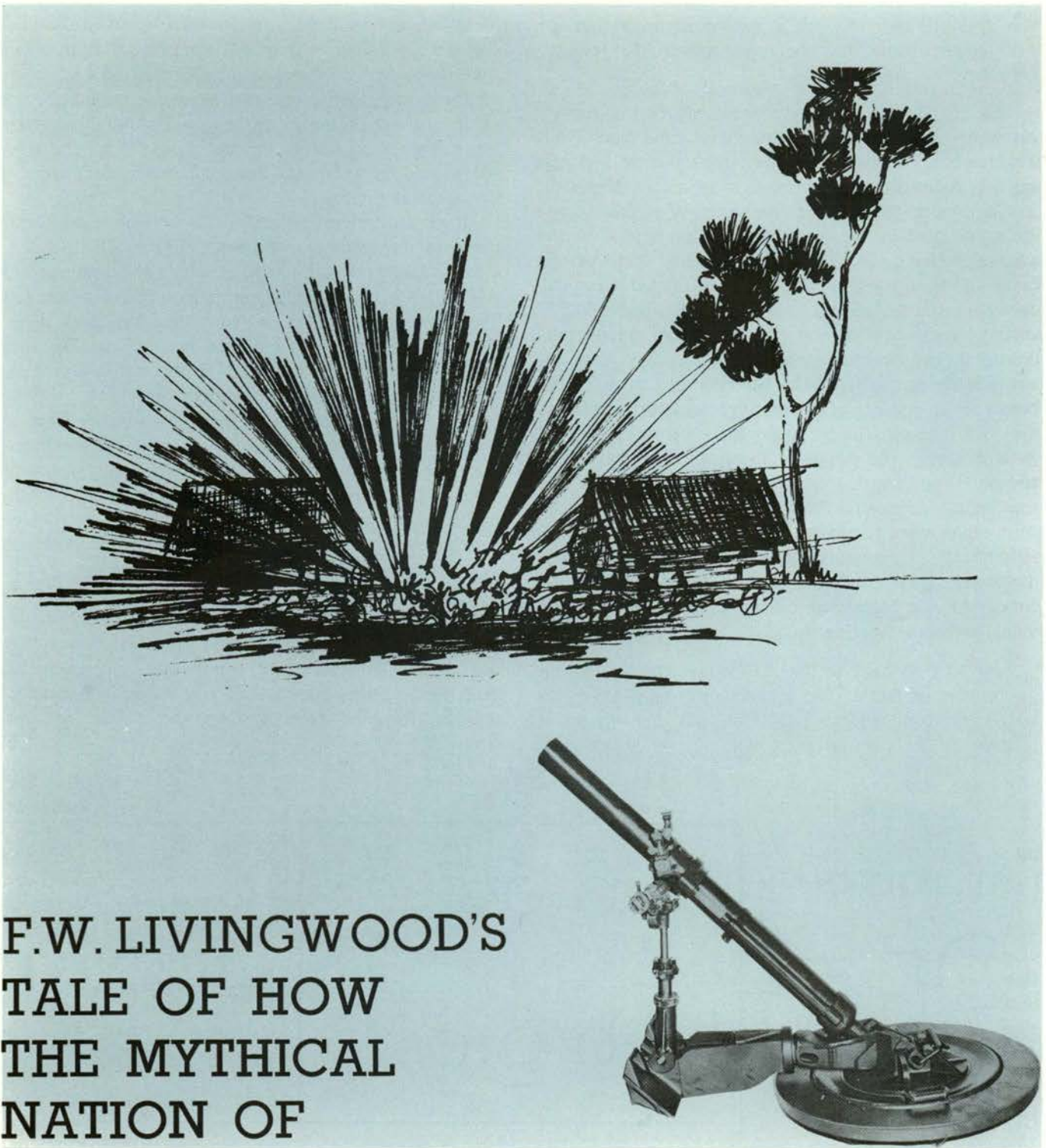
Now let's go back to that CO whose radio went out in the heat of battle. The maintenance man makes his way to the commander's jeep. Only this time his maintenance kit includes an extra item. To an observer it

looks like a long black snake with a hump in the middle. To the CO it is pure gold, because it is this item that allows the maintenance man to pull the CO's radio off the mount, take it out of the case, and using the test cable, connect the radio to the power supply and, making voltage checks from the test jacks, locate the trouble, repair the radio and restore communications in as little as five minutes.

How would these test cables aid the maintenance man down in the Infantry company? First of all, the AN/GRC-7 family of radio sets, of which the commander's AN/VRQ-3 is a part, is normally vehicular-mounted. The repairman is called on many times to check defective radios that are still mounted in a vehicle. By using this test cable he has the much-needed capability of on-the-spot set or individual component checks without having to remove the radio from the vehicle. This allows the repairman to make these on-the-spot corrections where in many cases the entire radio set would have to be removed from the vehicle and taken to the maintenance shop for diagnosis and repair of troubles.

What would this device really mean to the commander in the field? More reliable communications, reduction in man-hours spent for maintenance, reduced maintenance-parts cost, and above all—lives saved. All this can be accomplished right now by making maximum use of available salvaged equipment and ingenuity. With just a little effort toward the technology of maintenance, this and other problem areas can be overcome. ■





F.W. LIVINGWOOD'S
TALE OF HOW
THE MYTHICAL
NATION OF

SAN GOLONDRINO WALLOPS GUERRILLAS

“**B**UT, MAJOR, you say you have been bashing hell out of the guerrillas with mortars and artillery,” I said. “Sounds balmy to me. Everyone knows the only way to bag guerrillas is by flushing them out of the brush on foot and chopping them down with small arms fire. Or, have you trained your guerrillas to line up in mass formation while you bracket them with mortar shells?” I had garnered a bit of experience myself on

guerrilla warfare during various tours as a war correspondent in out-of-the-way places, and it irked me to see the self-assurance with which this upstart staff officer claimed to know all the new tricks in such an ancient and dog-eared art.

I could see that the other correspondents were as skeptical as I, and we fixed the major with coldly inquiring stares. There was no doubt that the local military in this tiny country of San Golondrino had performed a minor miracle in the recent highly successful campaign against the communist guerrillas—killing and capturing several thousand, sending the rest packing over the border, and regaining government control over several thousand square miles. The Golondrinos had done it in short order and with a military force hardly any greater numerically than the guerrillas. There had been none of this 16-1 numerical superiority the regulars usually had to have even to maintain the status quo in a guerrilla war. It was news all right, big news, but you couldn't do a thing like that to scattered guerrillas with massed mortar and artillery fires any more than you could swat flies with a baseball bat. However, the whole purpose of this press interview was to find out what magic recipe the San Golondrino Armed Forces had concocted for counter guerrilla success, and we awaited the major's comments with interest.

The major was unruffled. "We didn't do it all with mortars and artillery of course, but they played an important part in our bag of tricks. We started out originally recognizing that we had only small military forces; that we couldn't afford to raise and equip the massive forces that major powers such as France, England, and the United States have used in other places; and that we could get only a limited amount of military aid from other allied countries. This left only one choice: we had to beat the guerrillas with military forces only a little larger than theirs. To do it we had to take the offensive, because we didn't have enough troops to defend and guard everywhere. Instead of sitting and waiting for them to do their next hit-and-run bit at any of 3,000 unpredictable places, we had to go find them and kill them. To search the large areas involved, and do it quickly, we had to disperse the bulk of our forces in small patrols. But, of course, this meant that the guerrillas would be able to overwhelm and destroy these scattered patrols piecemeal in the jungle and mountains. Naturally, we kept out a few small mobile reserves, but it takes only minutes to ambush and destroy a small patrol, much less time than it takes for even airborne reinforcements to arrive."

"The answer was to use machines instead of men, firepower instead of bodies; long-range fire power, which could support the patrols from central firing positions where generous stockpiles of ammunition could be immediately at hand. In effect our patrols would act as "bird dogs," flushing the "game" from cover. Then the patrol leader, in the role of the hunter, would wallop the

quarry with mortar and artillery fire as necessary. It would use up a lot of shells, but it was far cheaper and more feasible than multiplying our standing military forces and our police forces."

"To make this scheme work we had to turn our previous concept of guerrilla mop-up operations inside out. Instead of surrounding a guerrilla area with large forces, we superimposed small scattered forces directly on top of the guerrillas. Our patrols fought the guerrilla on his own ground on his own terms with one exception: our patrols had the advantage of powerful mortar and artillery fires which they could call down instantly to help them at any time. Instead of starting out with an impenetrable wall of troops around a large perimeter and beating our way in toward the center, we started with hunter-killer patrols and mortar firing positions *at the center* of the guerrilla's suspected activity and pursued him *outward* with observed killing fires."

"This, of course, wasn't easy and took a great deal of doing. Here is how we went about it."

"First, we secretly spread a net of concealed observation and listening posts over the entire suspected area. Two- to four-man patrols, moving stealthily under cover of darkness, hiding in daylight, avoiding any human contacts and observing radio silence, penetrated to the depths of the area to predesignated sites where they prepared and manned concealed observation and listening posts. Two or three nights might be allowed for this process, and the patrols of course were highly trained for this arduous type of operation. The important thing was absolute secrecy."

"Second, mortars moved into pre-selected and previously surveyed firing positions also deep in the guerrilla's area. Speed, timing, and coordination were important, so that the wary game couldn't escape before the trap was closed. Units moved in from a distance under cover of darkness. Motor movements were by infiltration with weapons shrouded and concealed from public view to the extent practicable. Black-out was observed on near approach to march objectives. Mortar units dismounted short of the suspected area and covered the last leg cross-country by hand-carry or animal pack. During this final movement they accompanied the rifle units which were also moving into the area to clear it of guerrillas. All movements were timed so that each firing unit arrived in firing positions just at dawn, with minimum reaction time permitted the guerrillas before daylight. Some firing units were moved into position by airdrop or helicopter just at dawn to heighten speed of movement and surprise effect. Thus at dawn the guerrillas suddenly found themselves 'under the gun.' They were subject to surveillance and observed fires throughout their area."

"Simultaneously with the arrival of the mortars and rifle units at their detrucking points, artillery batteries occupied pre-surveyed firing positions some miles farther back, moving with maximum secrecy. Thus they were in

position to provide rapid close support of the rifle and mortar units during the final leg of their night movement into the guerrilla area."

"Third, immediately upon arrival of mortar sections and artillery batteries in firing positions, police and paramilitary forces (traffic police, rural police, home guards, etc.) established road blocks, ambush patrols, and observation posts around the periphery of the guerrilla area. Their purpose was to report, canalize, and if possible capture or destroy guerrilla elements attempting to flee the area. Simultaneously, small motorized reserves, composed of military and police units, moved to several central points around the area in readiness to reinforce peripheral road blocks and patrols or to pursue any larger guerrilla elements who might slip through the patrol nets. There was no wall of troops but there was a net of observation, fire, and mobile interception patrols around the area."

"Fourth, Infantry units organized into hunter-killer teams pushed out from their established patrol bases inside the guerrilla area and started a systematic search of the area to find and flush out the guerrillas and destroy them either with mortar and artillery or with their own hand weapons."

"Each hunter-killer team was first and foremost a combat-reconnaissance patrol, but in addition it was a walking arsenal of firepower. Strength varied from 8 to 16 men. Each patrol was equipped with a radio, at least one automatic weapon, and hand and rifle grenades, including signal smoke grenades. Each carried signal panels for ground-to-air identification. The larger patrols included a 60-mm mortar team carrying only the tube, to be fired by hand without a bipod, and a sack or two full of shells. This was for quick close-in work when the patrol suddenly got tangled up with a large group of guerrillas. Each rifle company could operate eight or nine of these patrols within its designated sector."

"Every patrol served as a forward observer team, and its operation was planned and controlled to assure that it could call down mortar fires instantly and accurately. A section of 81mm mortars supported each rifle company, and was located at the center of the company's sector. Since the mortars were little concerned with hostile counter-battery fires, they were positioned on the highest point of vantage available, to provide maximum observation, line-of-sight radio communication to the patrols, and some protection from guerrilla ambush. A small fire direction center was operated at the mortar site to coordinate and control all fire support for the patrols, including artillery and air-ground support."

"Of course, the fire direction center had to know at all times the location of all the patrols in order to assure troop safety as well as to assure prompt, accurate delivery of emergency support fires. For this reason patrols followed routes carefully worked out in advance. Frequent position reports were made and plotted on the FDC's firing charts. Any departure of a patrol from its

pre-designated route was reported in advance by radio. All this was somewhat slow and methodical, but it paid big dividends."

"So you can see, gentlemen, that if everyone played their cards right, and if there were guerrillas in the target area, they found themselves between the devil and a hard spot. If they moved they were spotted by our network of hidden observation posts who blasted them with observed mortar or artillery fire and put mop-up forces on their trail. If they holed up, our combat patrols dug them out sooner or later. If they assembled a large force to fight their way out of the box, they were sitting ducks for massed mortar and artillery fires as well as air attack. If they lay in wait and tried to ambush our patrols, they encountered a wall of fire and exposed themselves to discovery and destruction. On the other hand, if they remained scattered and attempted to exfiltrate the area in small groups, they suffered demoralizing losses and harassment enroute and fell easy prey to the ambush patrols of the police and the home guard ringing the area. Panic was our greatest ally, for the guerrilla, hunted by unseen eyes on every side, finding no tangible enemy to strike back at, and not even knowing which way to flee to escape destruction, rapidly sank into a state of blind terror."

"In short, we turned the tables on the guerrilla. We fought him on his own terms, but with the advantage of better organization and training, better communication, greater firepower, and greater mobility."

The major paused and I seized the opportunity to burst the major's magnificent bubble with a few well-chosen questions:

"Major," I said, "You have painted a pretty picture in theory, but from a practical viewpoint there seems to be something missing."

"The first thing any self-respecting guerrilla chief would do when you try to move mortars into the middle of his base area is to attack and destroy your mortars. This would pull the props from under your entire scheme and leave your patrols without their precious fire support. What did you do about that?"

"Furthermore, even if they weren't immediately wiped out, your mortars wouldn't be able to hit any fleeting guerrilla targets because they had not surveyed in their positions or adjusted their fires. By the time they got through bracketing a target, the guerrillas would be long gone, so what good were the mortars anyhow?"

"Finally, it is obvious that even if the mortars *could* survive and even if they *could* hit anything, they would shoot up all the ammunition they could possibly carry with them in a short time. How were you able to resupply them when there were guerrillas in all directions ready to mow down your ammunition detachments?"

The major waited until everyone was quiet.

"Frankly, we hoped the guerrillas would be foolish enough to attack our mortars as soon as possible and with all their available forces. We were not disappointed for

they tried to do exactly that on several occasions when we started our campaign. By doing so they only accelerated their own destruction and made our job quick and easy. Remember, our mortar sections are protected by accompanying elements of a rifle company during the initial movement into firing positions and they had excellent combat intelligence as a result of the concealed observation and listening posts which had previously infiltrated the area. When the guerrillas concentrated to attack them, both the mortars and the rifle units gave a good account of themselves, and in addition the supporting artillery, which had occupied pre-surveyed positions, had a field day slaughtering the enemy. They didn't repeat the error very often. Of course, it was SOP that the mortar firing positions were selected with a view to good all-around defense and they were dug in and provided with local security elements as soon as they arrived on position. Prearranged protective artillery barrages were always ready on call. Anytime the mortars were attacked, of course, our friendly combat patrols searching adjacent areas would double back to take the enemy in rear, and mobile reserves were sent to reinforce as required."

"I repeat; it was our primary purpose to *draw* the enemy into attacking us so as to speed up and facilitate his own discovery and destruction."

"As for adjustment of mortar fires, this began as soon as they arrived in firing position at daylight. The rifle units accompanied the mortars into position, then split up into combat patrols and moved out to search the surrounding areas for guerrillas. Secrecy was no longer paramount at this time for our trap had completely closed on the enemy. As each patrol advanced onto a new piece of terrain, the patrol leader adjusted supporting mortar fire on a selected reference point along his immediate route of advance. Of course, each such registration point was also selected as a likely location for a guerrilla observation post or hide out. What this amounted to was 'reconnaissance by fire.' It helped to smoke out any guerrillas who might be in hiding and at the same time assured accurate fire registration and rapid shifting of support mortar fires to any nearby targets of opportunity which might appear. The psychological effect which these probing fires had on the guerrillas was not the least of their value, for although they knew where the shells were exploding, they did not know where our concealed observation posts and patrols were located."

"The ammunition supply problem gave us less trouble than you might think. Initially ammunition was brought in with the mortars by man-pack or pack-mule. At the same time preparations were made for aerial resupply by light aircraft or helicopter. Helicopters are ideal for this, when available, but light planes cost less to operate and served our particular purpose very well. Prepackaged bundles of ammunition were trucked into a light plane strip some miles away from the scene of action. As soon as the operation was underway a couple of light

aircraft arrived on the scene. They were equipped with bomb shackles under the wings to carry supply bundles. One plane flew over the area on reconnaissance. Radio calls and/or pre-arranged panel signals indicated to the pilot and observer when and exactly where an ammunition drop was desired. The other plane, on call at the strip, then arrived with the desired bundles in a matter of minutes. Flying slow at tree-top level it dropped the bundles exactly on target without need of parachute. In addition, the observers in the planes adjusted artillery fire to supplement the concealed observation posts on the ground. They directed artillery fires, or mortar fires for that matter, on observed guerrilla targets."

"Using this technique we have had no trouble keeping our mortar positions as well as our patrols supplied with ammunition as well as rations and equipment."

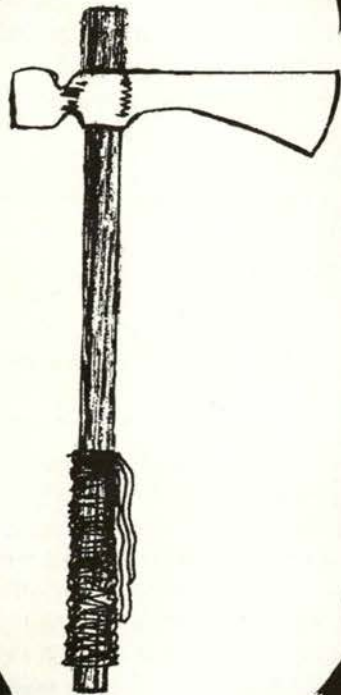
The major paused, and I seized the opportunity for a parting shot.

"Well, major, you certainly seem to have all the answers, but there is just one more thing I would like to know. What are all the innocent friendly civilians in the area doing while you are strewing the whole countryside indiscriminately with shell fire? The way I hear it, a guerrilla looks and acts just like anyone else unless you catch him redhanded carrying out acts of violence. So how do you separate friend from foe? Or do you just chop them all down without distinction?"

"That is the \$64.00 question," said the major, "and I am glad you brought it up. Naturally, it was necessary to impose all the population controls which are normal in such situations. At the outset, we established a curfew for all citizens during hours of darkness in all areas susceptible to guerrilla operations. Everyone had to collect in towns and villages at night, and a careful census of the citizens living in each town and village was maintained. In this way the legal population could be accounted for and protected. When we mounted a guerrilla drive in a particular area, we alerted the municipal authorities in all adjacent communities just before the curfew ended at daylight. They then kept the people in the villages until the drive was over, and of course, the police made a roll-call check in each village to detect any illegal skulkers who might be hiding there. The road blocks established by the police and home guards at daylight prevented innocent civilians from other localities from entering the combat area. So, as you can see, anyone left in the area of the drive was illegally there and was considered 'fair game.' These may appear harsh and unpleasant methods, but, gentlemen, there is no 'nice' way to fight a guerrilla war if you want to win it."

Well, that was the major's line and he was obviously struck with it, so why waste breath with any more questions? Perhaps, there was an element of truth in his version of the campaign. One thing is certain; it is peaceful in the country now. The guerrillas don't return to San Golondrino any more. ■

RANGERS FOUR



DR. A. PORTER S. SWEET



RIFLE RANGERS of our Revolutionary War were a fearless band. Reared during border warfare, the fight for survival had made them fearless. As children they had known the perils of the French and Indian Wars. Now, as men, they formed a thin, valiant barrier between hordes of Indians and the seacoast settlements.

In fireless camps on mountain-top look-outs they huddled alone, watching the trails below for war parties. As ranging companies they marched to meet those war parties, using Indian tactics and weapons. Ambushing and being ambushed, scalped and scalping, they offered their lives. Cold and wet, chewing their jerked venison and parched corn, they endured their lasting vigil.

Sometimes, as at Cherry Valley and Wyoming, their foe outfoxed them. But, had it not been for the Rangers, the border would have been crowded many miles eastward, more hundreds of scalps would have hung in Iroquois long houses, and the war efforts of the embattled colonies would have been seriously impeded.

There were hundreds of Rifle Rangers, but history recorded the deeds of only a few. Four have been chosen to tell their story: Dr. Knight, because he was captured and experienced what all knew they faced; Timothy Murphy, as an outstanding enlisted man; Horatio Jones, whose war effort was changed from killing to life saving; and Moses Van Campen, a typical Ranger officer.

DR. KNIGHT

On 25 May 1782, Colonel Crawford led an army of 465 militiamen from Fort Pitt against the Ohio Indians. Since they had no surgeon, they were accompanied by Dr. Knight of the Rifle Rangers.

After marching for eleven days they had encountered neither Indians nor Indian towns. The officers decided to continue for the rest of the eleventh day before turning back. Before nightfall, they met the Indians and fought an indecisive skirmish. By morning, so many



more Indians had arrived that a retreat was ordered.

It began in good order, the troops in three lines with the wounded in the center. But, when the Indians attacked, the militiamen scattered like wind-blown leaves. Dr. Knight, in a group consisting of Colonel Crawford, Captain Biggs, John McKinley and two or three others, was captured and on 10 June reached a village where there were other prisoners.

There, all except Crawford and Knight were tomahawked and scalped. McKinley was beheaded by an old squaw and his head used for a game of football. The bloody scalps torn from the slain were repeatedly thrown in the faces of Crawford and Knight. When Simon Girty, the renegade, arrived, the Colonel asked him,

"Are we to be burned?"

"Yes. You will be tortured here. The doctor in a Shawnee town."

After the fire had been built, Crawford was stripped

naked and told to sit by it. Both he and the physician were then beaten savagely with sticks and fists. Crawford's hands were tied behind him and he was tethered to a post. The rope was just long enough to let him walk around it twice. Captain Pipe, a Delaware chief, then made a rabble-rousing harangue and the torture began.

First, about 40 Indians loaded their guns with powder and each fired twice upon Crawford's bare skin. Then his ears were cut off. The fire consisted of hickory poles burned through the middle, the remaining sections being about six feet long. These were taken up one by one and pressed against his body. Then some squaws took wide boards, shoveled up live coals from the fire and threw them on him. Soon he was so surrounded by burning embers he could neither sit nor walk without touching them.

"Shoot me, please, Girty," he begged.

The renegade laughed, "I have no gun. Watch carefully, Doc, so you'll know what to expect."

Colonel Crawford asked God to have mercy on his soul and continued to bear the pain. It was nearly two hours more before Knight was taken away.

The next day an Indian painted the doctor black and they began their journey. Knight made believe he didn't know he was to be burned and acted as cheerfully as possible.

"Will I be adopted so we can live together as brothers?" he asked.

"Can you make a wigwam?"

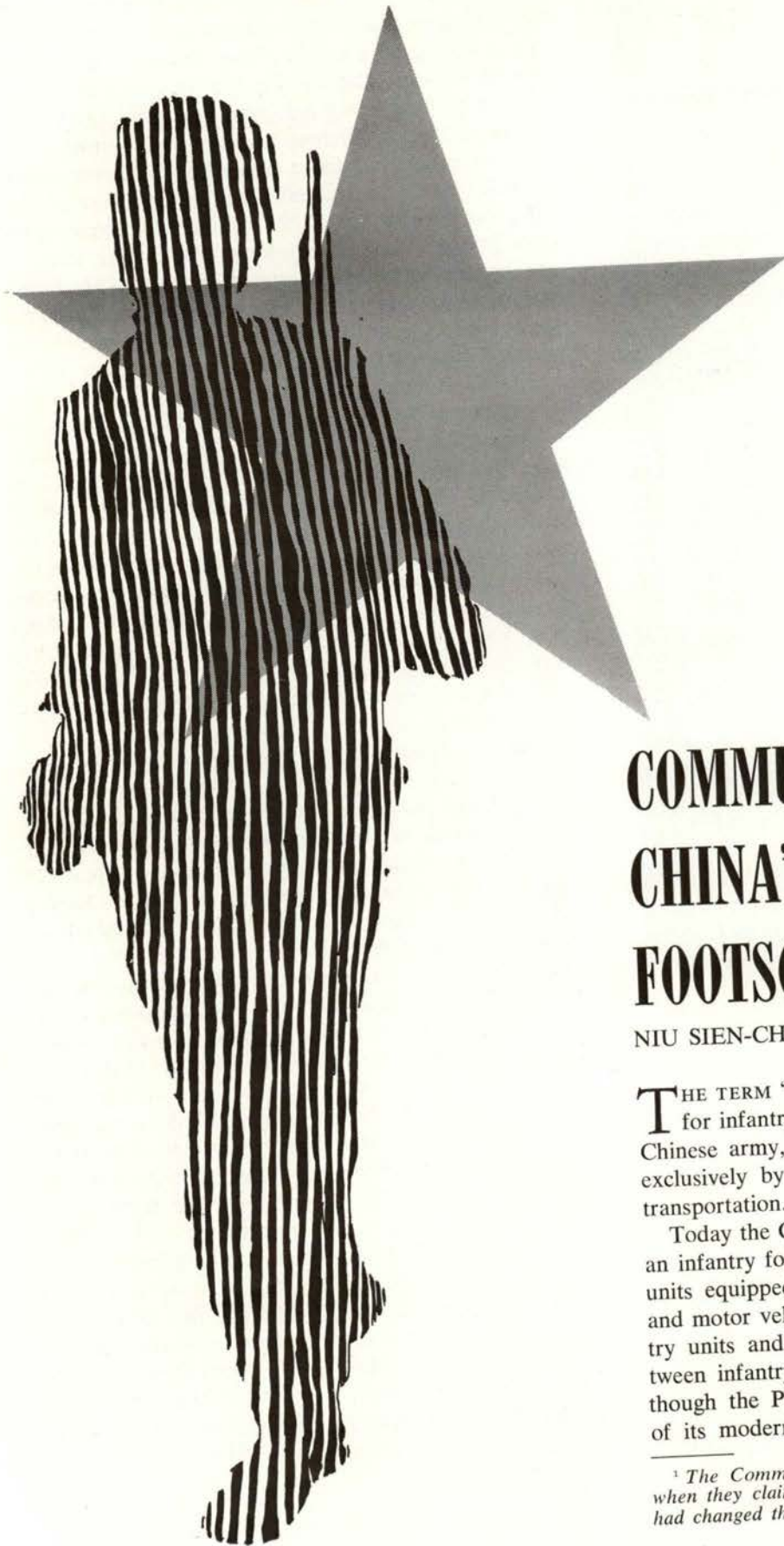
"I can."

The Indian didn't answer but seemed more friendly. Nevertheless, he tied him tightly for the night. At daybreak he was untied and, since the gnats were thick, Knight asked for and received permission to make a smoky fire. In doing so he got behind the Indian and felled him with a heavy stick. Grabbing the Indian's gun, he tried to shoot him, but the gun wouldn't fire. So he beat him over the head with it, took a powder horn and a duffle bag, ran a mile and hid in a thicket until dark. Then, guided by the North Star, he started east.

Knight had been a prisoner for six days, the first four he had little to eat; the last two, nothing. Gooseberries were plentiful but he could not chew them for his jaw was painfully swollen from a blow received from the flat of a tomahawk. He gathered a bundle of nourishing weeds and sucked the juice from them.

The next day he continued east, trying in every way he knew to make the gun fire before throwing it away. His jaw began to mend and in four or five days he was able to chew berries, leaves and roots. Gnats and mosquitoes allowed him little sleep and he crossed so many swamps he was always wet. After three weeks he reached Fort McIntosh. An eye witness to his later arrival at Fort Pitt said that he was still so weak he could hardly talk. ■

Next issue: the story of Tim Murphy



COMMUNIST CHINA'S FOOTSOLDIERS

NIU SIEN-CHONG

THE TERM "FOOTSOLDIERS" (Pu-ping) as a substitute for infantry is correct in the literal sense in the Red Chinese army, because the infantry units travel almost exclusively by foot—they have few modern means of transportation.

Today the Communist Chinese army is still essentially an infantry force. It is composed principally of infantry units equipped with only a few tanks, artillery pieces, and motor vehicles. At present, the ratio between infantry units and armored units is 20 to 1, and that between infantry units and artillery units is 20 to 3. Although the Peiping¹ regime has made regular displays of its modern weapons and mechanized forces during

¹ The Communists changed the name of Peiping to Peking when they claimed the mainland. The Kuomintang government had changed the name from Peking to Peiping in 1928.

the national celebration days every year, these elements can only be regarded as the ornaments of the Red armed forces. If a real war breaks out, the burden will still be imposed on the footsoldiers.

The average Chinese soldier is still poorly trained and equipped by Western standards. However, there is some truth in Mao's statement, that war is decided by men, not by weapons. The Chinese footsoldiers had proved themselves tough, cunning, and formidable fighters in the Korean War. And more recently, they fought relatively well during the Sino-Indian conflict.

Theoretically, with a total population of about 700 million, the military manpower that Communist China can mobilize is virtually unlimited. However, owing to the lack of a proper industrial base, the armed forces that she can maintain in peacetime are rather limited. On the whole, Chinese Communist regular ground troops now include some 120 infantry divisions, nearly 2¼ million men, counting special units. In addition, there are 350,000 marines, the air force ground troops, and the anti-aircraft force. It is believed that the bulk of the People's Liberation Army manpower is organized as 40 field armies, each basically consisting of 3 infantry divisions. This is an important fact which we should emphasize: a Chinese field army is not equal to an American field army. It cannot even be equated with a U.S. corps, because the latter enjoys greater firepower and controls more effective transports. Moreover, as a tactical unit, a Chinese division is also far inferior to any standard division in the Western world.

Frankly speaking, we still do not know the exact details about the organization of the People's Liberation Army. After the cease-fire in Korea, Communist China's army began to carry out the policy of "regularization and modernization." A slow change was taking place in the organization of the divisional structure. Up to 1958, there had been five reorganizations. Until 1950, the infantry division was small, having an average strength of under 7,000 men. Afterwards the strength increased to about 11,000, and then on to 14,000. According to Maj Edgar O'Ballance, there were just over 150 large infantry divisions in 1959, scattered over that country.² On the other hand, according to Mr. Jac Weller, the TO strength of a Chinese triangular infantry division is 17,600, hence it is almost equal to a U.S. division in manpower.³

Maj O'Ballance stated that, under Russian influence, the "triangular" system was emphasized. Really this is not true, since that system had been introduced into the Chinese army long ago. The Nationalist Army already adopted this system before World War II. In fact, the Russian organizational influence was strong but not all-important. First, Chinese Communists always have insisted that they have a particular system of military doc-

trine which is even more superior than that of the Big Brother. Secondly, Chinese Communists never had sufficient materials to carry out their plans of military reform. Even during the honeymoon period in the relations between Moscow and Peiping, the weapons and equipment which China received from the Soviet Union were still not enough to modernize the Red horde totally.

Modernization of Communist China's armed forces was essentially stopped about five years ago when Soviet military aid was cut off. However, the effect on the army is not so serious as on the navy or air force. In other words, even without the foreign aid, the Red army can still get along on China's own resources. Its loss of combat power would be rather limited. And fortunately for the Peiping regime, the army is the real military power of Communist China.

Nevertheless, the withdrawal of Soviet aid has created a grave blow to the foundation of Communist China's military machine. The policy of "modernization" was based on the assumption that Soviet aid would continue at least in the near future. Now the assumption has been invalidated, so a psychological crisis appeared in the top hierarchy of the Peiping regime. The result was the purge of the so-called "Peng-Huang anti-Party bloc." (Peng Teh-Huai was Minister of Defense until September 1959; Huang K'o-Cheng replaced Su Yu as Chief of General Staff in October 1958, but was relieved of this post by Lo Jui-Ching a year later.)

While the movement of "modernization" has been abortive, the original "revolutionary" foundation was also broken down. Therefore, under the new leadership of Lin Piao, appointed Minister of Defense in September 1959, PLA officials were forced to resume their old line of "a people's army to fight a people's war," hoping thereby to restore the combat capability and morale of the Red army.

In 1959, Peiping authorities announced that the divisional structure of the Red army was to be reorganized again. Some Western observers believed that Communist China would adopt a formation similar to the U.S. pentomic division. However, there was no evidence that the reorganization has really progressed along that line. In fact, Communist China now has several kinds of infantry divisions. They may be roughly classified as follows: (1) New Type Division—the main force is still formed by infantry units, but reinforced by some armor, artillery, chemical, and motor transport units. (2) Old Type Division—only supported by some obsolete artillery pieces but no tanks at all. (3) Standing Division—maintaining peace-time strength up to 85 percent to 100 percent of the TO strength. (4) Skeleton Division—only maintaining peace-time strength up to 40 percent to 60 percent to TO strength. (5) Heavy Division—half-mechanized. (6) Light (Mountain) Division—almost without motor vehicles and other heavy equipment.

Based on this analysis, we should frankly admit that our information about the PLA is really very poor.

² "The Red Army of China" Praeger, 1962.

³ "ChiCom Small Arms and Tactics" Marine Corps Gazette, Dec. 1962.

We do not know the exact organization table of each of those divisions, let alone the details of their lower echelons. However, according to all available sources, we can safely conclude that the bulk of the PLA is still organized on the old basis of the triangular infantry division. The average strength may be estimated at 12,000 men, and the maximum number may approach 14,000.

The main force of an infantry division composes three infantry regiments. Their organizations seem now to be standardized after a long period of reorganization. There are three rifle battalions and one weapons battalion in each regiment. The weapons battalion contains an artillery company, a mortar company, a recoilless rifle company, and an anti-aircraft company. Each rifle battalion has a headquarters group, three rifle companies, a mortar company, and a medium machine-gun company. Each rifle company consists of three rifle platoons and a weapons platoon. The latter has three 60mm mortars and two 3.5-inch rocket launchers. The rifle platoon contains three rifle squads and a light machine-gun (automatic rifle) squad.

Since the end of the Korean War, Chinese Communists have been eager to standardize their weapons and equipment. The old weapons were gradually replaced by the new arms delivered by the Soviets or produced by Red China's arsenals. Today, in respect to modern infantry weapons Communist China's army is adequately equipped. However, major shortages exist in artillery, tanks, military vehicles, and other heavy equipment. Therefore, Communist China's army, though unbalanced in organization, does not lack the necessary modern means to fulfill its task.

According to the recent report, the Red army only needs 750,000 recruits a year. To fulfill this annual requirement, it needs to choose only one from every seven or eight of the approximately 6,000,000 young men who reach the age of eighteen. Therefore, it can apply the most strict selection standards to the conscripts.

When Peng Teh-Huai was in command, Communist China's army followed more or less conventional training methods. After Lin Piao took over, the "revolutionary" doctrine was emphasized again. The training has been centered on the company and the individual enlisted men. Lin's slogan is "small in quantity yet high in quality; brief yet concise." Soldiers are taught close-quarter combat tactics. The so-called five great techniques are specially emphasized—*i.e.* shooting, bayoneting, grenade throwing, explosives handling, and digging. In target practice, the requirement is "true skill" within 200 meters. Night marches, infiltration, and night fighting are also getting special attention. The Red army still has not discarded the old "human sea" tactics, which demand "fighting to the death and charging without turning back."

The modern tactics of joint operations are neglected in contrast to the top priority given to small-unit training.

Even the regimental and divisional maneuvers involving close coordination of the infantry-armor-artillery team are confined to crack troops, and they are held only occasionally. After the failure of the "Great Leap Forward" and the termination of Soviet aid, a campaign to conserve materials has been launched among army units. Owing to the shortage of ammunition, fuel, and other materials, the training is restricted to the lower echelons. They cannot afford the expensive large-scale field exercise. However, without proper exercises, maneuvers, and war games, the troops can never acquire the necessary battle proficiency.

Communist China's footsoldiers have a high degree of tactical mobility, though their strategic mobility is very poor. The speedy tactical movement is still dependent on the soldier's feet. With full equipment, they can walk 40 miles in a single night. This is surely an excellent achievement. However, Communist China has little airlift capability, and her modern railway and highway systems are also inadequate. The PLA has rarely made long-distance rotations since the Korean War. The leading principle is that "the troops must train and fight in the same place." The future tendency of Communist China's army may be more territorialized, and their organizations and equipment will be more adaptable to the local conditions. Each military region may have the capability to fight independently against the foreign invaders.

The general impression of Western observers concerning the PLA is that the higher leaders are capable and possess a great deal of war experience; however, the lower-level cadre is not so good. The Work Bulletins (Kung-tso T'ung-hsun), a kind of secret document in the PLA, also reveal that the quality of leadership at the lower levels has been a source of concern. Very few officers below the rank of lieutenant colonel—that is, below battalion commander—have actual combat experience.

Nevertheless, there is little to show that the Communist Chinese lower commanders lacked initiative or flexibility during the Sino-Indian border conflict. This may be evidence that the quality of lower officers has been improved since the Korean War. On the other hand, the experiences of the senior leaders are almost confined to the field of guerrilla war, which may not be relevant to conventional military operations. Furthermore, memory and tradition tend to make the mental attitude of senior commanders rigid, and should be considered as a hindrance to the development of a proper new military doctrine.

In short, Communist China seems to possess little capability for sustained large-scale conventional war outside her own borders. On the other hand, Communist China's ability for defense against conventional attack may be relatively strong. In this circumstance, the footsoldiers would be the trump card in Mao's strategy of protracted war. ■

Keep up the good work

Articles have been coming in from personnel in field units at a most satisfactory rate. INFANTRY thanks those who have taken the time to make their professional contribution and urges those who have an idea but have not yet put it into writing to pick up their pens. There is always a need for a good article particularly for those dealing with practical application, problem solving, field experience, training suggestions, or combat tips. ■



Communication Supervisor Training

Are your communication supervisors performing at peak efficiency? Do they grasp the myriad technical details necessary to perform their job? Have the "old soldiers" forgotten much of what they once knew? Are your young eager beavers hampered because of a lack of technical training?

The solutions to such problems may be the Communications Chief Course at Fort Sill, Oklahoma. This is not an Artillery course; it is a common course designed to provide noncommissioned officers with the necessary know-how to supervise and coordinate the operation of the communication section of any non-Signal unit.

There is no need to worry about the Army-wide excess of MOS 31F40s and 50s (311s). Although the Communications Chief Course in previous years awarded an MOS upon successful completion, it is now a non MOS-producing course and attendance has no adverse effects on the MOS structure nor does it generate reclassification problems.

Get out your new Army School Catalog, take a look at the valuable training, equally valuable as initial

schooling or refresher-type training, and consider sending your communication supervisors to the next course for which you get an allocation.

If you do not have the new School Catalog (DA Pamphlet 350-10), you can inquire through normal school channels about Course Number 101-F4, (Formerly 6-R-F31) Communication Chief.

Computer Assisted Education at The Infantry School

To increase educational and training efficiency and to meet the new demands that will be placed upon it in future years, the Infantry School is preparing a five-year plan entitled Computer Assisted Education at The Infantry School (Short Title-CAETIS).

A planning committee composed of representatives of Departments and Staff Sections under the supervision of the Director of Instruction has reviewed 19 major objectives for inclusion in the plan. These objectives include automatic information retrieval, remote output-input devices enabling students, faculty, and staff to communicate directly with the computer, the use of educational television and the computer together, and the use of the computer to assist in presenting instruction.

Although the objectives may seem far-out, expert opinion supports their accomplishment. The majority opinion is that computer technology has developed faster than man's ability to use it. This is a challenge to USAIS and, for that matter, the entire U. S. Army.

USAIS is meeting the challenge and requests any information possessed by other individuals or agencies. Communications referring to the use of computers to increase instructional efficiency should be addressed to USAIS, ATTN: Director of Instruction, and will receive prompt replies. ■

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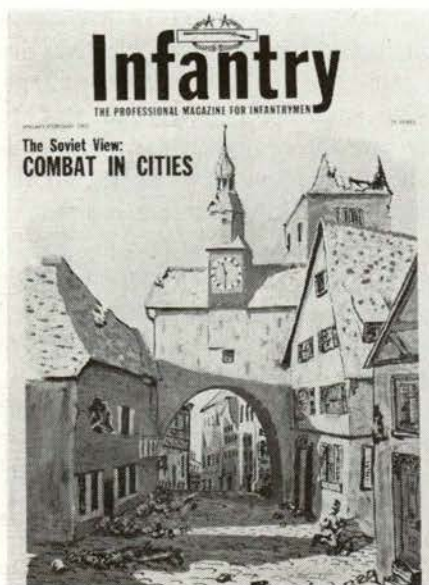
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Rifle Company in a Night Withdrawal from a Perimeter Defense, Capt Warren T. Lillie, ND
The Infantry Platoon Leader Needs Help, Maj Gen David W. Gray, JA
9 + 1 = 10, Col Herbert E. Wolff, MA

INDIVIDUAL TRAINING

Campus Warfare, Ted M. Jablonski, MA
CAR '66: A New Look, Capt James A. Booker, SO
Combat Platoon Leader Course, Capt Edgar R. McGreevy, SO
Davy Crockett Training Aid, Capt Ira G. Kohr, MJ
Letter From Vietnam, Capt Francis D. Lynch and Capt Alinson A. Bartholomew, SO
Physical Fitness for Old Soldiers, Brig Gen J. T. Corley, MA
Realistic CBR Training, Lt Guy M. Lovelace, JF
ROTC Summer Camp: Prepare Now, Capt Eugene R. Currier, SO
Swelter and Shiver, Capt Fred C. Berry, JA
The Chairborne Conditioner, Capt Arthur W. Garrett, JA
The Drill Sergeant: A New Concept in Basic Training, Lt Col Robert W. Jamison, MA
To Live as a P. O. W., SFC Fred H. Bost, MA
Why the Pullup Went, Capt Fred C. Berry, ND

LEADERSHIP

As We Should See Ourselves, Maj Carl M. Guelzo, ND
As Others See Us, Capt George R. Michael, JF

Freedom to Fail, Capt Peter M. Dawkins, SO
Dear Sergeant, Col Edward M. Flanagan, MJ

MISCELLANEOUS

"Mr. 26th Infantry", Sp4 Marlin Adkins, JA
Pop! Goes the Weasel, Capt Fred C. Berry, MA
The Language Barrier, Maj Carl M. Guelzo, JA
The Soldier's Chapel, Margaret E. Jensen, JA
Words for Weary Writers, Lt Col Rolfe L. Hillman, MA

PERSONNEL

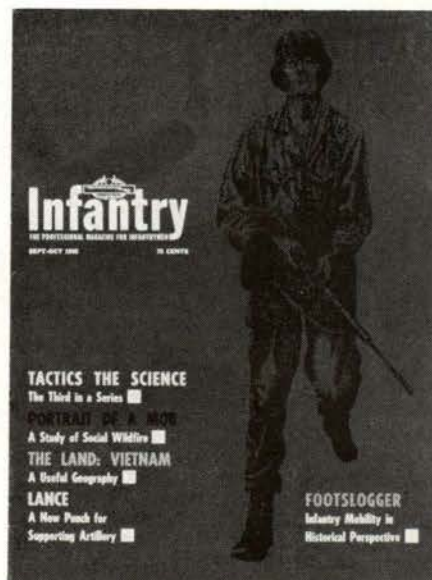
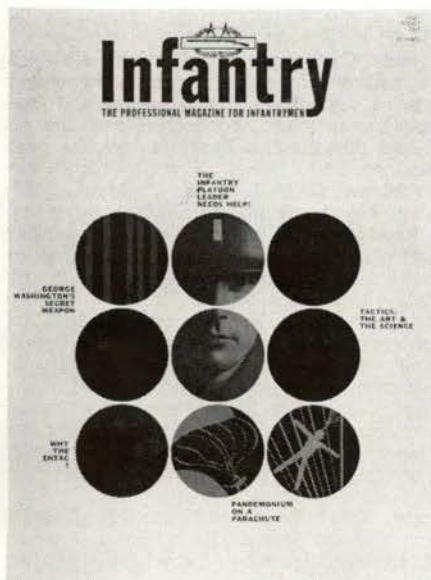
Fringe Benefits—Are There Any Left?, Capt Lewis S. Sorly III, MA
Retention of Junior Officers, Capt James M. Danley, Jr., JF
The Arm of Opportunity, Capt Hal Lyon, Jr., JF
20-Year Man or Professional NCO?, SFC Stewart E. Werner, MA

UNCONVENTIONAL WARFARE

After Action Report: V-C Ambush, Capt James R. Dismukes, MA
Ambush:
 1 *The Unconventional Ambush*
 2 *Ambushes Can Be Defeated*, Capt G. D. Livingston, JF
Combat In Cities, Lt Col John G. Fitzgerald, JF
Combat Notes, Brig Gen Ellis W. Williamson, SO
Commentaries on Jungle Warfare, Lt Col John Lance, JF
Instant Guerrilla Warfare, Lt Col Ralph Kinnes, ND
Portrait of a Mob, Capt Dandridge M. Malone, SO
Two-Man Terror Team, SFC Fred H. Bost, ND
Variation on a Theme by Rogers, Capt Richard A. Jones, SO

WEAPONS AND EQUIPMENT

Carbine M2A2?, Capt Richard A. Scholtes, MA
Every Man a Law Man, Lt Peter S. Reinhart, MJ
LANCE: A New Punch for Supporting Artillery, Capt Roger C. Laudati, SO
Mr. Six-in-One: STONER 63, Capt Thomas M. Johnson, MJ
The Colt Family: Variations on the XM16E1, Capt Thomas M. Johnson, ND
Why the ENTAC?, Capt Robert L. Ament, JA
Small Unit Special Purpose Vehicles, R. W. and J. P. Forsyth, JA
Air Boats, George A. Wallis, MA
The Flying Tank, Col J. H. Reinburg, MJ



LIST OF INSTRUCTIONAL MATERIAL

Division Support Command. This 31-page self-instructional text is designed to familiarize the individual with the organization structures and characteristics of the ROAD division support command. 30¢

Engineer Combat Support. This 155-page self-instructional text is designed to provide a working knowledge of the mission, organization, capabilities and equipment of division engineer units. Special emphasis is placed on the engineer platoon and company organization. 65¢

The Army Maintenance System. A self-instructional text covering maintenance serviceability standards; IROAN; rebuild; overhaul; repair; end item; mission essential equipment; objectives of maintenance; command responsibilities. 15¢

Introduction to Airborne Operations (Problem BPC 05, 4 Hours). Problem will enable you to explain joint airborne operations and airmobile operations to include missions; concepts of employment; planning considerations; and prepare a ground tactical plan and landing plan. 35¢

Airborne Logistics (Problem BJC 77, 2 Hours). Problem will enable you to demonstrate a knowledge of the organization, capabilities and methods of operation of logistical support elements of the airborne division. 5¢

Training Programs (Problem BMC 53, 1 Hour). Problem will enable you to develop a training program to include the preparation of a battalion training circular. 10¢

Intelligence and Counterintelligence Activities (Problem BIO 14, 4 Hours). Problem will enable you to determine the influence of the enemy on small unit tactical operations and explain intelligence and counterintelligence activities at the company and platoon level. 5¢

Aggressor (Problem BIC 56, 4 Hours). Problem will enable you to explain organization and tactical doctrine of Aggressor forces normally encountered at the brigade and battalion level and to use reference materials on enemy forces. 25¢

Customs and Courtesies of the Service and Guide to Army Social Life. This 37-page booklet covers the officers code; customs of the service; local customs for the student or assigned officer personnel; guide for the army wife; rules and examples of various seating arrangements for banquets; samples of engraved and semi-engraved invitations and dress card enclosures. 15¢

Writing Handbook. This handbook covers the principles of clear, logical, effective writing. It contains specific information on how to apply these principles to the type of writing required in the preparation of staff papers and an article for publication. Also included is a military correspondence reference kit. This kit includes the proper format for all military writing. 50¢

Mathematics Related to Nuclear Weapons Employment. This booklet is written to familiarize personnel with the mathematical procedures used in the solution of problems involving the employment of nuclear weapons and to provide practice problems for study prior to the start of nuclear weapons instruction. Problems are restricted to roots of numbers, equations or proportions; interpolation; probability; and rate, time, and distance relationships.

Garrison Supply Handbook. This 40-page supply handbook covers types and categories of property; company and battalion supply personnel; battalion supply records and procedures; methods of relief from property responsibility and garrison mess operations. In addition it sets forth the principles and policies governing supply and property accounting procedures as they relate to requisitioning, receiving, and accounting for supplies at the battalion level. 20¢

Small Arms Handbook. The Small Arms Handbook covers rifle marksmanship; special purpose weapons; machineguns 7.62 and .50 cal and rifle squad technique of fire. The handbook includes firing characteristics, assembly, disassembly, stoppages and immediate action on the following weapons: US Rifles 7.62mm, M14 and M14E2, 5.56mm, XM16E1; Pistol cal .45; 40mm grenade launcher, M79; 7.62 mm machinegun, M60; Browning machinegun cal .50, HB, M2; portable flame thrower M2A1-7 and M4 incendiary burster. Also included is information on hand and rifle grenades and infrared equipment. 65¢

Infantry Commanders Handbook for Vehicular Maintenance Management. This handbook of 214 pages presents in a clear, concise manner the fundamentals of maintenance and the management tools for an effective maintenance program. It is complete and detailed, with illustrations and samples. It is pub-

lished to aid commanders and staff officers in vehicular maintenance management. 95¢

Errata Sheet, Infantry Reference Data. Errata sheet covers significant changes to Airborne Division TOE, 57F. No cost.

Introduction and Concept of Leadership [Problem CL(C,K) 93, 1 Hour]. Problem will enable you, by means of discussion and practical exercise, to gain a knowledge of the concept of leadership; predicting and controlling behavior of men; proper administration of reward and punishment, and counseling. 5¢

Joint Air-Ground Operations (Problem BMC 33, 1 Hour). Problem will give you an understanding of the Joint Air-Ground Operations System (JAGOS) with emphasis on the actions required at company and battalion level to obtain effective close air support and tactical air reconnaissance. 5¢

Combat Formations, Battle Drill and Security During Movement (Problem CPO 22, 4 Hours). Problem will enable you to state and explain the principles and techniques of platoon-level combat formations, battle drill and security during movement. 5¢

Problems for the 4.2-inch Mortar Fire Direction Center. This 124-page problem booklet covers the practical problems of a fire-direction center. Booklet includes sections on construction of a surveyed firing chart and determination of firing data; altitude, registration and reregistration corrections; metro message; polar coordinate missions; conduct of fire missions; M-16 plotting board and other fire direction center problems and procedures. 55¢

Infantry Radio Maintenance Management and Supply Handbook. This 123-page handbook covers the Army radio maintenance system. Handbook includes information on the Army system of maintenance; maintenance publications; equipment record procedures; inspections of communication equipment; materiel readiness; signal supply procedures; repair parts procedures; signal supply manuals and a sample SOP with Julian date calendar. \$1.15

Division Support Command (Problem BJC 72/BJK 72). Problem will enable you to explain the organization, capabilities and functions of the division support command. (Scrambled Book, "Division Support Command," to accompany.) 30¢

Rifle Company in Airmobile Operations (Problem CCB 72/CCO 72, 8 Hours). Problem will enable you to participate in the planning and execution of airmobile operations conducted at the company level. Problem includes the airmobile planning sequence; tactical plan for airmobile operations; selection of landing sites/zones and conduct of a linkup. Maps for the problem are included. \$1.35.

Fundamentals of Artillery Employment (Problem BCC 06/BCK 06, 5 Hours). Problem will enable you to explain the fundamentals of artillery tactical employment within the division, with emphasis on organization for combat. 5¢

Personnel Functions (Problem BNC 13/BNK 13, 3 Hours). Problem will enable you to recognize and discharge the duties of the brigade and battalion S1 pertaining to maintenance of morale, discipline, law and order, the unit journal, records of radiation dosage and prisoners of war. 25¢

Mechanized Rifle Company Team in the Attack (Problem CCO 23). Problem will enable you to plan for, and conduct, an attack by a mechanized rifle company team. Maps for the problem are included. \$1.00

Human Behavior and Command Application (Problem CL(O,G) 33). Problem will enable you to gain a knowledge of leadership techniques as applied to the reception and integration program, personality structure, counseling and the administration of reward and punishment. Problem includes practical exercises and discussions. 5¢

Commander-Staff Problems (USAR ADT Problem 2085). Problem will enable you, by means of practical exercises and discussions, to gain a knowledge of commander-staff problems concerning span of control, chain of command, functional organization, and senior-subordinate relationships to include subordinate commander-staff relationships. 5¢

Leadership Problems of the Battalion Commander In Combat (USAR ADT Problem 2096). Problem will assist you in the solution of leadership problems at battalion level. to include privileges of the commander, the restoration of attack momentum and fighting effectiveness, the necessity for continual unit evaluation, considerations in recommendation for battlefield commissions, basic responsibilities of the commander, and considerations in selection of subordinate leaders for promotion. 10¢

Tank Company Team, Offensive Operations (USAR ADT Problem 2846). Problem will enable you, by means of a practical map exercise, to explain the organization of the tank company team and apply the principles and techniques of em-

playing the tank company team in offensive operations. Maps are included with the problem. 75¢

Support Units of the Battalion (USAR ADT Problem 2882). Problem will provide you with a working knowledge of the organization, mission, and principles of employment of the combat and combat support [reconnaissance platoon, heavy mortar platoon, Davy Crockett section (when augmented), antitank platoon, and ground surveillance section] elements of the headquarters company, Infantry, mechanized Infantry, and airborne Infantry battalions. Maps and overlays are included. 80¢

Rifle Company in a Night Attack (USAR ADT Problem 2886). Problem will enable you to recognize the principles involved in night offensive combat and plan a rifle company night attack. Problem includes troop-leading procedure; control measures; use of supporting fires and illumination; a communication plan; and the need for contingency plans. Maps for the problem are included. 55¢

Maintenance Evaluation (USAR ADT Problem 4866). Problem will provide you with a working knowledge of evaluating a battalion maintenance situation and determining remedial action for specific problem areas. 25¢

Mob and Riot Control in Counterinsurgency Operations (USAR ADT Problem 6116). Problem will enable you to comprehend crowd and mob behavior, principles of riot control, measures of force and planning procedures for employment of forces to control a mob or riot with application in a counterinsurgency situation. 20¢

Introduction to Airborne Operations (USAR ADT Problem 6605). Problem will enable you to explain joint airborne opera-

tions and airmobile operations to include missions, concepts of employment, and planning considerations and to prepare a ground tactical plan and landing plan. \$1.20

Planning the Defense (USAR ADT Problem 6630). Problem will enable you to apply troop-leading procedures when planning an area defense. Problem includes mission analysis; key terrain and avenues of approach in an area to be defended; preliminary planning guidance; technique for the commander's estimate; commander's decision and detailed tactical planning. 65¢

Artillery in Support of Brigade and Battalion Operations (USAR ADT Problem 7215). Problem will enable you to explain the fire support responsibilities of a direct support artillery battalion and how the artillery commander carries out these responsibilities. 85¢

Field Fortifications, Obstacles, and Camouflage (USAR ADT Problem 7445). Problem will provide you with an appreciation of the logistical impact of constructing a brigade defensive position, the protective characteristics of various emplacements, and the latest developments in camouflage techniques. 5¢

Infantry School Card Packet (Ten Pocket Cards). This packet of pocket cards consists of the following: Check Card for Army Instruction, Card Communication—Voice of Command, Notes for use in Radiotelephone Operation, Leadership Guide, Patrol Leaders Card Operation Order, Leaders Card Operation Order, Physical Training Guide, Code of Conduct—The Articles, General Orders, Mouth to Mouth and Mouth to Nose Rescue Breathing. ■

INSTRUCTIONAL MATERIAL

Material may be purchased from the Book Store, USAIS, Fort Benning, Ga., at prices indicated, by any member of the U. S. Armed Forces who so identifies himself when ordering. Requests must include name and address of the military unit to which assigned or attached, and a statement that the material will not be re-sold or otherwise released to individuals not assigned to the military establishment or to agencies not an integral part of the military establishment. Mail orders must be accompanied by full remittance, including postage surcharge (25¢ for orders less than \$5.00; 5% of total cost of orders over \$5.00). Orders will be mailed to the requester through his unit.

Book Reviews

A General's Story by Brig Gen M. L. Stockton, USA (Ret), Vantage Press, New York, 1965. 248 pages. \$3.95.

2nd Lt Charles W. Teague

If you are a reader of memoirs of famous military leaders whose decisions have had far-reaching impact and consequence for nations and the world, and if you enjoy reading "factual accounts" of the behind-the-scenes intrigue and maneuvering that these men witnessed and participated in, then leave Stockton's *A General's Story* on the shelf.

This book is the tale that a sportsman tells around campfires at night when the day's hunt is done, that the veteran soldier tells to the greenhorn lieutenant of what the Army was like when he received his first assignment, that a man treasures as his fondest memories.

There is the story of Private Jenkins, the teamster who was



being court-martialed for killing his mule; when it turned out that Jenkins had simply attempted to alleviate his mule's suffering from a horsefly's biting the beast's ear by shooting the fly with a .45!

There is Captain Pett, also a handy man with a .45, who, among other unbelievable stunts, delighted in shooting the headlights of oncoming automobiles, and who marshalled his cavalry troop at midnight and rode them through the little town of La Grulla, Texas in a "show of strength to keep the situation under control." The uniform for the occasion? Shoes and slickers ONLY!

None of the tales of grand strategy or of the horrors of war fill this book. There is the story of a sportsman and soldier who enjoyed an unbelievably full life outdoors finally retiring and becoming a top industrial executive and cattleman. This is truly

a story to delight any reader, full of humor and written in the manner of a born story-teller.

* * * * *

The Communist Conquest of China, A History of the Civil War 1945-1949 by Lionel Max Chassin, Harvard University Press, Cambridge, Mass., 1965. 264 pages. \$5.95. Translated from the French by Timothy Osato and Louis Gelas.

2nd Lt Charles W. Teague

It is probably within only the last four or five years that the full impact of the Chinese Civil War of 1945-49 has dawned on the people of the West. The immediate result that one fifth of the world population and four million square miles of rich, untapped resources suddenly shifted from the camp of the western powers to that of Soviet Russia was startling enough. Today, however, Communist China is making her own way as a world power separate from her former role as the impoverished second fiddle in the Sino-Soviet Bloc. No longer is it necessary for the Chinese to beg "Big Brother" for nuclear weapons and assistance; for now, China maintains her own camp of satellites and must be reckoned with as a separate entity.

It is startling how little most non-Asians know of the Chinese Civil War. Few could even guess how and when Mao replaced Chiang as the ruler of this vertiable sub-continent. Although China has known many masters, and has remained virtually unchanged through hundreds of years of slightly different brands of oppression, it is becoming increasingly apparent that the Communist rule merits deeper study. Chassin's book is the only available concise, yet comprehensive, history of the Chinese Civil War and is a necessary first step toward understanding Communist China.

Chassin's book was first published in France in 1952 and traces the development of the Red Chinese Army from its embryonic stages in the Chingkung Mountains to its emergence as one of the most formidable forces in the world. The book treats in detail the various battles of the war and deals extensively with the psychological and non-military factors that so greatly influenced the outcome. Especially striking, to the Westerner at least, are the mistakes and outright blunders of the Kuomintang in dealing with the Communist insurrection—mistakes that practically wrote the story of defeat before the war began. The attempts of Chiang's government to hold China were frustrated by wholesale desertion of the Kuomintang forces in the face of the ill-equipped but well-disciplined Red Army, by government intrigue and "deals" that played right into Mao's hands, and by incompetent military commanders and their undisciplined troops.

The two main factors that gave the Communists such a tremendous advantage over the government forces were the public support that Mao's army won each time he gained more territory and the Kuomintang's refusal to institute much-needed reforms. When the Communists occupied a community, they replaced the corrupt local government with a well-organized regime that was more responsive to the needs and will of the local population. Mao's army was the model of organization and good behavior in striking contrast to the conduct of the majority of the government units.

It is possible that General Chassin held a rather high opinion of the Communists and that this could have influenced the writing of this book, but it is obvious from the Communists' easy conquest of the mainland that practically all of the Chinese people also held Mao in rather high esteem, else his victory would have been hard won or not at all.

Chassin's book goes a long way in explaining how the Communists gained power in China but at times is sketchy and hard to follow. For the military man, though, this is an excellent study in insurgent strategy and gives some insight into the thinking that has shaped Red Chinese-guided "wars of liberation" in more recent times. The military man can also profit from know-

ing more fully a potential and ominous threat to the free world.

* * * * *

Mutiny at Koje Island, by Hal Vetter, Charles E. Tuttle Co., Inc., Tokyo, Japan, 1965. 223 pages. \$4.50.

PFC John R. Moran

An ostensible private who is in reality the head of a vast underground network.

A commandant of a prison camp who lets his prisoners dictate the terms of a meeting.

A "honeybucket" detail that doubles as a courier service.

And finally, a hospital-cum-message center.

These are only a portion of the ingredients of Hal Vetter's exposition of one of history's most astounding fiascoes. Though it reads as a James Bond novel, the events are true; they did occur. The setting was the island of Koje-do, location of a U.N. prison camp during the Korean conflict that never held less than 100,000 POWs.

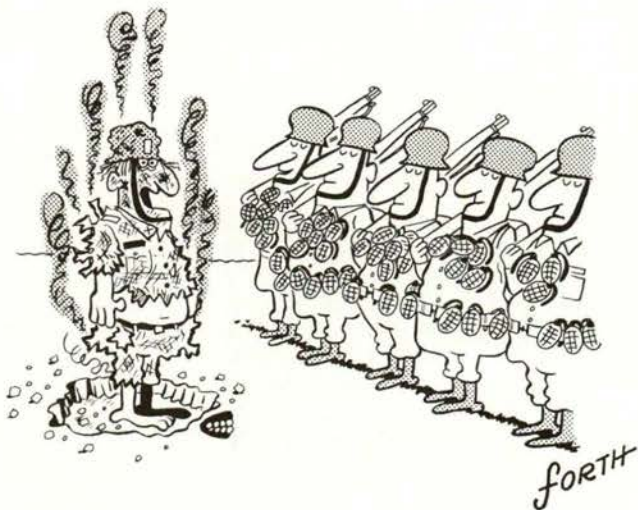
Mutiny at Koje Island is the story of the events leading up to and following the kidnapping of Brig Gen Francis T. Dodd, the commandant of Koje, and the effects the abduction had on the concurrent armistice commission at Panmunjom.

Mr. Vetter does an excellent job of conveying the ineptness of the United Nations Command (UNC) personnel and the duplicity of the Reds. He does not concentrate his efforts on the kidnapping itself, but rather devotes his coverage to the repercussions of it and, to a slightly lesser degree, to the conditions in existence which made this episode possible. Much of the conclusions drawn are those of personages of the times, quoted by Mr. Vetter.

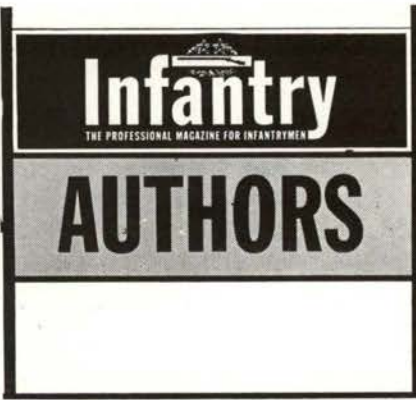
The value of this book lies, not in its description of a single isolated escapade, but as a case history of the continuous willingness, indeed eagerness, of the Communists to seize any and every opportunity to advance their cause through all means available.

Mutiny indirectly makes the additional point that the democratic societies' theory and practice is totally inadequate to cope with the nonrestrictive policies of the Reds.

Vetter's attempts to place the blame for this incident are inconsistent and confusing but this is probably due to, and serves to accentuate, the inconsistency and confusion of the episode itself. *Mutiny at Koje Island*, whether read as an Ian Fleming substitute or as a study of the Communist method, is highly absorbing and stimulating. ■



"All right . . . who's the wise guy?"



Col John H. Barner, Infantry, graduated from Infantry OCS in 1942 and from the Army War College in 1961. He holds an MA degree in International Affairs from the Graduate School of George Washington University. He acted as co-editor of the Tactical Operations Handbook while serving as Chairman, Defense Committee, USAIS.

Capt James E. Behnke, Infantry, is now assigned to the ROTC detachment at Westminster College, Fulton, Mo. He was commissioned through OCS in 1958, attended Ranger and Airborne schools, Infantry Officer Career Course, and MATA. At the time he wrote this article, Capt Behnke was a Tactics Advisor to the Vietnamese Infantry School.

Capt Raymond E. Bell, Armor, is a 1957 graduate of USMA, where he is now stationed as a German instructor. He has written many articles for various military journals, including *Armor*, *Army*, and *The National Guardsman*.

Lt Col William E. Burr, Infantry, is now the Action Officer, USACDC Institute of Advanced Studies, Car-

lisle Barracks, Pa. He received his commission in 1944 from USMA and has studied French, Spanish, German, and Chinese, and has taught English to the Chinese.

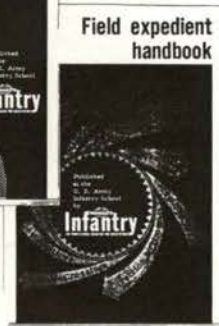
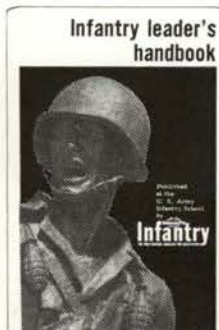
Lt Col Willard E. Chambers, Infantry, is the Chief of the Doctrine Branch, Doctrine and Organization Division, USACDCIA, Fort Benning. He was commissioned through OCS in 1942, and has served as Infantry Platoon Leader, Company Commander, and Regimental Staff Officer in WWII, as Regimental Staff Officer in the Korean War, as Test Project Officer, Airborne & Electronics Board, Fort Bragg, and as Army Liaison Officer, 322nd Air Division in France prior to his present duties.

Maj Clinton E. Granger, Jr., Infantry, is currently a student at the Armed Forces Staff College. He received his commission from USMA in 1951, and has attended Infantry Officer Basic Course, Infantry Officer Career Course and the Command and General Staff College.

Capt Thomas M. Johnson, Infantry, an instructor of the Weapons Department's Rifle Marksmanship Team, has served as platoon leader, XO and CO of a rifle company in the 24th Infantry Division. He received an ROTC commission at the University of Tennessee. Capt Johnson is a frequent contributor to INFANTRY.

Capt Thomas P. Kehoe, Infantry, received his commission from USMA in 1957, attended Infantry Officer Basic Course in the same year, and completed Infantry Officer Career Course in 1964. He has been Test Officer, US Army Infantry Board since May 1964.

Capt John M. Little, Infantry, was commissioned through OCS in 1960. He received his BA and MA in Social Sciences from Michigan State University, and is now an Instructor in the Weapons Department, USAIS.



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F. W. Livingwood is a colonel, Infantry, now on active duty in the US Army. He is a graduate of USMA and the Army War College.

S/Sgt James H. Lorrorn is presently assigned to the Communications-Electronics Department, USAIS. He has attended the 3rd Army Advanced Leaders Course, High Speed Radio Operator Course, Field Radio Repair Course, and Special Warfare School, and has spent a one-year tour as a battalion advisor in Vietnam.

Lt Col Charles J. Milazzo (Ret) is information representative of the Delaware-Eastern Pennsylvania Sector Command, XXI US Army Corps. He is a former freelance writer, newsman, and editor and has published works in *Army*, *Army Times*, *Argosy*, *Catholic Digest*, and *Second Army Sentinel*.

Niu Sien-Chong is a civilian advisor in the National Defense Planning Bureau of the Nationalist Chinese Government. He was a colonel during World War II.

Lt David H. Price, Infantry, was commissioned through OCS in 1962. He was assigned as an armed helicopter fire team leader in Vietnam prior to his present assignment to the US Army Aviation School, Fort Rucker. He has won the Distinguished Flying Cross, the Air Medal with 13 OLCs, and the Purple heart.

Lt Col Robert H. Robinson, Infantry, is the Chief of Policy and Plans Section, Office of the Director of Instruction, USAIS. He received his commission in 1945. Lt Col Robinson is a graduate of Kansas State University and has completed airborne training, ranger

training, and the Command and General Staff College.

Robert M. Ruggles is the Suburban Editor of the Oklahoma City Times. He received his BA in journalism from Oklahoma State University and his MA, also in journalism, from the University of Oklahoma. Mr. Ruggles is a 1st lieutenant in the 45th Infantry Division. While on active duty he served as assistant editor of *INFANTRY*.

Dr. A. Porter S. Sweet, Cmdr, DC USNR was commissioned as Lt Commander in 1942. He was the Officer-in-Charge of the School for Dental Technicians, USNTC, Samson, N. Y. from 1943 to 1945. Since his retirement as editor of *Dental Radiography and Photography* he has authored over 60 nonfiction articles.

Capt James J. Waldeck, Infantry, is a 1956 graduate of USMA and is presently assigned as an instructor in the Company Tactics Department, USAIS. Prior to this assignment, Capt Waldeck was an advisor with MAC-V. He is a graduate of the Ranger School, Airborne School, Infantry Officer Basic Course, and Infantry Officer Career Course. He holds the Bronze Star w/V, the Air Medal, and the CIB.

Lt Nelson D. Scherer, Infantry, was commissioned in 1964 through OCS. He is a writer and editor, Department of Nonresident Instruction, USAIS. Lt Scherer holds a BA in History from San Jose State College. He is the creator of the crossword puzzle in the November-December *INFANTRY*. His biography was inadvertently omitted from the last issue.

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The image shows the cover of the magazine 'Infantry' with the subtitle 'THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN'. Overlaid on the cover is a subscription form with the following fields:

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INFANTRY BLAZER



THE COMMANDING GENERAL of the US Army Infantry Center has adopted an Infantry blazer for wear by all Infantrymen of the Infantry Center and the Infantry School. The blazer is dark blue in color, which is symbolic of Infantry organizational colors and Infantry unit guidons. The light blue color of the Infantry scarf is recognized as an optional color for the blazer. The blazer is considered appropriate for casual wear and as a substitute for the business suit at informal social functions. It is not intended as a substitute for the military uniform or for formal civilian dress. Purchase and wear of the blazer will be at the individual option of each officer, non-commissioned officer, and enlisted man of Infantry.

A distinctive Infantry blazer crest has been designed and adopted for wear on the breast pocket of the Infantry blazer. This crest is described as: "On a dark blue disc, $3\frac{1}{4}$ inches in diameter, two gold Infantry muskets saltire-wise within a silver oak wreath of victory, stems crossed at base and opened $\frac{1}{2}$ inch at top." The detachable crest may be worn alone or with a distinctive unit insignia (metal crest) superimposed on the crossed muskets. This same blazer crest is, therefore, suitable for wear by any Infantryman regardless of his assignment. Pictures of the crest, with and without unit insignia superimposed, appear on the back cover of this issue of INFANTRY.

For those who wish to wear distinctive buttons on the blazer, reproductions of the Infantry uniform button of 1847 will soon be available.

Many units already encourage the wear of blazers with distinctive unit insignia or coat of arms affixed. It is hoped that the adoption at the Home of the Infantry of a standard Infantry crest on which unit insignia can be superimposed will encourage the practice throughout the Infantry. Units or individuals wishing to purchase the crests may order them from the Infantry School Book Store which will soon have both crests and buttons in stock. Watch the pages of INFANTRY for further news. ■



MARCH-APRIL 1966

75 CENTS



Infantry

THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN

THE WAR IN VIETNAM



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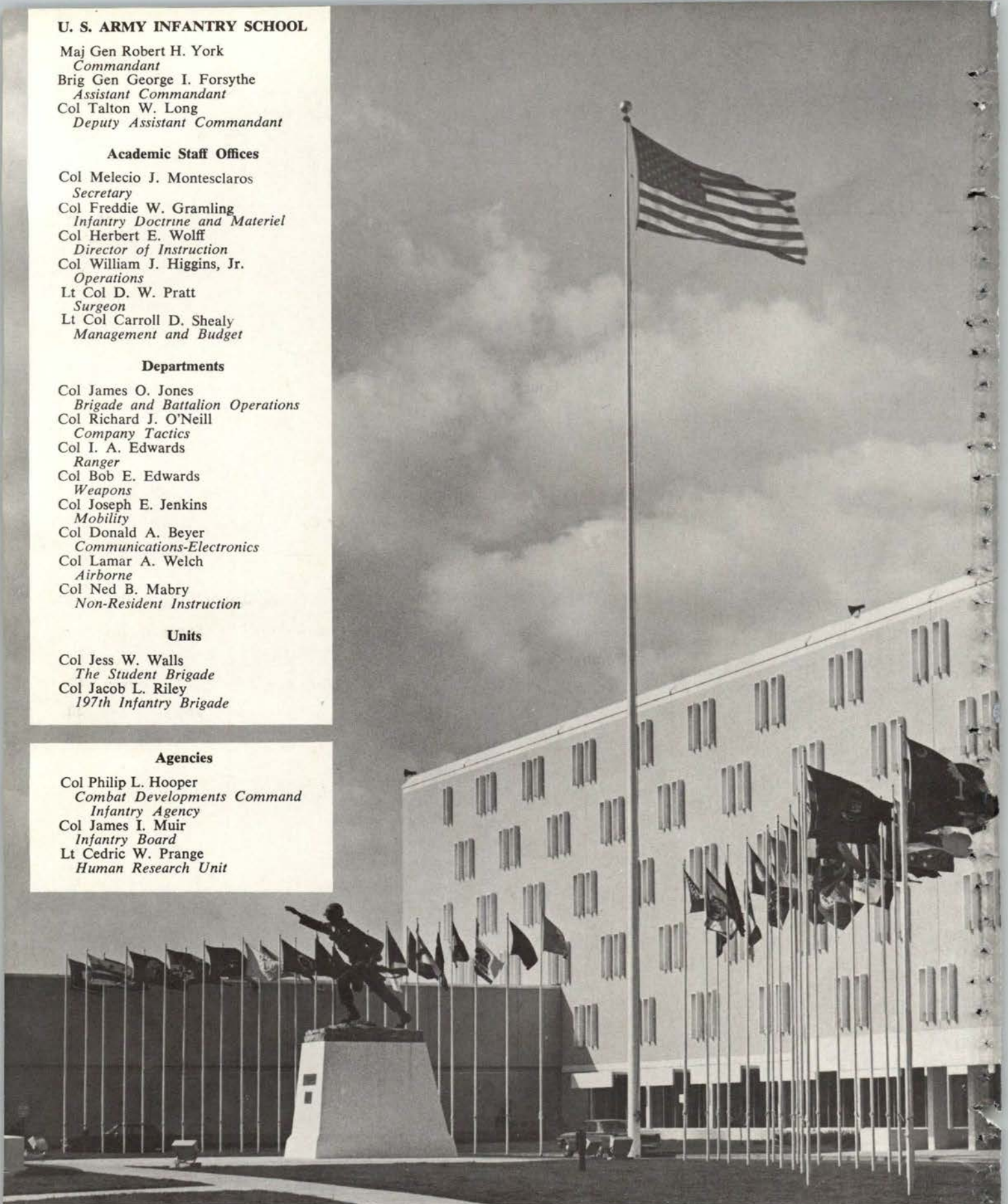
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INFANTRY, published bimonthly at the U. S. Army Infantry School, is supported solely by subscription. It provides current doctrinal information on Infantry organization, weapons, equipment, tactics and techniques. It serves also as a forum for progressive military thinking through thought-provoking articles. Unless otherwise stated, material does not represent official thinking or indorsement by any agency of the U.S. Army.

Subscription Rates: 1 year, \$4; 2 years, \$7; 3 years, \$10. For bulk orders of ten or more, deduct 10% from normal rate. On such bulk orders, remittance must accompany the order. Foreign (non-APO) subscribers add 85¢ per year postage.

Expiration of Subscription is shown by the first 3-digit number on address label. First two digits show month; last digit shows year. Example: 076 indicates 7th month of 1966 as terminal issue.

Correspondence: Address all correspondence to Editor, **INFANTRY** Magazine, Box 2005, Fort Benning, Ga., 31905. Please use full address. *Renewal, changes of address, or any correspondence concerning your subscription should be accompanied by an address label or by the numbers that appear on the label's first line.*

Manuscripts: Payment on publication at minimum rate of 1¢ per word. Acknowledged within 30 days. Manuscripts will not be acknowledged or returned unless accompanied by self-addressed, stamped envelope. Queries answered promptly.

Postmaster: Entered as second-class matter 11 June 1948 at Columbus, Georgia.

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Infantry
THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN

Vol. 56

MARCH-APRIL

No. 2

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"ANGELS" AT LOS BANOS

• I was particularly interested to read the story of the Los Banos rescue operation in the Philippine Islands during the last war (May-June, 1965 INFANTRY), for as a small boy of six I heard this tale soon after it had happened and, of course, much envied those to whom it had happened.

My father was then a POW in Hong Kong and my mother and I were among the 600 inmates of Bilabid Prison, Manila, some miles from Los Banos. We were liberated by the tanks and some 700 men of the First Cavalry Division and the 37th Ohio Division, who naturally became heroes beyond belief in my infant eyes. Oddly enough, having waited 1,135 days for the rescue to be made, when the shooting outside the prison started at 6 pm on February 3rd, my bedtime story of "Jack and the Beanstalk" continued to be read to me steadily through the racket; routine is the great thing in British nurseries even if the children are in prison!

Manila was on scorched earth and that night the flames approaching from the walled city made it too dangerous for us to remain at Bilabid. My mother often made drawings of the guards, in return for vitamin tablets for me and we still have one drawing, the last she drew. It is of a guard who sat near to us, weeping bitterly as he made a little fire to burn all his papers. Soon after, the triangle was rung for the camp to parade, and in silence, the guards all filed out of the compound to where the guerrillas were waiting for them.

Late that night our new U.S. guards told us to start walking, until there were enough Army vehicles leaving Manila after depositing their stores, etc., to pick us up. We reached our destination, the Ang Tibay Shoe Factory, at about midnight and found there a glorious mixture of troops, who were fighting for Manila, the staff, 800 POWs and 600 mixed internees, as usual, we children revelled in the excitement; wide awake at midnight lying on our coats and finding that each deep American helmet carried more boiled sweets than we had ever seen. Everyone seemed heroic; incredibly good-tempered with us, and twice as big and ruddy as

the skinny camp men we had become accustomed to. In the morning there were K rations. Jeeps speeding about (though some carried bodies in blankets on the bonnet cover) and P-38s cavorting above us contributed to an amazing day. However, the shoe factory was scarcely equipped for such an influx and at dusk we were returned to Bilabid, and shelled, fortunately most inaccurately, en route.

Bilabid had been looted in our absence but we personally had nothing to lose anyway. A few nights later, General MacArthur and his staff swept in, and I understand that I was hastily awakened to see this famous figure. Later still, the general's small son, Arthur, kindly gave us his red and white striped dressing gown and a vest, and proud as peacocks, my friend (now Lt Robert MacMillan, R.N.) and I wore them on alternate evenings!

After about a week in the no-water, no-lights, no-nothing Bilabid, we were transferred to the [sic] relatively comfortable Santo Tomas where we remained for a further three weeks before being allotted a ship in which to return to the United Kingdom.

I hoped very much to be able to revisit these places in the Philippines when on leave from serving in Borneo last year; however it was not to be, as all leave had to be taken locally.

I would be very interested to hear from anyone who took part in the rescue of Bilabid, Manila and take this opportunity of expressing my thanks.

Lt D. M. G. Bird

The Royal Ulster Rifles (83d and 86th)
The North Irish Brigade Depot
Ballymena, Co. Antrim
N. Ireland

A BERLINER'S VIEWS ON VIETNAM

• I am a 22-year old Berliner and am very interested in the 6th U.S. Infantry, which is partly stationed in Berlin. You have written me a short history of the Infantry in your last letter, and I was very pleased about it.

Today I want to write about something else. Here we read a lot in the press about demonstrations in the U.S. against the Vietnam policies of the U.S. government.

I regret this very much. I think it should not be forgotten, wherever there are American soldiers all over the world, why they are there. Everywhere they are ready to defend freedom. Is it forgotten how many American soldiers lost their lives for the matter of freedom? This is not only in the interest of Vietnam, but also in the interest of freedom and the reputation of the United States. I regret very much, that American soldiers have to die in a strange country. I hope that the war in Vietnam will be over soon. Here in Berlin we know that we can rely on our Allies.

A bulletin on an American base refers to the soldiers of the U.S. Army in Berlin with the following words:

"SOLDIER . . . WHY ARE YOU IN BERLIN? to show the Berliners, your Allies, and the Communists the best soldiers in our Army; to protect U.S. lives and property; to help the West Berlin police; to keep law and order; to fight like hell, if necessary, for U.S. rights and a free Berlin."

My hobby is collecting match box labels and match book covers with military motifs from the U.S. Army. Can you or your readers tell me where I can acquire some. Of course I will pay for the labels or covers.

Udo Dollfuss

I Berlin 21
Beusselstrasse 89

SMALL-UNIT SPECIAL PURPOSE VEHICLES AGAIN

• Reference is made to Major F. A. J. Balvers' letter in the November-December issue concerning our article, "Small Unit Special Purpose Vehicles," which appeared in the July-August issue of INFANTRY.

1. With respect to Major Balvers' statement concerning the Marmon-Herrington military tractor/carrier:

This vehicle was introduced by Marmon-Herrington in 1936. In September 1938, a vehicle was shipped to Java for demonstrations to Netherlands East Indies officials. As a result of these demonstrations, by 1941, Marmon-Herrington was in large-scale production of the vehicle for use in Java. With the Japanese conquest of the Netherlands East Indies, subsequent production of the vehicle was diverted to U.S. Army Ordnance.

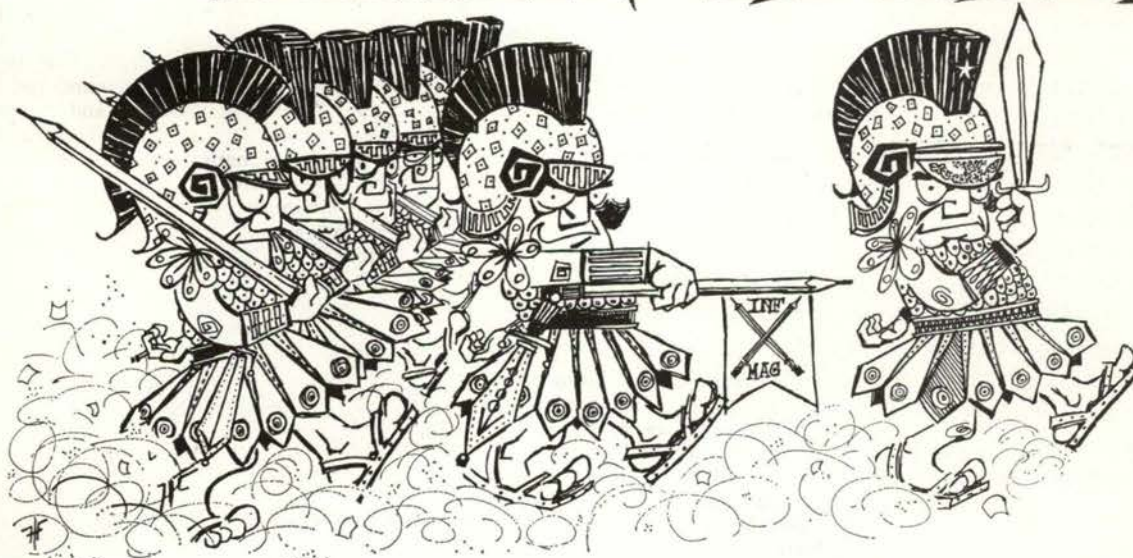
2. Concerning Major Balvers' statement relative to the use of tracked vehicles by the Netherlands prior to 1940:

Light tanks of the Carden-Loyd type with armored head covers, purchased in England, were operating in the Netherlands in 1938. Similar vehicles, including light amphibious (track-laying) tanks were employed in the Netherlands East Indies as early as 1935. Marmon-Herrington CTLS-4TAC light tanks were employed in Dutch Guiana prior to 1940.

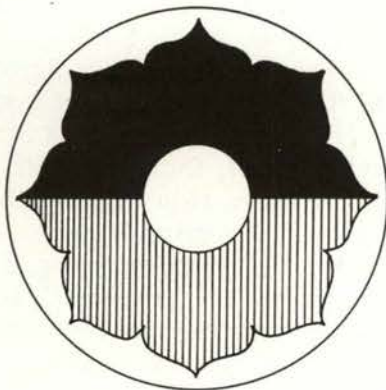
3. We certainly concur with Major Balvers on the DAF-PORTER vehicle;

Continued on page 72

PASSING IN REVIEW



INFANTRY salutes the 9th Infantry Division and welcomes it to the roster of active divisions. Located at Fort Riley, Kansas and commanded by Major General George S. Eckhardt, the division will be organized as a ROAD Infantry Division with eight Infantry battalions and one mechanized Infantry battalion. There will be no armored units in the division but there will be the normal cavalry squadron. The 9th possesses a distinguished combat record earned in World War II, and it will be good to see the "Old Reliable" patch in circulation again.



* * * * *

On 1 April the U.S. Army Infantry School celebrates its 59th anniversary. For 48 of those years the School has been located at Fort Benning. It was with some surprise that we noted that we had personal recollections of somewhat more than two decades of the Benning period. Some of the things that came immediately to mind: the presence of two divisions, the then relatively new Airborne activity, the teeming OCS area at Harmony Church, and the dirty but welcome rides on

the "Chattahoochee Choo-Choo," also known as the "Benning Bullet." We would be interested in hearing from some whose recollections go back still further.

In honor of the anniversary, we are publishing a brief history of the Infantry School in this issue. The Commandant's anniversary message is quoted below:

"On behalf of all United States Army Infantry Center personnel, I congratulate The Infantry School on its 59th Anniversary.

As Commandant of The Infantry School I share your pride in past achievements. But these are critical times, and the past must be subordinated to the efforts we expend today and to our continuing dedication to the future.

The Infantry School is no stranger to crises. In every period of national stress since World War I, we have met the challenge to provide muscle, manpower, and leadership for our fighting forces.

The clarion call has again been sounded and, like our predecessors, we shall respond with every facility at our disposal and with the unmatched esprit of the Infantry soldier.

I share with you this brief salute to the 59 years that have gone before and join with you in pressing every effort for complete fulfillment of each mission and commitment imposed upon us during the coming year."

Robert H. York

ROBERT H. YORK
Major General, USA
Commandant

I DON'T LIKE RIFLES

CAPT WILLIAM R. DEAN, Inf

"Washington's Secret Weapon" by Dr. A. Porter S. Sweet in the July-August 1965 INFANTRY was interesting and informative; however, I feel Dr. Sweet's article did not give us the complete picture of the rifleman. As an Infantryman I do not wish to take away any of the honor and accomplishment of our early riflemen but as a student of history I feel the rifleman and his rifle should be placed in proper perspective.

Therefore, through my research on the rifle and the use of the bayonet during the American Revolution, I was able to prepare a short manuscript that reveals the views on these two weapons by prominent American generals who led our fight for independence.

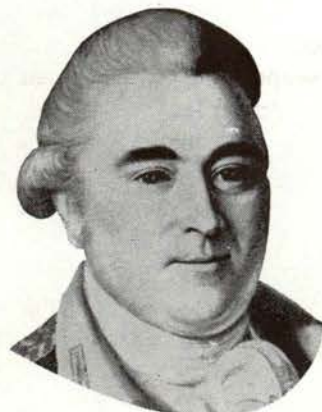
—Capt William R. Dean

THE GREAT AMERICAN MILITARY LOVE AFFAIR has been that between our military historians and the American Revolutionary rifleman and his weapon. Lest we become overly enamoured with the invincible buckskin-clad sharpshooter it is meet that we should take a closer critical look at the true value of the man and the machine that are often credited with being midwife to the birth of this nation.

In the summer of 1775 there were more than 1,000 volunteer riflemen in the American Revolutionary Army, many of whom were stationed in and around Cambridge, Mass. It was noted in a journal by a surgeon in the Cambridge camp, "They are now stationed on our lines, and their shots have frequently proved fatal to British officers and soldiers who expose themselves to view, even at more than double the distance of common musket-shot."

Washington's new recruits were frontiersmen, not generally accustomed to taking orders or being subordinate to anyone or anything. In general they were undisciplined and unruly, a characteristic not uncommon in the early American Army. Struggling to establish some kind of order in the new Army, Washington found the strong-willed southern riflemen too disruptive to be tolerated. They jumped in and out of the American lines on Prospect Hill, fired without orders, and often at such great distances as to waste scarce powder. In September, 1775, Washington was forced to court-martial an entire platoon of 33 riflemen, who were fined 20 shillings for "disobedient and mutinous behavior." Since many of them began to desert to the British about this time, their reputation began to sink.

Major General Charles Lee, ordered south by Congress in 1776 to help the patriot defenders of Charleston, urged Colonels William Moultrie, Christopher



"MAD" ANTHONY WAYNE

Gadsden, and William Thompson, the local commanders to insist the riflemen stop firing at such great distances.

"It is a certain truth," said Lee, "that the enemy entertain a most fortunate apprehension of American riflemen. It is equally certain that nothing can diminish this apprehension so infallibly as a frequent, ineffectual fire." Lee recommended that no man should fire at a distance greater than 150 yards. "In short," he advised the southern military commanders, "they must never fire without almost a moral certainty of hitting their object."

The British sought to match the American riflemen with German *Jägers*.^{*} About 1,000 of these men, trained to use rifle-barrel guns in boar hunting in the German forests, were among the mercenaries hired by Britain. It was not until after the first battle of Long Island on August 27, 1776, that the Achilles Heel of the rifleman was suddenly uncovered. During the fight the English Generals William Howe, Henry Clinton, James Grant, and Hessian General Philip von Heister noted the basic weaknesses of the rifle—it took too long to reload, and it had no bayonet. The American riflemen could scarcely get off a volley of shots before the advancing columns of British and German Infantry were on them with the bayonet.

The musket and bayonet were the weapons for the line of battle when the target was not an individual but another line, and when the lines closed the bayonet was ready for use. Firearms were very sensitive to the weather; after continued or heavy rain they were useless, and lack of a bayonet was then fatal. To take advantage of the rifle, fire must be opened at a long range and its accuracy utilized in aiming at individuals. It could not be used with the musket in the line of battle,

^{*} Hunters or riflemen.

for the smoke prevented the rifleman from seeing his target, thus nullifying the principle advantages of the weapon.

When these faults were revealed, the rifle suddenly became a handicap. General William Howe, in preparing his British troops for the next battle, reminded them "of their evident superiority" with their bayonets and he recommended that they place "an entire dependence" on that weapon. As the campaign progressed, so confident did the British leaders become in their superiority that they ordered many an attack with muskets unloaded, leaving the troops no alternative but to use their bayonets against the terror-stricken American militia.

Propaganda, that parasite of success, now was invoked to tell the British story of superiority with a weapon which, in battle after battle, struck fear in the hearts of the untrained Americans and sent them flying. The colonists' growing inhibitions over the bayonet became an important psychological handicap which Washington and his officers worked hard to overcome. However, it was not until March of 1778—when bayonet practice was introduced into the Continental Army by the German volunteer, Baron von Steuben—that progress was made in this direction.

One of the most revealing statements made in connection with this problem came from General Anthony Wayne, the military Romanticist of the Revolution, who exclaimed in a letter to Richard Peters in February, 1778:



**GENERAL
CHARLES
LEE**

**GENERAL
HENRY
CLINTON**



**GENERAL
WILLIAM
HOWE**

"I don't like rifles. I would almost as face an enemy with a good musket and bayonet without ammunition [in my hands], as with [one with] ammunition without a bayonet. For although there are not many instances of bloody bayonets . . . I am confident that one bayonet keeps off another—and for the want of which the chief of the debates we have met with ought in a great measure to be attributed. The enemy knowing the . . . state of our riflemen rush on: they fly, mix with, or pass through the other troops and communicate fears that is [sic] ever incident to a retiring corps. But it would be still better if good muskets and bayonets were put into the hands of good marksmen and rifles entirely laid aside. For my own part I never wish to see one, at least without a bayonet. I don't give this as mere matter of opinion or speculation but as matter of fact to the truth of which I have more than once been an unhappy witness."

With the strength of his belief, General Wayne, during the successful storming of the British fort at Stony Point in July 1779, had his men attack with unloaded muskets, "placing their whole dependence on the bayonet."

In September, 1781, while Washington's Army was on its march to the historical denouement with General Cornwallis at Yorktown, the Commander-in-Chief used the occasion to encourage his troops "to place their principle reliance on the bayonet, that they may prove the vanity of the boast which the British make of their particular prowess in deciding battles with that weapon."

Although the rifle later became the main weapon of the Infantry, it is easy to see why it could only be employed with limited success during the American Revolution. It was a weapon ahead of its time and doctrine for its proper employment was yet to be developed to realize its full potential—much as the tank in World War I met with only limited and insignificant success. ■



The Infantry School Today

A HISTORY OF THE INFANTRY SCHOOL

CAPT KENNETH L. TEEL, Inf

THE UNITED STATES ARMY INFANTRY SCHOOL magnificently endowed with educational facilities, influential, and well-respected—is a tribute to the dedication and creativity of Infantrymen who persisted in developing the professional education and training of Infantry officers and men. Infantrymen throughout the world can be proud of the School's position today; they can be equally proud in reflecting on the 59 years of growth and development which have made the School what it is today.

ESTABLISHMENT OF A SCHOOL FOR THE INFANTRY

The United States Army Infantry School traces its origin to 1 April 1907, when the School of Musketry opened at the Presidio of Monterey. Alarmed by the decline of marksmanship in the Pacific Division, Maj Gen Arthur MacArthur, then commanding the division,

established the school to provide selected officers and men the knowledge with which they might better instruct the men of their units. The student body, to be renewed quarterly, was to consist of representatives from each of the division's Infantry, Cavalry, and Field Artillery regiments.

On 30 June, when the Pacific Division was discontinued, the School of Musketry came under the auspices of the Department of California. The caliber of the work done at the school was of such high quality and attracted so much attention that it was given new status as a national service school and moved to Fort Sill, Oklahoma, in 1913.

The school staff had hardly reached Fort Sill, early in 1913, when a crisis developed on the Mexican Border, threatening to end the work of the newest service school before it even started. The concentration of large num-

bers of American troops on the border made it necessary for the War Department to postpone sending students to the school. The troops that were to provide demonstrations and support for the school were ordered to Galveston, Texas, where the 2nd Division was being formed. Although the suspension of school activities was intended to be only temporary, the situation on the border became more serious each day. Finally, the commandant of the school was placed on detached duty and ordered to Galveston, and the majority of the school's personnel returned to their own regiments.

A favorable opportunity for the reopening of the school developed upon the return of the Vera Cruz expedition in November 1914, and the school's supporters pressed the War Department to resume instruction without delay. Six courses in small arms and machine guns were to be taught to officers and noncommissioned officers of the Infantry and Cavalry. It was February of the following year, however, before the first class of noncommissioned officers began their studies. The next fall an experimental class was conducted to test the curriculum and train noncommissioned officers of the school detachment as assistant instructors. Although the school was ready to resume instruction, conditions on the border were so unsettled that active units were unable or unwilling to release officers for training, and regular classes were not held again until February 1917.

In August 1917, the school was renamed the Infantry School of Arms, giving the Infantry for the first time a school devoted to the training of its own personnel. The congestion at Fort Sill, however, made it mandatory to seek new locations for some of the school's activities. In June 1918, the Machine Gun Department was discontinued and transferred as a unit to Camp Hancock, near Augusta, Georgia, where it became the Machine Gun School. That same month a new Small Arms Firing School was established at Camp Perry, Ohio, rather than further overcrowd Fort Sill.

Even these moves did little to relieve the congestion

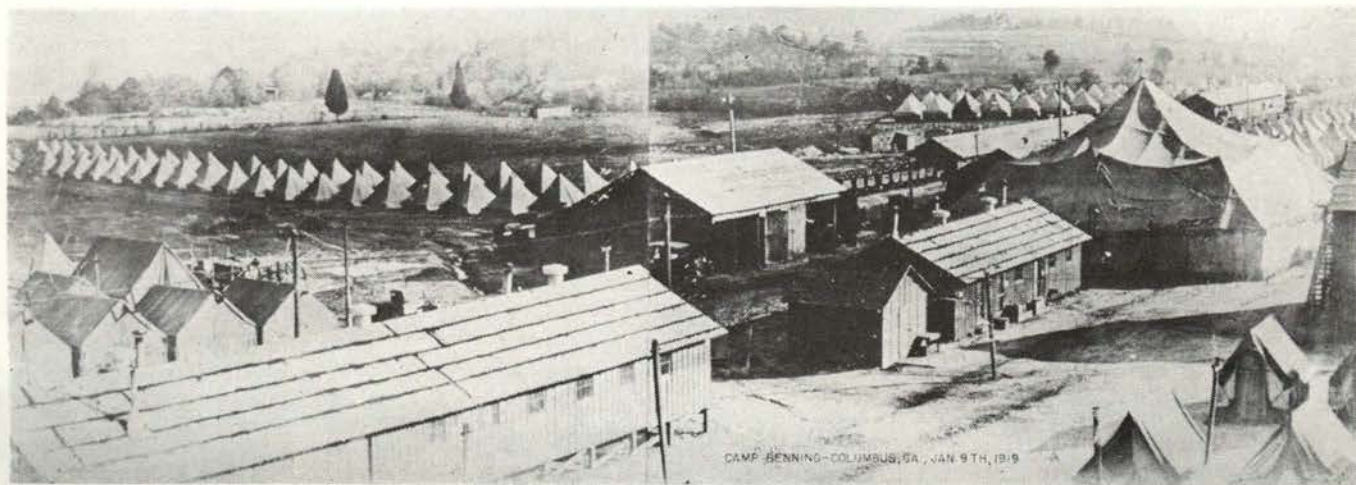
at Fort Sill and it became apparent that a new location for the Infantry School of Arms was desperately needed. After months of investigation and evaluation of available areas, the War Department announced the decision to transfer the Infantry School of Arms and the Machine Gun and Small Arms Schools to Columbus, Georgia. On 30 January 1920, the School was renamed The Infantry School.

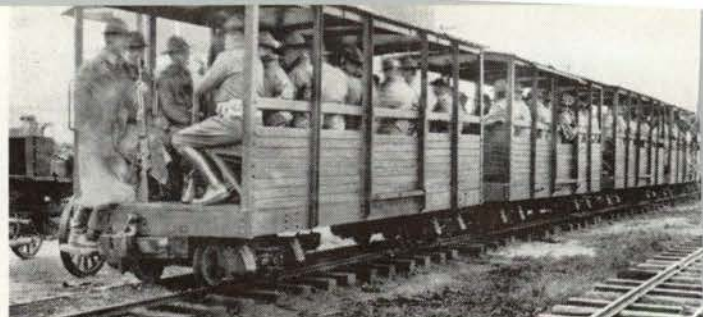
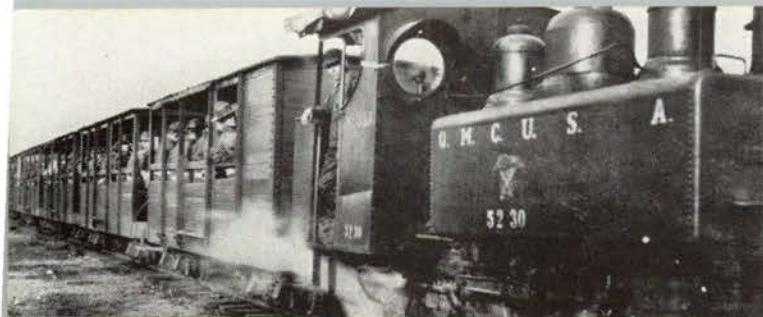
DEVELOPMENT OF CAMP BENNING

The development of Benning was not without incident, and it appeared for a time that the school, which had been established because of the war, would be ended because of the peace. On 4 October a group of instructors arrived from Fort Sill, and two days later the first troops arrived. Land was being acquired and construction of the camp had begun when the Armistice was declared on 11 November 1918. To most of the surrounding landowners this event meant there was no longer any reason to give up their land for the new camp, and they were backed up by the Senate Military Affairs Committee. Construction on the camp, however, proceeded as rapidly as possible and the first class enrolled on 2 December as if no change in plans was contemplated. The Military Affairs Committee finally took drastic action and directed the Secretary of War to order, on 7 January 1919, that construction on the camp be stopped and that Benning be salvaged and abandoned.

The Commandant, Colonel Henry E. Eames, immediately went to Washington and because of his prompt and skillful action, the camp was temporarily saved as the result of a hearing before the Senate Military Affairs Committee. While the hearing was in progress, the construction project officer at Camp Benning stayed on the job and interpreted the "salvage" part of his "salvage and abandon" orders to mean "save." To save these buildings that were already constructed, he had them painted. In March the Assistant Secretary of War issued

Camp Benning, Circa 1919





"The Benning Bullet" Coming and Going

She was slow, sooty, and usually dependable as she shuttled Infantry School students to and from the training areas around Benning from 1921 to 1946.

the orders which officially resumed the work of building the camp. In fact, the work had never entirely stopped.

EARLY INSTRUCTIONAL DEVELOPMENT

The first class to be graduated at Benning had essentially the same instruction as had been presented at Fort Sill, concentrating on one weapon in order to serve as qualified instructors in that specialty when they returned to their units. Even this limited curriculum, however, was a significant advancement over the previous ones.

When it opened, the School of Musketry provided for an intensive course in the theory and practice of the use of the rifle, revolver, and machine gun. The practical course for rifle and revolver began with firing at all ranges prescribed by existing regulations, followed by extensive experimental firing. Theoretical training consisted of a thorough study of existing small-arms regulations, a study of small-arms ballistics and their relation to tactics, fire control and discipline, and ammunition supply in battle. In addition, a limited study of the small arms of other nations was conducted. Work with the machine gun included testing of the various weapons available and experimentation in their tactical use.

When the Infantry School of Arms was established in 1917, World War I had already been going on for three years, and the lessons of combat were being incorporated into the school's instruction. The school was organized into four major divisions—the Small Arms, Machine Gun, Engineer, and Gas Defense Departments. All departments, except that of Gas Defense, were divided into several sections. The Small Arms Department, for example, had sections for instruction in grenades, bayonet, musketry and pistol, and automatic rifle. Dur-

ing the fall of 1917, the first of several foreign military missions arrived and began advising and instructing the American faculty in their various specialties, materially improving the value of the School's instruction.

War Department guidance for the organization of the School at Camp Benning, issued 25 September 1919, declared its principal mission to be to develop and standardize the instruction and training of officers in the techniques and tactics of Infantry. Special Regulation Number 14, published 22 April 1920, prescribed the organization and operation of The Infantry School. When the School was reorganized under the provisions of this directive, the Academic Department consisted of three principal divisions—the Department of Military Art, the Department of General Subjects, and the Department of Research.

The Departments of Military Art and of General Subjects were further divided into sections. The Department of Military Art had six sections which presented instruction in such subjects as weapons, map reading, communications, troop leading, and tactics of all units up to and including the brigade. The four sections of the General Subjects Department taught administration, hygiene and sanitation, military justice, animal husbandry, and similar material.

The Department of Research presented instruction in military history, geography, and military policy of the United States; evolution of Infantry weapons, tactics, and organization; and the relation of psychology to leadership, command, and discipline.

When the 1920-21 school year opened, the uncertainty that had characterized the school's preceding years was largely gone. There were five classes—the Field Officers' Class, the Company Officers' Class, the



Other Troop Transport

Where the "Benning Bullet" failed to go, less luxurious modes of transport served admirably.



Basic Course, the National Guard and Reserve Officers' Class, and the Refresher Class. The first three were nine months long, ending in June. There were to be two, three-month-long National Guard and Reserve Officers' Classes. The Refresher Class was a ten-week review of Infantry organization and tactics for colonels and lieutenant colonels.

Although the school year was considered a success, the school staff felt that improvement in organization of the Academic Department should be continuous, and modifications and refinements were made during subsequent years. Three separate sections which had been teaching weapons were consolidated into one under the Department of Military Arts. Engineering subjects such as sketching, map reading, and field fortifications had been taught by a section of the Department of Military Art, but it was difficult to teach these subjects in their relation to Infantry without touching on tactics, resulting in conflict with existing doctrine. To provide control and uniformity, the Engineering Section was combined with the Tactical Section, which had also been assigned responsibility for teaching the employment of tanks. The Department of Military Arts then consisted of only two sections—one teaching tactics and engineering, and the other teaching the weapons habitually employed in Infantry commands. The activities of the Department of Research were taken over by the Department of General Subjects, reducing the number of departments in the School to two.

THE MARSHALL INFLUENCE

Improvement at The Infantry School had been both steady and continuous, but one event was to have a more profound effect on the School's development than any other. In 1927, George C. Marshall, then a young lieutenant colonel who had carved out a brilliant record in World War I, reported to Fort Benning as the Assistant Commandant of the School. During his five years at The Infantry School, Marshall laid farsighted plans for its future growth, accomplishing at last an almost complete revamping of the instruction and technique.

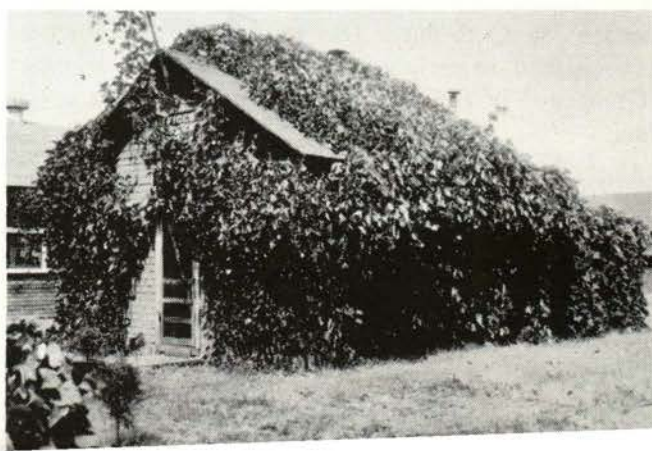
During the period following World War I, combat lessons and experience had been crystallized and consolidated into a planned program of instruction, and it was upon his own experiences in the war that Marshall based his further revision of instruction.

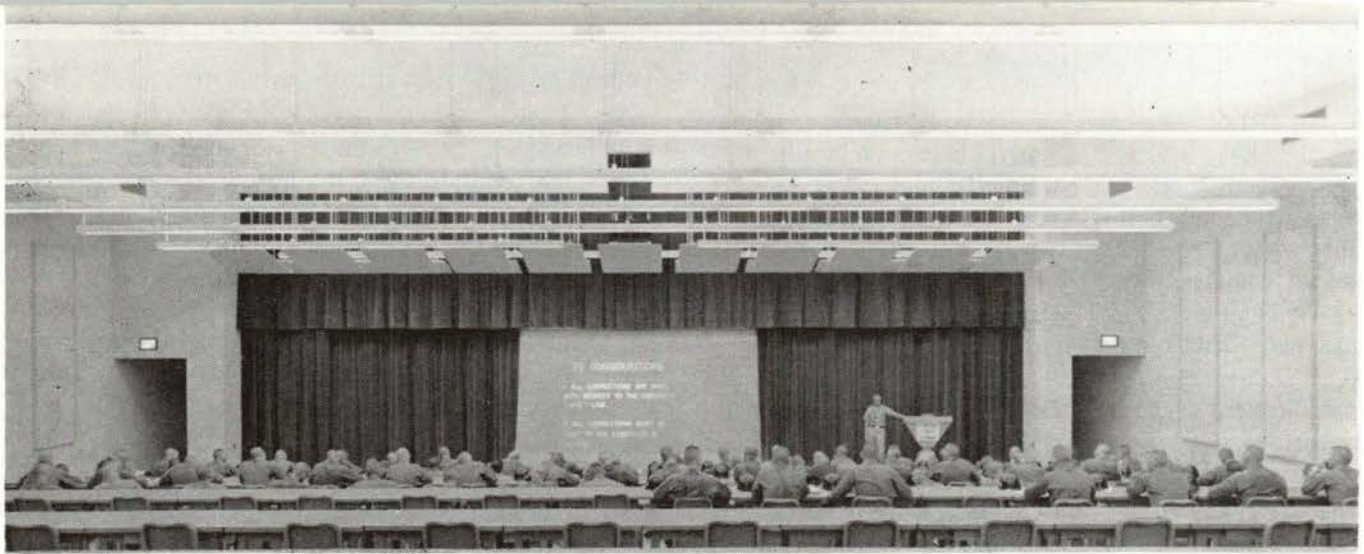
Concerned with the methods and principles of command rather than the theories of war or the grand shape of the battles of the future Marshall emphasized decision-making under stress. Examining the tactical instruction, he found there were two major deficiencies. First, information given concerning the enemy situation in field problems was about 80 percent too complete. Second, when most tactical exercises reached an important moment, the action was stopped and students were required to make their decisions. To Marshall's thinking this procedure evaded the essential problem, which was not what decision to make, but when to make it.



Early Benning Facilities

Early family housing and troop accommodations (above) were somewhat primitive but compared favorably (?) with the administration buildings (below).





Today's 200-man Classrooms

This is just one of the many classrooms in Infantry Hall boasting the most modern teaching and instructional facilities in the U. S. Army.

He was convinced that success in future battles would depend not upon adherence to set techniques, but rather upon the officer's ability to improvise and apply sound tactical principles to unexpected situations. He disliked the pat solution and encouraged the students and faculty to think independently and creatively. As a result The Infantry School developed into a center for free and open discussion of all the problems of the professional Infantryman.

THE DEPRESSION ERA

The Depression that hit the entire country in the '30s had a mixed effect upon Fort Benning and The Infantry School. On one hand, it permitted the completion of much-needed construction plans that had been shelved to await funds. Because civilians needed employment, the Works Progress Administration was formed; since public buildings were needed, the Public Works Administration was organized. Through these two agencies Fort Benning received over six million dollars for construction, including a new academic building for The Infantry School.

Instructional programs suffered, however, particularly with the creation of the Civilian Conservation Corps in 1933. Although Fort Benning received its share of men and boys who were put to work on various installation projects, the administration of the program fell to the Army, demanding officer personnel from the School and other activities. On 22 May, 69 of the 80 instructors at The Infantry School were sent to various parts of the country on CCC duty. The school, like other service schools, had an early graduation that spring, and when it reopened in the fall, student enrollment was cut in half.

PREPARATION FOR WAR

The opening of the 1939-40 school year coincided with the beginning of World War II, and while it marked

a period of feverish activity for The Infantry School, a gradual shift toward preparedness had begun years before. The Tank School had moved from Fort Meade, Maryland, in 1932 and was combined with The Infantry School to put all academic activities of the Infantry into one facility. In 1934, in addition to teaching Tank Courses for Regular officers and for Reserve and National Guard officers, The Infantry School offered the Refresher Course, the National Guard and Reserve Company Officers' Course, Communication and Motor Mechanics' Course for enlisted men, and the Regular Course—a consolidation of the Advanced and Company Officers' Courses. As war approached, increased attention was given to small-unit tactics, mobilization, training, and advances in mechanization and motorization.

Changes in the world situation during the last months of 1939 and the early part of 1940 resulted in more drastic revisions of school programs. The old nine-month courses were discontinued and replaced by short courses of one-third to one-half their former length. It was further planned that as one short class graduated, another would follow immediately, providing continuous instruction throughout the year. The new courses were designed to rapidly increase the number of trained specialists available to the expanding Army and to keep up with the demand for training more National Guard and Reserve officers. In August 1940, the curriculum was further revised, changing all courses to 13 weeks' duration. By the late spring of 1941, there were 26 classes in continuous session, with total student enrollment averaging more than 3,000.

July 1941, brought the addition of two major programs—the training of parachutists and officer candidates. The War Department had announced in June that parachute training would begin on a permanent basis and provide 1,400 qualified parachutists each year. The Parachute Section of The Infantry School was established in July and by the following May had grown so

large that it was activated as a separate school. Instead of graduating 1,400 parachutists annually, throughout the war the school graduated an average of 4,000 each month.

The Officer Candidate Course, which opened 5 July, soon became The Infantry School's most important activity. Originally this three-month course was to be conducted four times each year, with class capacity at 200 candidates. The number of classes, however, increased progressively until February 1942, when a new quota was established calling for 9,900 students in attendance at one time. Even while preparing to handle this increase, The Infantry School received instructions calling for further expansion to accommodate 14,400. Within a little more than three years, more than 50,000 second lieutenants received commissions through the program.

The tremendous speed and efficiency with which the Officer Candidate Course met the requirement to provide junior officers finally made it possible to reduce input and increase the number of students in other courses. Throughout the war The Infantry School conducted 17 various courses and graduated more than 100,000 officer and enlisted students.

POST-WAR DEVELOPMENT

Demobilization brought reorganization and the reduction of personnel strength within the instructor group and the student body. In November 1946, in addition to

his duties with The Infantry School, the Commandant assumed command of the Infantry Center, bringing all Army troop units on Post under his control as Commanding General. That same month the Airborne School, as the Parachute School had been redesignated, was absorbed by The Infantry School adding seven courses to the school curriculum and bringing student enrollment to approximately 3,500 students. Officer Candidate instruction ended when the last class graduated 1 November 1947.

In 1950 the Korean War repeated the test of a decade before, and the peacetime schedule was again accelerated. The Officer Candidate Course reopened in February 1951, and expansion of the program in November brought in a new class each week and increased The Infantry School's total student input for the year to 66,703. Ranger instruction was added to the school's missions when the Ranger Training Command at Fort Benning was deactivated and the Ranger Department established in September 1951.

After Korea The Infantry School continued to move forward, revising instruction and organization, participating in the development of new equipment and bold concepts, and always reaffirming the unique role of man himself as the ultimate weapon. Redesignated as The United States Army Infantry School in 1964, its success is reflected today in the combat ready status of Infantry units at home and abroad, and in the outstanding achievements of Infantrymen in Vietnam. ■

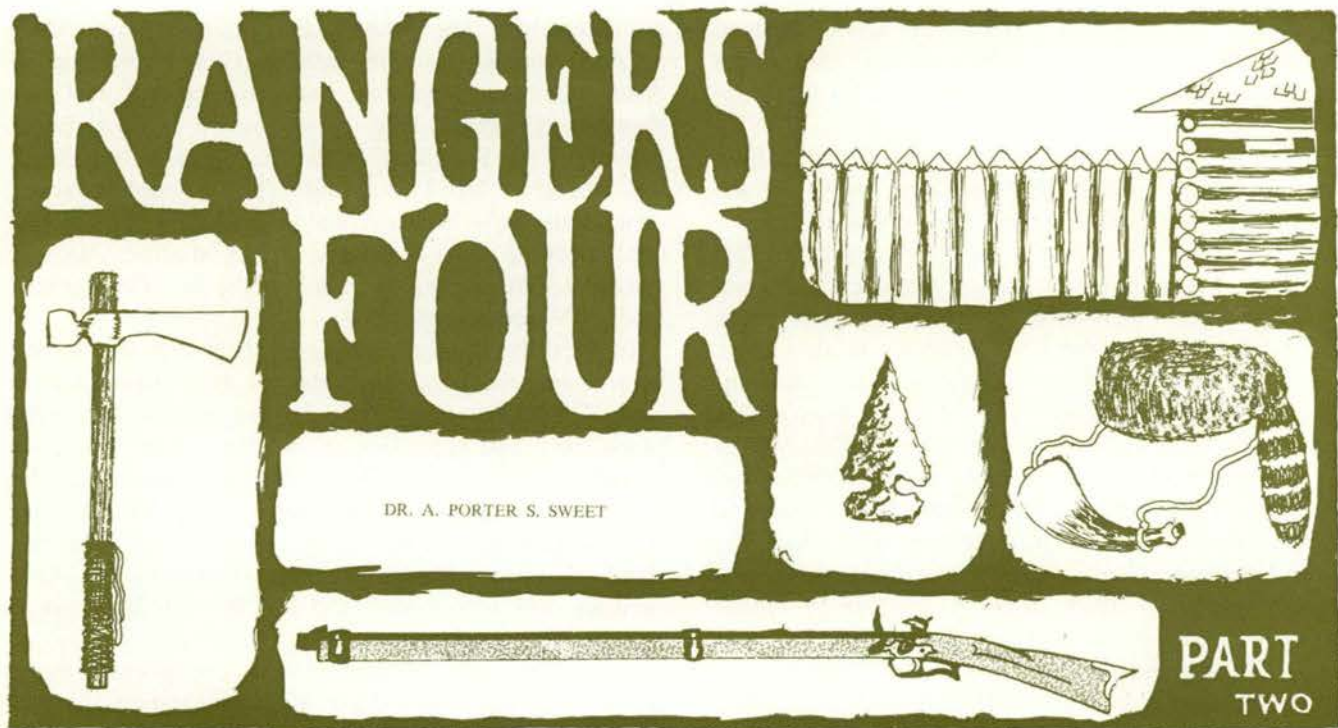


DOUGHBOY'S SWAP SHOP

The Problem: To develop realism and interest in field training.

An Idea: Some commanders have had great success by assigning units to adjoining training areas. Each was given a training mission. But they were authorized to operate freely against each other while still responsible for the training mission. This sort of training can be a real challenge; it adds realism. While the unit is training it must be very aware of its security. It has an opportunity to match wits with another unit. Failure to "play the game" can result in great embarrassment to one side or the other. The men will go to great lengths to avoid that embarrassment and will, in the process, engage in some excellent training.

A Challenge: How have you solved this problem—share your solution with other Doughboys. Write INFANTRY. ■



IN THE LAST ISSUE, the first installment of “Rangers Four” featured the tale of Dr. Knight’s capture, tribulations, and eventual escape during operations against the Ohio Indians. In Part II, *INFANTRY* offers the story of Tim Murphy, an outstanding enlisted man and one of the most renowned sharpshooters of the times.

Tim Murphy is the embodiment of the statement, in the series’ introduction: “But, had it not been for the Rangers, the border would have been crowded many miles eastward, more hundreds of scalps would have hung in Iroquois long houses, and the war efforts of the embattled colonies would have been seriously impeded.”

TIMOTHY MURPHY

Timothy Murphy enlisted at Northumberland, Pennsylvania in June 1775. His pay was \$6.66 a month and he furnished his own clothes and rifle. His company marched to Boston, missed Bunker Hill, but fought in nearly every other major battle of the war, including Yorktown.

Tim and his company distinguished themselves early. At Lechmere Point the tide rose and made it an island. British regulars landed in boats, attempting to seize some cattle. Murphy and his comrades plunged into the water, waded to the island under fire, and drove off the enemy. Washington thanked them publicly.

Much of Tim’s fighting was against Indians. They considered his over-and-under rifle bad medicine and believed he was a wizard, for he could fire twice without reloading. Eventually they realized he had just two shots. Then they would wait his second shot and dash

in pursuit. Fortunately, “Big Foot” Murphy was fast, so fast no Indian ever caught him. Once, when pursued by a group, he turned and shot the leading Indian. When another appeared, he killed him with the fallen Indian’s gun. Fearless, now that they had heard two shots, the rest raced toward him with knife and tomahawk. The second shot from his own rifle killed another. They quit. Why try to fight a man who could shoot forever without reloading?

Tim distinguished himself twice while fighting Burgoyne. Once, while scouting near the enemy’s camp, he saw a British officer enter a tent which stood nearer the forest than the rest. Creeping silently across the open space, he crawled under the back of the tent. The officer was seated at a field desk. Suddenly, he felt a knife at his throat and heard a warning to be quiet whispered in his ear. Forcing the officer to accompany him, Murphy led him back into the forest and reached the American camp.

Later, Tim turned the tide at the Battle of Saratoga. Dan Morgan’s Rifle Corps had driven General Fraser’s forces back and flanked his right. But Morgan knew that if Fraser could rally his men, the Americans would probably be defeated. So Dan called a squad of riflemen, pointed out Fraser, and told them to get him. The first to fire had near misses but Murphy, who had climbed a tree to get a better shot, put a ball through Fraser’s stomach. The British were routed and the battle won.

In the fall of 1780, Murphy saved the people of Schoharie Valley. Sir John Johnson’s army of 800 British and Indians camped about four miles above the up-



per fort and at daybreak marched past it. An alert sentinel saw them and fired an alarm shot, warning the middle fort. Murphy, although a civilian at the time, was placed in command of 20 riflemen and sent out to meet the enemy. They waited until their foe was within 80 yards, then fired and retreated to the fort. Johnson's army surrounded the fort.

Within, all was confusion. Major Wolsey, the cowardly commander, hid in a house with the women. When they drove him out, he announced he was going to surrender the fort. The garrison was against it for they did not trust Johnson's ability to control the Indians. Murphy, in particular, was against surrender for he knew he would be the first to be roasted.

Sir John soon sent forward a flag of truce. Murphy and Colonel Vroman (an elderly militia officer outranked by Wolsey) considered this a trick to learn the strength of the garrison. Tim, realizing that the commander would surrender to the British officer, if he was admitted, sent a ball buzzing past the flag bearer's ear. He retired. Wolsey ordered Tim's arrest but none would obey him.

Later, when the flag approached for the second time, Tim sent another shot close to the bearer. He retreated. Then Wolsey ordered a white flag raised. Murphy said he'd shoot the man who tried it. A third flag appeared and Wolsey, drawing his pistol, threatened to kill Murphy, if he fired on it. Tim's answer was to point his rifle at him and announce, "I'll die before they take me a prisoner."

Wolsey backed down and ran to his room. Colonel Vroman followed him and demanded, "Were you sent here to sneak away when you are attacked by Tories and Indians? And do you mean to give up the fort to those bloody rascals?" When Wolsey did not answer, the little Dutchman told him he was taking over command.

Meanwhile, since the third flag had not been recognized, even by a rifle shot, it withdrew. The British held a council of war. They decided, since the Americans had so arrogantly fired on a flag of truce, the fort must be too well garrisoned to be taken. Therefore, they withdrew, burning every house and barn except those owned by Tories. As soon as they left, Murphy burned the Tories' buildings.

In Middleburg Cemetery, not far from the site of the Middle Fort, stands an imposing monument with the inscription:

"To the memory of Timothy Murphy. Patriot, Soldier, Scout, Citizen, who served in Morgan's Rifle Corps, fought at Saratoga and Monmouth and whose bravery repelled the attack of British and their Indian allies upon the Middle Fort, October 17, 1780, and saved the colonists of the Schoharie Valley. 1751-1818." ■

Next issue: the story of Horatio Jones

I. Introduction

II. The Offense

- A. Movement to Contact
- B. Reconnaissance in Force
- C. Coordinated Attack
- D. Exploitation
- E. Pursuit

III. The Defense

- A. Area Defense
- B. Mobile Defense
- C. Withdrawal
- D. Delay
- E. Retirement

IV. Conclusions

TYPES OF MILITARY OPERATIONS

LT COL A. L. GOODWIN, Inf
LT COL W. H. SILBER, Inf

THE HEADLINE in the newspaper reads "U.S. STEPS UP MILITARY OPERATIONS IN VIETNAM," and the civilian reader pictures massive troop, vehicle, and aircraft movements—the sure signs of a small war's quickening pulse. The average military reader visualizes additional soldiers walking along dusty trails; assaulting Viet Cong positions or "digging in" and defending for the night. Neither reader has a clear mental picture of

the military operations taking place. To the casual student of tactics, "military operations" denotes two broad and very general classifications—offensive and defensive operations. However, the serious student of tactics understands a different and more accurate representation of the term "military operations," for he realizes that there is a specific type of military operation designed to accomplish a specific military mission. For example, there are five types of military operations directly concerned with the broader scope of the offense alone.

* * * * *

THE OFFENSE

Offensive operations are conducted to carry the battle to the enemy for the ultimate purpose of destroying his military force and his ability to wage war. To accomplish this it is generally recognized that there are three tasks to be performed: locating and holding the enemy in position; maneuvering against him to gain a tactical advantage; and, at the decisive time and place, delivering an overwhelming assault to destroy him.

In order to accomplish these three tasks, five general types of offensive operations have evolved: movement to contact, reconnaissance in force, coordinated attack, exploitation, and pursuit.

In general, these five basic tactical operations encompass all conceivable types of offensive operations. The five operations are listed in the normal order of occurrence although it may not be necessary to accomplish them in this sequence nor do they have application at all levels of command. For instance, rarely, if ever, will a modern field Army be completely out of contact with the enemy; however, with the mobility inherent in ground forces today, it is quite possible that subordinate elements of a larger force frequently will be out of contact. Recognition by a commander that he is involved in any one of these types of operations should immediately bring into focus the tactical environment and allow him to determine the battlefield conditions and the tactical considerations which will influence the selection of a course of action.

MOVEMENT TO CONTACT

Movement to contact is an offensive operation conducted to gain initial ground contact with the enemy or to regain lost contact.

The purpose of a movement to contact is the early development of the situation to provide an advantage over the enemy prior to decisive combat. It is appropriately conducted whenever a unit is out of contact with the enemy. This may occur prior to initial engagement or as a result of other offensive operations, such as a successful coordinated attack where a force has penetrated the enemy defensive positions and is moving freely in his rear area. Once a commander has determined

that he must conduct a movement to contact, his choice of a course of action is rather simple. Our doctrine tells us that there are two methods of moving to contact, movement in a single column or movement in parallel (multiple) columns. Imminence of contact, knowledge of enemy strength and dispositions, and required speed of movement, and terrain to be traversed largely determine which of the two methods are used.

Regardless of the method used a commander may employ the techniques of an administrative march when contact is remote, a tactical column when contact is improbable, and an approach march when contact is imminent. The movement to contact ceases when the situation has been developed and the determined enemy resistance encountered requires the deployment and coordinated action of the main body.

RECONNAISSANCE IN FORCE

Reconnaissance in force is an attack by a considerable force to discover and test the enemy's dispositions and strengths and/or to develop other intelligence. The primary purpose of this operation is reconnaissance. On the battlefield there are many instances when a commander needs additional information of the enemy in order to make a sound tactical decision. Reconnaissance in force is the type operation which is used to obtain this information.

Before a commander decides to conduct a reconnaissance in force, which requires the commitment of major subordinate elements of his force, he must weigh the urgency and value of the needed information to insure that it justifies the commitment of major subordinate elements. In making his decision concerning a reconnaissance in force a commander must consider the efficiency and speed of other collection agencies which provide information to him. If these agencies are capable of providing the required information a commander should carefully consider the advantages and disadvantages of committing tactical forces to achieve the same results. He should also consider the extent to which his plan of action may be divulged. If it is determined that the reconnaissance in force may divulge more information to the enemy than it will gain, the possibility of accomplishing the mission by other means should be considered. And finally, there is always the risk of defeat in detail and the risk of a general engagement under unfavorable conditions.

Once the decision to conduct a reconnaissance in force has been made, there are two methods available to a commander—a limited objective attack, and a raid. A limited objective attack may be conducted as a phased advance along a front or confined to a specific area. It is usually located on or near the enemy front line and is conducted as a series of strong aggressive probes to

determine the enemy situation in a specific area or at several critical points. A raid on the other hand is an attack within an enemy position to accomplish a specific mission, with no intention of holding the invaded territory. This is in contrast to a limited objective attack in which the territory gained may be retained. The attack in either method is conducted as in any other attack. The only part which differentiates the attack made as part of a reconnaissance in force from any other attack is the intent of the commander.

COORDINATED ATTACK

A coordinated attack, as taught at the Infantry School, is a deliberate attack that is normally planned in detail and undertaken after thorough reconnaissance, acquisition and development of targets, an analysis of all other factors affecting the situation, and methodical evaluation of relative combat power. The coordinated attack may be made before, after, or as a part of the other types of offensive operations. This is the type of offensive operation which comes to mind most frequently when the terms "offensive" or "attack" are employed. It means the same as the British term "deliberate attack" and is usually referred to in U.S. Army manuals as "the attack." Most separately identifiable offensive operations such as night attacks, river crossing operations, or air-mobile operations are coordinated attacks.

The coordinated attack is characterized by complete integration of the effort of all means available, mutually supporting combined arms teams, and by fire and maneuver/movement. Its purpose is to destroy the enemy in position or in an area of the attacker's choosing.

The specific methods of making a coordinated attack vary greatly depending upon the mission of the attacking force. Once the coordinated attack is launched, the initiative is retained by bold and aggressive employment of overwhelming combat power at the decisive time and place. The coordinated attack may well set the stage for the complete destruction of the enemy.

EXPLOITATION

The exploitation as a type of offensive operation usually follows a successful coordinated attack and for all practical purposes is a continuation of the attack, taking full advantage of the success achieved by following up the initial gains. The purpose of the exploitation is to destroy the enemy's ability to reconstitute and conduct an organized defense or to withdraw in good order.

The exploitation is usually initiated when the enemy force is having recognizable difficulty in maintaining his position. The transition from the coordinated attack to the exploitation may be gradual or abrupt. It can be particularly abrupt when nuclear weapons are employed.

There are two general methods by which a commander may exploit the success of his unit. He may ex-

exploit with committed forces or exploit with reserves. In the first instance the commander employs the committed forces to exploit their own success and in the second instance the commander employs his reserve by passing it around or through the forces which have achieved the success. Because the exploitation must be initiated without hesitation, the method a commander will use will depend upon which force is most available.

The characteristics of the conduct of an exploitation are to some degree those of a movement to contact, particularly with regard to subordinate elements of the exploiting force. While the force remains in contact, its subordinate elements may often be moving to contact in their respective zones of action or executing other appropriate types of offensive operations. The commander should exploit all means of tactical mobility. Following and supporting forces may be employed to assist the exploiting forces by relieving them of tasks that would otherwise slow their advance.

The exploitation is terminated when enemy demoralization begins and enemy forces disintegrate under relentless pressure, signalling the initiation of a pursuit operation. It may also end when the enemy has successfully broken contact or consolidated new defensive positions requiring another coordinated attack to overcome.

PURSUIT

The pursuit is an offensive operation against a retreating enemy force. It is the final phase of the exploitation and occurs when the enemy has lost his ability to operate effectively and attempts to disengage. The pursuit differs from the exploitation in that its primary purpose is to complete the destruction of the enemy force, rather than preventing him from organizing a defensive position or withdrawing in good order.

The pursuit, like the exploitation, is characterized by speed and aggressive movement, decentralized control, and a rapid and unhesitating employment of uncommitted forces. Because of the enemy's inability to react there can be less regard for security and greater risks should be taken to achieve decisive results.

Successful pursuit requires unrelenting pressure against the enemy to prevent reorganization and reconsolidation of his defense. To accomplish this there are two methods available to a commander:

Direct pressure. In this method the direct pressure force maintains relentless pressure against the retreating enemy force. The mission of this force is to prevent disengagement and subsequent reconstitution of his defenses, and inflict maximum casualties.

Direct pressure in combination with an encircling force. In this method the direct pressure force maintains relentless pressure on the retreating force while a highly mobile encircling force cuts the enemy's lines of retreat

to intercept and destroy him.

The pursuit is terminated when the withdrawing enemy force is destroyed, when he has successfully reached an organized defensive position, or when the enemy successfully disengages and retires from the scene of battle, causing the pursuing force to conduct a movement to contact.

DEFENSE

There should be no doubt in the minds of military planners that defensive operations will never win a war—offensive actions are required for ultimate victory. However, it should also be recognized that many times the skillful application of the defense may keep us from losing a war.

In the course of military operations a skillful commander employs all types of operations to accomplish his objectives—either winning a localized battle or winning a war. It becomes necessary that planners not only have a thorough knowledge of offensive operations, but also a complete understanding of defensive operations.

There are five basic types of defensive operations: area defense, mobile defense, withdrawal, delay, and retirement. Each is designed to accomplish a specific purpose, but in some situations, several defensive operations may be employed by a commander simultaneously to accomplish a defensive mission.

A plan of defense is a tactical plan formulated to accomplish a defensive mission. Different techniques exist for planning each of the five types of defensive operations; however, each tactical plan's content is essentially the same. The tactical plan includes a scheme of maneuver and a plan of fire support. Although it is technically correct to refer to counterattack, barrier, surveillance, and other plans in an operations order, it must be recognized that each of these supporting plans is not a separate entity, but one aspect of the overall plan of defense. Each is developed and coordinated with other plans throughout the planning process.

The scheme of maneuver includes those aspects of the plan which provide for the movement and placement of organic and attached combat elements prior to and during the conduct of the defense.

The plan of fire support provides for the coordinated and integrated employment of all fire support available to the commander. This plan is developed concurrently with the scheme of maneuver.

To further understand the purpose of each type of defensive operation, a closer examination is required.

AREA DEFENSE

The area defense is an operation wherein it is visualized and anticipated that we will deny an area to the enemy and voluntarily accept close combat and decisive engagement to accomplish this result. Its purpose is to

deny terrain to the enemy. Inherent within this purpose is the destruction of the enemy. The basic tenets of the area defense are as follows: stop the enemy, repel the enemy, and eject the enemy.

The task of stopping the enemy is accomplished by delivering fires on him as he approaches the battle area. Two techniques are applicable: first, engage the enemy as he comes within the maximum effective range of each weapon that can place fire on him; or second, withhold the fires of some or all of the direct-fire weapons located on or behind the forward edge of the battle area (FEBA) until the enemy comes within the effective range of individual riflemen.

The selection of either technique must be analyzed by the commander who must recognize that fire delivered on the enemy as they come within range of each different weapon subjects them to destruction for the maximum possible time by an ever-increasing volume of fire; however, by using this technique the enemy may be able to gain information concerning the exact location of the defender's longer range weapons earlier than would be possible by using the other technique. If fires are withheld until the enemy comes within range of the individual riflemen located along the FEBA, they will then be subjected to a more intense initial volume of fire, the defender will gain surprise, and he will deny the enemy early information concerning the exact location of the longer range weapons; however, the enemy will be able to close on the FEBA relatively unscathed.

The task of repelling the enemy is accomplished by a combination of fires and close combat. This includes such techniques as locating machine guns to provide grazing fires across the front of the command and interlocking these fires with those of adjacent elements. Fires are planned to take advantage of existing obstacles as well as additional obstacles which may be constructed.

The task of ejecting the enemy is accomplished by fire and maneuver, fire and movement, and offensive action by the reserve in the counterattack.

MOBILE DEFENSE

The mobile defense envisions the acceptance of penetrations by the enemy to a relatively deeper position within the battle area than would be accepted in the area defense. The primary consideration in the conduct of a mobile defense is the destruction of enemy personnel and equipment. The commander must select the areas into which *he desires* the enemy to penetrate, as well as the depth he desires the enemy to reach prior to launching the counterattack. Another consideration of the commander is the degree of resistance initially offered to the enemy by the forward defense echelon. It is incumbent upon the commander to present sufficient resistance to deceive the enemy into thinking his pene-

tration is a successful offensive action. At the same time though, friendly forces are delaying to blocking positions in an attempt to canalize the enemy into a predetermined area. As a result of apparently creating a penetration the enemy can logically be expected to reinforce his success. Such action will result in a relatively larger enemy force being within the penetrated area, the final outcome being the destruction of a larger enemy force than was allowed to penetrate the FEBA initially.

In order to successfully conduct a mobile defense the commander must distribute his forces to provide the forward defense echelon sufficient forces to present the desired degree of initial resistance. He must keep in mind, however, that the reserve is his main force and give it adequate combat power to successfully counterattack. This does not imply that the reserve must be the largest force; nevertheless, it is mandatory that it be the strongest in terms of combat power. Combat power is developed from a preponderance of tanks, artillery, and nuclear weapons available to the reserve during the conduct of the counterattack.

WITHDRAWAL

A withdrawal is an operation wherein all or part of a deployed force disengages from the enemy.

The two basic methods of withdrawal are the daylight-type and the night-type withdrawal. The term "daylight-type withdrawal" connotes a withdrawal under enemy pressure; the "night-type withdrawal" indicates a lack of enemy pressure and is usually conducted during periods of reduced visibility. Although the methods are identified with "day" or "night," this does not imply that a daylight-type withdrawal is conducted only during the hours of daylight. A daylight-type withdrawal may be executed at night or other periods of reduced visibility. The same is true of the night-type withdrawal. The deciding factor is the enemy—whether or not he is actively pressuring the withdrawing force.

The major difference between the two methods is that normally the night-type withdrawal employs detachments left in contact (DLIC). However, the commander may elect not to employ detachments left in contact and thus withdraw his command simultaneously, in which case provisions must be made for a rear guard.

Since the daylight-type withdrawal is executed under enemy pressure, the commander may divide his force into a main body and a covering force. The commander may utilize his reserve to constitute the covering force behind which the main body will withdraw to the next position. The reserve may be given the additional task to counterattack to disengage forward forces.

DELAY

A delay is a type of operation in which a force under pressure trades space for time while inflicting maximum

punishment on the enemy without becoming decisively engaged.

The echelons of the delaying force and the areas in which the echelons are employed are similar to that of the area defense (security echelon, forward defense echelon, and reserve echelon). The principle differences between a delay and an area defense are apparent in the widths of the sectors involved. While there are no guide figures, a delay position will be much wider than a position in the area defense. Also, the reserve of a unit occupying a delay position will be relatively smaller than the reserve in an area defense. A careful examination of the delay and area defenses may lead the reader into the misconception that there is no fundamental difference between the two operations, but this is not true. In the area defense, decisive engagement and close combat are voluntarily accepted; while in a delaying action, decisive engagement and close combat are not contemplated in the delay.

RETIREMENT

A retirement is a type of operation wherein a force not in contact with the enemy moves away from where the enemy is known to be located.

A retirement cannot be executed by a deployed force in contact with the enemy. Such a force would first have to withdraw from contact with the enemy and from march columns before the movement is classified as a

retirement. Retirements may be conducted using any means of mobility such as air, sea, or surface transportation.

A retirement may be made to increase the distance between the defender and the enemy, to reduce combat service support distance, to occupy more favorable terrain, to conform to the dispositions of a larger command, or to permit employment in another sector.

CONCLUSIONS

It is conceded that the discussions of the types of offensive and defensive operations have merely touched the broad surface of a deep and complex subject. In order to fully grasp the fundamentals and techniques of each type of offensive and defensive operation the reader must research and study to a considerable degree. But even the most knowledgeable grasp of offensive and defensive operations is ineffective if combined with inadequate leadership, untimely troop support, faulty intelligence, or the misapplication of any principle to be found in the broad spectrum of tactical operations. Just as it should be evident at this point that there is a specific military operation designed to accomplish specific purposes and missions, so also should it be evident that uniting the proper operation with the commander's visualization is the science—and the creative response to the mission is the art. ■



DOUGHBOY'S SWAP SHOP

The Problem: To develop the self-reliance and endurance of small units.

An Idea: Move platoon-size units into isolated wilderness areas. Assign long and difficult reconnaissance or combat missions to some units and assign other units to stop those missions. The patrol leaders must not only be required to outwit their opponents, but they must also plan to provide the necessities for their men by resupply, living off the land, etc. This Ranger-type training will thoroughly test the skill, ingenuity, and endurance of the Infantryman, and in doing so, will develop self-reliance in the leaders and team spirit in the platoons.

We can also send platoons and companies off into the brush to conduct their own exercises for periods of 24 to 72 hours. This training, if properly conducted, trains not only the soldier but also the junior leader in independent action. In addition it tends to develop a very high *esprit de corps*.

A Challenge: How have you solved this problem—share your solution with other Doughboys. Write INFANTRY. ■

SMALL UNIT REAR AREA PERIMETER DEFENSE

Sp6 RUSSELL A. KRAEMER

A REAL PROBLEM AREA exists for the small unit commander in considering his perimeter defense. He is in a "rear" area, not able to count on first-class combat troops, and not having within his unit the men or materiel to deploy his forces for an adequate defense posture because of his unit's mission, which may be supply or some other technical function. Even though his defense is in direct proportion to the alertness and skill of his sentries, he must be able to supplement his forces with mechanical means. Just how is he to protect his unit against enemy infiltration, lightning-swift airborne drops, partisan or guerrilla attacks, or subtle observation by "innocent" 12-year-old children?

The commanding officer has deployed his unit in the woods near a second-class road for easy access by supported units. Machine guns command the main approaches and other guards are posted strategically around the perimeter. There are no enemy troops within many miles—only passing civilians and an assortment of military vehicles of various allies. The bulk of the personnel are busy with everyday tasks, carrying on with the unit's mission. As night falls, listening posts are manned and blackout discipline is enforced. The only sounds are the occasional soft burst of profanity as a man trips over a tent rope, and the mechanical throb of a small generator supplying power to maintain communications.

About four in the morning, the area comes alive with the flash of explosives, the rattle of small arms fire, and the shouts of confused men, some of whom don't shout long. The death of the unit takes about six minutes.

This is the nightmare which should haunt every small unit commander, whether his be a missile battery or a light messkit repair detachment. His is the gnawing realization that his unit is not combat-ready in the true sense of the term. His unit cannot fight at the drop of a flare, and it is no comfort to say "our mission doesn't call for it." The potential nature of modern war dictates that every soldier be combat-ready because the enemy is everywhere and the "enemy" is the farmer in the field one

mile down the road or the paratrooper in the sky one mile up, each equidistant from his target, capable and prepared to advance from his element with the same striking force.

How is his unit singled out? Mission importance comes high on the list of a unit's qualifications to make it a prime target, but if the attacking group is small and not versed in grand military strategy, ease of annihilation outweighs the consideration of military value. How easily then each unit fits into somebody's plans. Therefore, regardless of your mission or any other single factor, it becomes of prime importance to maintain adequate defensive measures to stay alive!

Once a unit has been picked to be "it," its defense posture is checked out by careful observation, and on an appropriate night it gets hit. In order to be less susceptible, obviously the first thing to do is to remain undetected. Realizing your unit's presence cannot easily be hidden, you then progress to the next most obvious—to hide the strength, and of course the weaknesses. Camouflage discipline must be stringent, light and noise discipline at night must be most stringent if not deceptive in purpose. Repositioning at dusk must not be overlooked as an inexpensive means to deny useful intelligence. The striking and covering of tents during daylight hours is a worthwhile measure. Entrance routes to the area must not only be guarded, they must be physically barred, and access gained only by positive recognition. It is no difficult task to waylay a small vehicle and use it as a ruse or battering ram at the unit's front door—the element of surprise being a powerful weapon capable of nullifying all but the best defense.

Interspaced between manned positions, effective devices must be placed in depth either to deny access or to make a presence known. Care must be taken to keep the devices away from normal troop areas and they must be positioned in conjunction with the manned posts so that firing into them will not endanger friendly personnel. The devices need not be elaborate; tin cans and concertina wire are cheap. An occasional trip flare, if positioned properly, is a handy device; dead falls



made from available trees and commo wire make a distinctive sound, especially when they hit an intruder. Stretches of coarse gravel are almost impossible to traverse quietly except when covered by thick leaves or snow; channeling with obstacles sounds good but should be avoided generally since it is safer on the part of an intruder to go over, under, or through the channeling device. The suggested mechanical devices are but a few. An imaginative mind could conceive others but they must be foolproof. Undetected, an intruder needs only patience to neutralize any device.

The best perimeter-guarding device is an alert guard, but even though he may be the best, human frailties can easily make him the poorest. To be effective, he must be as patient as a trip wire, as alert as a cat with coffee nerves, and as quiet as a half-buried stone. This type of individual is hard to come by, especially when he has just put in a day's work repairing engines and now finds himself on guard duty in the rain. Every possible comfort must be given to the guard without sacrificing his ability to see and hear on post. He must be protected from the elements, yet not bundled up in a blind nest; he must have commo to other posts or the CP and not have to yell. His tour should not exceed two hours, and he must travel to and from his post without lights or noise, preferably remaining on post as part of a four-man team all night, thereby eliminating movement to and fro. His use of sign and counter-sign must be flawless and done quietly. He must (as should every man) have first-hand knowledge of a plan of action in case of attack. For instance, should a disturbance start on some other portion of the perimeter, his attention must remain devoted to activity in his own sector. He must know every landmark by day and night and be familiar with the method of alerting others in case of trouble. This is not easy, but it is important for, once a breach is made, it can spell sudden disaster. Thought might be given to backing up each post with static defense devices in lieu of detection by commo methods.

One thing remains to be added to the defense posture, the formation and immediate availability of a light reserve force. This force can be of any strength, but it must be capable in the end to plug any gap made in the perimeter; reinforce any point on the perimeter; and be capable of countering any breakthrough, and mopping up. Such things as fire-fighting teams, damage control teams and the like are nice to have, but their existence and value depend on the unit's manpower, on-hand equipment, and plain necessity.

The small unit commander in a "rear" area has a problem which could spell disaster if he is not prepared, and preparation is vitally important since reaction time is paramount. Proficiency in basic military skills, flexible planning, and ingenuity are the answers to the question, "How do I protect my unit from annihilation by a small group dedicated to that end?" ■



COMMANDANT'S NOTES



**General
York**

All of us at the Infantry School are aware of our responsibility in assisting our national effort to WIN IN VIETNAM. Even though we happen to be on the shores of the Chattahoochee, a long way from the Mekong, we are trying to learn all we can—and to teach all we can—so that our officers and soldiers will be fully prepared for battle. Of course, the school training of Infantry leaders is our Number One Job. If we continue to do our job well, these leaders will be better able to improve combat training when they join their outfits. We feel a close association with all leaders in the field, at all levels of command, in achieving the best possible product—a **qualified, motivated, professional soldier**.

To accomplish this common goal we must make the best use of our training time, and our training must be realistic, interesting, and challenging. If it is, the American soldier will be able to cope successfully and immediately with the problems he will soon encounter on the battlefield. To duplicate the battlefield in training is next to impossible. But there are many things we can do to give our soldiers the proper battle experiences—and instincts. These experiences and instincts are developed by training that really challenges the mentality of the American soldier and that plants in his mind, through appropriate repetition and critique, the important fundamentals of his job.

Our common goal is to develop in our soldiers the proper "state of mind" for combat, not merely a robot-like response where he simply goes through the motions of training. How many of us have seen our soldiers in field problems run and hit the ground when the circumstances at the time would make it far better to carefully and stealthily bend over and walk? How many of us have seen a squad stand up and move forward—John Wayne style—when it would be far better to move back a few feet in order to use a fold in the terrain which would give them another 50 or 75 yards of forward movement protected by defilade? I am sure we have all seen the command post guard at night jump out in the center of the road and shout "Halt!", not thinking that the person he challenges may be an enemy and that he would be a dead duck if he did this in combat. Many a combat-wise sergeant, I am sure, has had to correct the soldier who has failed to use his bean in selecting a good firing position. How many young soldiers take up a position on the ground in deep grass where their fields of fire and observation can be measured in inches, and where to fire effectively they would have to stand and expose themselves. By simply climbing a tree they get better observation, fields of fire, and concealment.

We at the Home of the Infantry, therefore, issue an invitation to all leaders to help stimulate thinking as to how we can make our training more realistic, interesting, and challenging. We are convinced that this will greatly speed the process of making our soldiers into true professionals.

Some months ago all Army Divisions were invited to take part in an "idea clearing house" run by INFANTRY Magazine. The response was not at all encouraging. To try to create some enthusiasm for such a program, this issue contains some of our thoughts. We will call this new feature the "DOUGH-BOY'S SWAP SHOP." It is simple to submit an idea. We will even take it written in pencil on the back of an old C-ration carton. The writing isn't important but the idea is. We agree that there is no corner on brains and the problem ahead is enough to make it wise for all of us to share our ideas.

A handwritten signature in black ink that reads "Robert H. York". The signature is written in a cursive, slightly slanted style.

ROBERT H. YORK
Major General, USA
Commandant

A CASE FOR DUSTER

LT COL
WILLIAM F. BOILER, Arty

TM 9-7218 SAYS that the full-tracked twin 40mm gun M42 was "designed for deployment with armored divisions as a means of anti-aircraft protection." It is further pointed out that "because of its rapid rate of fire, it has proved a valuable Infantry support weapon against ground targets."

While the above represents the view of doctrine writers in 1957, it should be noted that by 1964 (FM44-1) the M42 was considered capable of being deployed "to defend Infantry, armored, and mechanized brigades, nuclear delivery means, march columns, assembly areas, and other critical points." It goes without saying, of course, that this defense capability pertains against a ground as well as an air threat.

Many will remember a similar vehicle of World War II and Korean vintage which was dubbed the M19. But shortly after Korea a new prodigy was spawned, the T141, later to become the "Duster" in quasi-official terminology. Packing a lot of fire power, this 25-ton "monster" has a place in the Army's arsenal. Yet, like other fine weapons systems, Duster was regarded as primarily filling an anti-aircraft role and was forced to

surrender its place to more sophisticated weaponry. This occurred because the idea was accepted that gun-type weapons would be ineffective against modern high-speed jet aircraft, and the National Guard became the repository for the Duster. Perhaps inevitably, it became apparent that pilots of high-speed aircraft cannot effectively engage targets at maximum speed, and the resulting reduced speeds brought these targets once again well within the Duster capability.

Hence, while perhaps an irony, the M42 is being seriously considered for redeployment with the Active Army. In addition to the air defense role, we are again reminded that Duster is "a valuable Infantry support weapon against ground targets."

Today Duster is deployed in the Panama Canal Zone, as part and parcel of a composite HAWK-AW battalion. In combining two batteries of each weapons system, whether consciously or not, an ideal marriage has ensued. From a tactical standpoint Duster should complement HAWK in the air defense role, and to a degree it does. But for HAWK, a fundamental deployment problem is always one of ground security, whatever the theater, terrain, or climate. And when one mentions security of a missile unit, to be effective this means Infantry and lots of it, since adequate security forces are not "built-in" to the HAWK battery.

From an Artillery standpoint there must be insistence on this need for additional security forces, since electronic equipment is so inherently susceptible to destruction by ground attack. But how many Infantry battalions can spare companies for HAWK security? How many company commanders, if given the task, relish the idea of securing a HAWK position where major items cannot even be fully dug in or camouflaged without sacrificing operational efficiency?

So, while the modern Artilleryman may hesitate to admit that Infantrymen have other to do than guard mis-

sile positions, it must be conceded that the missilemen had best do something toward looking out for themselves.

Herein, then, lies a use of Duster not conceived when the system was built. For as a missile perimeter weapon, it simply has no peer. Its rate of fire and muzzle velocity are highly effective in the direct fire role. Tracer ammunition with point detonating fuze offers an excellent means of direct-fire night adjustment on identified targets. In jungle terrain, a very popular area for Army activity these days, HAWK will seek open high ground, even to the extent of clearing if need be. Thus the surrounding jungle is the threat, and Duster has proved ideal in providing the needed perimeter security.

Duster's flexibility is the real story. The weapon can be operated manually, where silence is paramount, or electrically if such is not the case. It offers 360 degrees of effectiveness, and can successfully counter any cross-country threat, particularly in terrain where the effect of bursts in dense growth is devastating to all personnel in the vicinity.

In practical terms, the perimeter surrounding an augmented assault fire unit (a portion of the HAWK battery deployed apart from the remainder of the battery) will not be less than 1,100 meters in length, due to various physical limitations imposed on the HAWK ground configuration. Because Duster should rarely be deployed closer than 100 meters between fire units in the air defense role, it follows that the augmented assault fire unit perimeter will require 11 fire units (Duster) on the average. The remaining five fire units of the 16-weapon Duster battery are well utilized in defense of the battery minus.

The tactics of such perimeter employment need not be discussed here, since the flexibility of Duster begs to accept any challenge. As a heavy track-laying vehicle it is most useful in knocking down dense undergrowth, yet enjoys an uncommonly high flo-

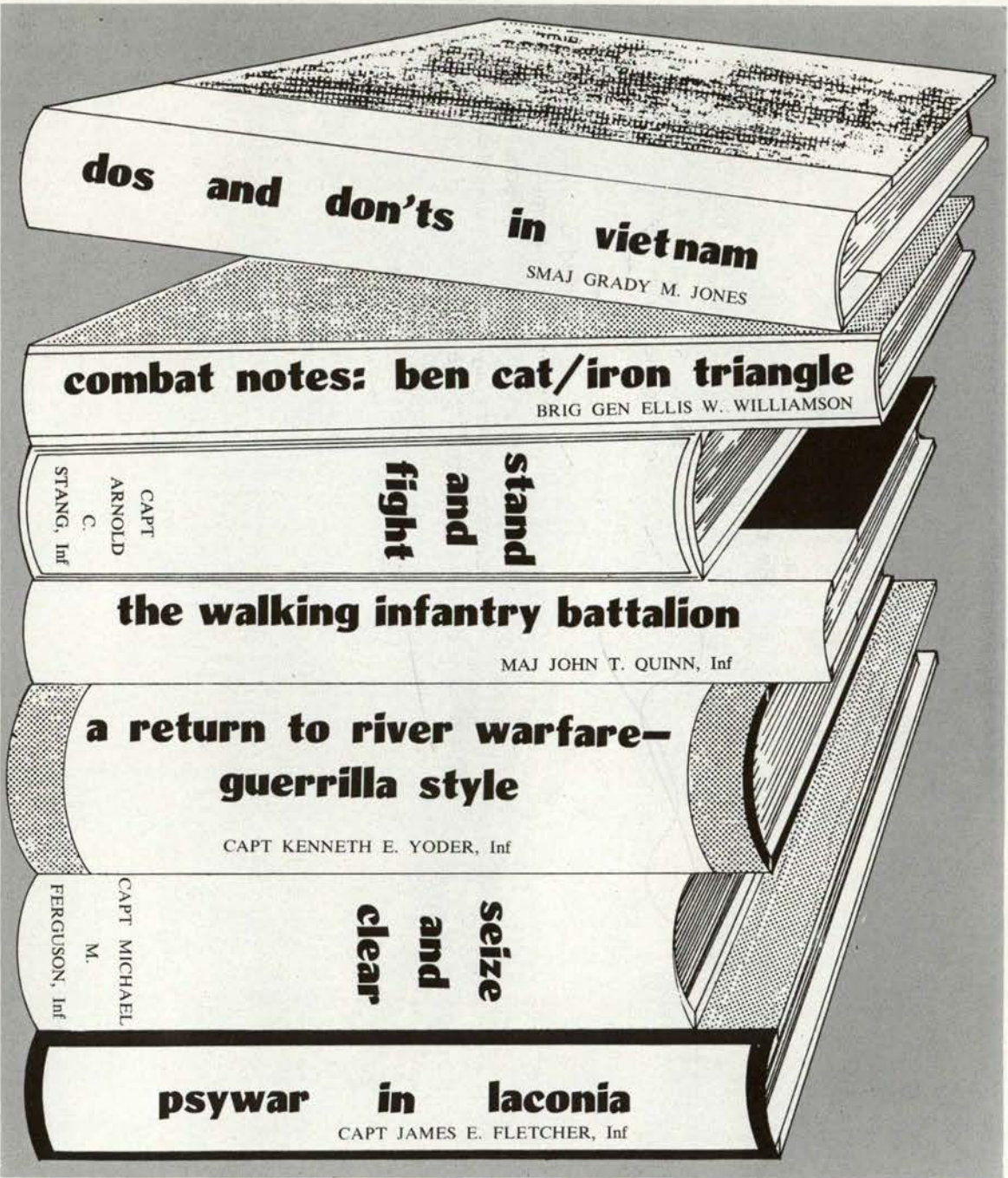


tation factor. It functions admirably in protecting the missile-unit convoy, and inherently possesses the speed and maneuverability for any road conditions.

Thus, in synthesis, we have an ad-

ditional role Duster can play in today's combat. As did its predecessors, it can effectively counter any low-level daylight air strike, with crew proficiency the only limiting factor. And in addition, when the sun goes

down, and the surrounding terrain, be it jungle or mountain, offers a means of enemy infiltration, Duster is a reassuring companion-at-arms, whether as HAWK defender, in support of Infantry, or what have you. ■



THE WAR IN VIETNAM

A SPECIAL 29-PAGE SECTION DEALING WITH TACTICS AND TECHNIQUES OF THIS JUNGLE WAR.

dos and don'ts in vietnam

SMAJ GRADY M. JONES

GENERAL

DO:

Be prepared for the unexpected./ Fill or resupply loads at every opportunity./ Treat any stranger as a possible enemy./ Keep your weapon immediately available and ready for use./ Practice the highest order of personal hygiene at all times./ Protect your

personal property./ Maintain security at all times and report any violations or suspected violations./ Provide adequate air-ground and forward observer communications for all operations./ Maintain enemy contact once it is gained./ Avoid developing patterns in any and all operations./ Use your own combat support weapons before calling for outside support./ Use every available intelligence source in planning every operation./ Effect positive coordination with ARVN, Province, District and Special Forces units in your area./ Use hand and arm signals to conceal your presence whenever possible./ Always use discipline in small arms fire—a well aimed hit is worth more than 10 random shots./ Carry a large quantity of illumination ammunition when operating at night./ Consider combat efficiency over troop comfort./ During extended movement stop before dark to insure establishing a good, all-around, coordinated defense./ Be sure grenade ignitors are screwed in tight and safety pins are properly crimped./ Police the battle area and destroy everything left behind—a rundown battery can still fire a booby trap./ Be alert to dead foliage, it may be old camouflage over booby traps, tunnel entrances or other positions./ Before placing reliance in native interpreters have them checked by a Vietnamese-speaking, qualified U. S. man./ Do practice land navigation constantly (compass use, pacing, dead reckoning, etc.)./ Test-fire weapons before each operation./ Carry bayonets on all operations to probe for mines and for use in combat./ Vary the meanings of smoke signals to deny the VC the ability to interpret./ Carry files or sharpening stones for machetes and axes when operating in jungle./ When using vehicles be sure they are equipped with tow cables./ Carry extra demolitions on all operations./ Develop supply brevity codes—situations often require the use of the command net for administration and supply purposes.

DON'T:

Become stereotyped in your actions./ Discuss anything classified over radios or telephones./ Permit horseplay at any time./ Abuse equipment; your life may depend on it./ Travel alone at anytime; use the buddy system./ Drink water except from an approved source./ Leave vehicles or equipment unattended at any time./ Trust children at any time; they may be VC agents./ Consider any route or area to be inaccessible to the enemy./ Neglect planning for civic action whenever possible./ Overclassify or use an unnecessarily high priority for electrically transmitted messages./ Call for helicopter medical evacuation until the casualty is near the landing zone./ Leave mines and flares in abandoned positions; the VC will salvage them for use against you./ Listen to, or pass on, rumors./ Panic or get trigger-happy; wait until the VC closes on your position to insure his being

killed./ Break seals on ammunition or other supplies until they are to be used.

DEFENSE

DO:

Use wire entanglements around your entire position./ Plan for the use of all available support fires./ Integrate mines, flares, and booby traps into defenses./ Record mine fields and remove them when you leave./ Be sure someone is always alert in each position./ Plan ambush patrols on likely avenues of approach outside the perimeter./ Plan for the use of illumination rounds./ Maintain all-around security./ Dig trenches and positions in a staggered manner to reduce the chance of the enemy using enfilade fire./ Bury electrical wiring to mines to prevent detection./ Provide patrols and listening posts beyond the perimeter./ Establish multiple communications means./ Disperse key personnel and facilities to lessen the chance of loss from single enemy rounds./ Maintain a reserve to repel and destroy penetrations./ Try to set up defense before dark./ Deny the VC any opportunity to remove casualties from the battlefield./ Vary times of relief for patrols and posts so as not to set a pattern./ Use trip flares throughout the position./ Plan overhead cover on all possible positions.

DON'T:

Get complacent because of the lack of enemy action./ Fail to pass the plan to all interested parties./ Allow civilians in or near the perimeter or positions./ Fire illumination rounds at regular intervals.

BASE CAMP

DO:

Prepare protective shelters adjacent to sleeping areas which can be occupied quickly in the dark./ Use your mosquito net when sleeping./ Know your defense sector and that of the man on your left and right./ Use dismounted vehicle guides when operating under blackout./ Prepare to defend the camp; never drop your guard./ Plan for a reaction force to counter any enemy success./ Provide for alternate communications means./ Develop a good civic program in areas adjacent or near the base camp.

DON'T:

Allow civilians in the area./ Establish a routine; vary your **modus operandi**.

CULTURAL

DO:

Speak slowly and distinctly and avoid the use of slang. (Think of the difficulty of trying to explain the meaning of "I get a bang out of that")./ Try to learn and use Vietnamese./ Use a title of rank or the word "Mister" rather than call an individual by his first or last name./ Accept refreshments when visiting a Viet-

namese./ Pay respects to all clergy by a slight nod of the head when you meet, including Buddhist Monks and Catholic Priests./ When in doubt, be sincerely courteous. Even if your gesture is not understood, the courtesy will be appreciated.

DON'T:

Summon a Vietnamese by gestures./ Prop your feet on a desk or table, put a leg over the arm of a chair, or sit cross-legged when talking with Vietnamese./ Make jokes about not being able to eat with chopsticks. /Enter anyone's home socially unless invited in./ Worry about time; be patient.

SEARCH AND DESTROY OPERATIONS

DO:

Use some form of encirclement when villages are encountered./ Have a rapid reaction force available to block enemy withdrawal, cover routes of withdrawal, provide a covering force, or to mop up./ Use hidden routes or darkness to conceal your approach./ Have air reconnaissance routes to and over the objective to keep the enemy from surprising you; however, care must be used not to reveal your intentions./ Be alert for snipers in unorthodox locations such as dung piles, gardens, haystacks, wells, etc./ Plan fires to cover the entire area of operations./ Withhold scheduled fires to the last moment so as not to reveal your intentions./ Reconnoiter landing zones for obstacles before using./ When possible have villagers precede you into villages—they will avoid mines, booby traps,



Use hidden routes or darkness . . .

and obstacles./ Avoid being channelized by fences, hedges, punji traps, etc./ Be alert for, and destroy, all camouflaged tunnels, caves, and bunkers./ Leave stay-behind ambush patrols to ambush returning VC and those hidden underground and undetected.

DON'T:

Relax at anytime, especially on return from an operation./ Allow captured VC and civilians to mix./ Fail to question individuals out of sight and hearing of groups so they will talk without fear of reprisal./ Separate small children from their mothers./ Neglect searching every possible nook and cranny for booby traps, weapons, and possible intelligence information./ Throw grenades into mud or wooden buildings without having adequate cover.

HELIBORNE OPERATIONS

DO:

Provide back-up spare aircraft to cover aborts./ Make detailed reconnaissance of all landing zones and objective areas whenever possible./ Provide a reaction force not more than 10 minutes from the objective./ Plan to use Air Force, Artillery, and aviation units to seal off the objective area. /Consider weather in all planning./ Select multiple landing zones when possible and use a deception plan to deny the enemy knowing the primary one./ Select landing zones which facilitate rapid decisive maneuver and prevent the VC from resting./ Plan suppressive fires on the landing zone to be executed at the last possible moment./ When multiple lifts to the same LZs are used plan to have the preceding lift clear the area so that succeeding lifts may have suppressive fires./ Provide an in-flight landing orientation for troops being carried./ Provide for medical evacuation./ Provide different routes for multiple lifts to the same LZ./ Provide for armed helicopter escort./ Provide medical evacuation pilots with unit frequencies to expedite their action.

DON'T:

Dispatch helicopters in less than pairs./ Fail to consider time needed for aircraft refueling.

CONVOYS

DO:

Sand-bag vehicles./ Provide and maintain vehicle intervals at all times (minimum 100 meters)./ Consider any portion of the route as a potential ambush site./ Plan supporting fires along entire route./ Face personnel outward to permit immediate return of fire if attacked./ Have all personnel carry weapons at the ready at all times./ Lead out with the heaviest vehicles./ Whenever possible have air cover./ Provide an alert force to extricate any portion of the convoy attacked./ Avoid routine and repetition./ Keep movement times and dates secretive until the last possible moment./ Rehearse immediate action to be taken in case of attack./ Treat all strangers as enemy./ If fired on, immediately return fire, attempt to drive out of the killing zone, and attack the ambush force as soon as possible./ Coordinate with all agencies, area forces, and commands thru which the convoy will move./ Provide for escorts in addition to reaction forces./ Have effective communications with a back-up at all times./ Avoid identifying command and control vehicles.

DON'T:

Allow civilians (including children) to approach or get on any vehicle./ Leave vehicles or equipment unguarded at any time./ Emplace supporting weapons in the same location each day on succeeding con-

voys./ Relax at anytime; the VC may allow portions or whole convoys to pass in order to gain complete surprise./ Fail to check equipment readiness before moving out./ Allow a broken down vehicle to be left unprotected.

PATROLS

DO:

Maintain front, flank, and rear security./ Move with stealth./ Make maximum reconnaissance before moving out./ Provide for a reaction force./ Maintain contact once gained./ Be alert for ambushes./ Plan for automatic weapons to be in the lead element./ Plan and react to cut off enemy escape routes./ Carry only essential supplies and equipment./ Preplan all available supporting fires./ Report enemy contact by the fastest available means./ Be alert for punji traps, mines, and booby traps./ Develop and use silent signals./ Use your own combat support means before calling for outside assistance./ Make initial moves from base camps under cover of darkness or by concealed routes./ When possible move on multiple and mutually supporting routes./ Check all personnel for physical fitness and proper equipment before moving out./ Have a planned succession of command./ Develop all possible intelligence on the area of operations./ Be prepared for sudden meeting engagements./ Plan in advance for medical evacuation.

DON'T:

Bunch up; present as small a target as possible./Talk, laugh, smoke, or use lights./ Travel exclusively on roads and trails./ Out-manuever your security forces./ Wear armored vests on prolonged ground operations./ Forget to coordinate with ARVN, Popular, Regional Forces, and Special Forces in the area.

PERSONAL HYGIENE

DO:

Bathe regularly and keep clean-shaven./ Treat every scratch or insect bite as a serious wound./ Change socks regularly and practice good foot care./ Keep your immunizations up to date./ Drink plenty of water and use salt tablets./ Take your malaria pills regularly.

DON'T:

Dispose of human waste without covering it. /Eat anything unless you know its source./ Remain in the sun without outer garments for periods over 15 minutes./ Swim in unauthorized streams or ponds.

AMBUSH PATROLS

DO:

Have a single commander./ Insure every man knows his job./ Control noise, lights, and smoking at all times to prevent detection./ Provide sufficient firepower to cover the killing zone and escape routes./ Exploit and search immediately after springing the

trap./ Select a site where enemy chances of escape are minimal./ Develop a simple pocket card checklist for all to use to insure the ambush is complete./ Rehearse the ambush whenever possible (sand tables can be used effectively)./ Prepare to react immediately to VC counter-ambush action./ Use simple, easily understood signals./ Keep civilians (including children) from observing movement to, or emplacement of, the ambush./ Fire low, a ricochet is better than a miss./ Plan night ambushes to cover normal VC movement periods./ Use stay-behind ambushes to trap and destroy the VC when leaving an operational area./ Exploit surprise when engaging the VC./ Conduct a relentless pursuit./ Rotate units on local security missions to increase alertness.

DON'T:

Spring the trap too early./ Fail to provide illumination for night ambushes./ Fail to mine and booby-trap escape routes./ Use the same site repeatedly.

COUNTER AMBUSH

DO:

Make a detailed reconnaissance by all available means before beginning any operation./ Provide front, flank, and rear security at all times./ Immediately return fire and attack the ambush force./ Provide a

reaction force to flank or cut off the ambushing force./ Plan fires on all suspicious areas./ Provide for a succession of command in case the commander is trapped in the killing zone./ Use stealth to conceal time and routes of movements./ Have security forces perform detailed check-outs of all possible ambush sites./ Maintain continuous communication with all elements at all times./ Control noise so as not to telegraph your approach./ Practice immediate action drills to make reaction instinctive./ Vary formations to thwart VC plans./ Use white phosphorous grenades against the ambush party to inflict VC casualties and screen your assault.

DON'T:

Bunch up at anytime./ Try to take cover in the killing zone./ Announce any movement or operation until the last possible moment./ Fail to report suspicious areas as they are approached./ Be baited by careless pursuit of the VC./ Fail to clear the entire ambush site once the ambush is overcome./ Forget to fire, even after the VC stops, to prevent his escape and recovery of weapons and bodies./ Consider normal civilian activity in an area as an indicator that it is clear—VC use civilians in cover and deception./ Consider any place to be free of possible ambush—the VC use the unorthodox as normal. ■



DOUGHBOY'S SWAP SHOP

The Problem: To develop an understanding of the meaning of sights and sounds on the battlefield.

An Idea: A good soldier is like a successful hunter. He has to be trained to stop, look, and listen and to evaluate the meaning of what he sees and hears. Some units have established patrol courses where various sights, sounds, and scents of combat are duplicated. Soldiers are required to identify what they see, hear, and smell. They listen to various weapons being fired and are required to identify each weapon and the general location. They are exposed to certain setups along the patrol course which, in themselves, provide intelligence information (tracks, cold cooking fires, and other "signs" of past habitation or activity). They are required to interpret the meaning of these "signs" in terms of who was there, how many were there, what were they doing, when were they there, and where did they go. This technique can be integrated with procedures outlined in Items 1 and 2 on pages 11 and 18.

A Challenge: How have you solved this problem—share your solution with other Doughboys. Write INFANTRY. ■



a return to river warfare- guerrilla style

CAPT KENNETH E. YODER, Inf

NOT SO MANY MONTHS AGO, our Special Forces "A" Detachment flew into the celebrated Mekong Delta region. We'd been briefed on the great Mekong River, one of the longest rivers in Asia. We'd learned how it rose in the Tibetan highlands 16,700 feet above sea level and flowed 2,800 miles to the China Sea, sometimes flowing peacefully, as in the Delta, but mostly rushing as a torrent through channels its power had cut between bare, rocky mountain walls. In Cambodia and in Vietnam the Mekong flows through plateaus, swollen in the monsoon, leaving behind a muddy, rich soil that makes the area one of the richest ricelands anywhere in the world.

In the Mekong Delta we were to learn that insurgent lifelines lie open and vulnerable. We were to find that tactical operations against the Viet Cong might be carried out with hope of success.

The French recognized the importance of waterborne tactics in Indochina. "The most important river warfare since the operations of the Federal Navy against New Orleans or Vicksburg was carried on from 1946 to 1954 in Indochina," a student of the French naval effort in that period has observed. "One of the five principal missions of the French Navy in Indochina," said French Vice Admiral Ortoli in the *Revue Maritime* in 1952, "is controlling the vast network of interior waterways. They are," he said, "the principal means of access to the life of the country." Robert McClintock, writing for the *U.S. Naval Institute Proceedings*, December, 1954, reports

the establishment in 1954 of a unit which, as it fought its way south to the Delta, formed two river flotillas consisting of junks, motor sampans, and river launches which were assigned the task of clearing the area of the Viet Minh. At that time, however, the importance of high-speed mobility, a blocking force, and the use of light, fast craft instead of conventional vessels, was not recognized. "Progress across rice paddies and mangrove thickets forced the men most of the time to struggle through water and mud. Frequent transshipments aboard LCVPs to cross river channels became exhausting . . .," said French Naval Surgeon Breton. Evident also was a lack of understanding of the unique requirements of waterborne operations. A naval officer wrote: "The (staff) discussions are sometimes troubled because it is difficult to make our Army comrades understand that the tides fix our timetables in an imperious fashion."

A typical unit of those days was a *Dinassaut*, or assault river division. Frigate Captain Brossard writes of an expedition in the Tonkin, the Delta of North Vietnam. His unit, led by an LCI and followed by three LCMs and three LCVPs, carried troops to assault a Viet Minh town. One Brossard excerpt reads: "The river banks, at first thronged by cheering Vietnamese, fell silent as the expedition chugged upstream. Farther up the river the *Dinassaut* had to leave the LCI because of her draft and length." (Mobility was lacking.) Moreover, insurgent tactics cost the French Navy greatly because of the

use of shore-controlled mines. Deeply sunk in the mud bottoms of canals and streams, they rendered ineffective detection by sweeping. The use of heavy, wire drags met with partial success. Up until the end of the war the French Navy had not solved the requirements posed by shore-controlled river mines.

Even so, this concept of canal-oriented, counterinsurgent forces, deployed on guerrilla waterways, should not be underestimated. We have since improved on the means of using the water, and learned of the necessity to add concurrent civic action and psychological warfare with tactical canal denial. Experience has shown that a successful waterborne program can be effected after comprehensive planning to include training of native personnel, logistical support, an active intelligence effort, and the development of an immediate reaction capability followed by constant vigilance against re-entry after initial restriction and denial.

A basic objective of the Viet Cong in the Delta region of South Vietnam is to secure large quantities of rice to sustain the insurgent effort. In this effort, the guerrillas use long-range subversion such as civic action programs, psychological operations, youth organizations, and entertainment activities, in addition to paramilitary units. The result is all too often that large segments of an agriculturally productive population are wrested from government influence and control. We have learned that the Delta canals are major arteries for economic circulation and guerrilla lines of communication. The guerrilla rice collection plan is carried out at the grass roots level. Quotas are levied and made effective by persons indigenous to the area, controlled and directed from without, making extensive use of their inland waterways in a general rice collection and redistribution program. While pro-government troops and paramilitary forces search for elusive and often imagined "VC" units, quotas are quietly levied, central collection points established, and rice moved by canal to other points of central distribution for the guerrilla effort.

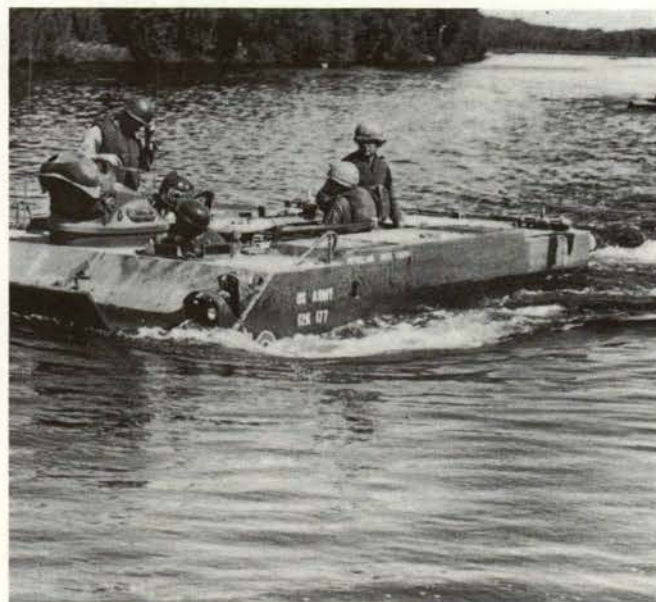
The attitude of the people plays a key role, as they provide the audience for which a great portion of the "Viet Kich" or friendly guerrilla (counterinsurgent) effort is intended. The countryfolk are far more aware of the struggle than they care to show. Hardly coerced in some cases, let alone terrorized, the people are the chief participants in collection plans in areas supposedly under government control, or being "cleared." Actually, such areas are often the scene of VC activity characterized more by Class I support activities than overt military organization and movement. Such areas, unfortunately, are frequently mistaken for "cleared or pacified" sections. At the same time, these areas are militarily significant in the counterinsurgent strategy.

These breadbasket areas are hardly appropriate for immediate paramilitary exploitation and development. Instead, a preliminary to any such action should be quiet

and careful area study and placement of native agents who can be relied upon to get the "lay of the land" and learn the general temper prevalent among the people. It may be that the area is not suitable for the relatively unsophisticated presence of a paramilitary outpost camp. A true estimate of manpower potential must be established and considered adequate prior to any significant attempt at troop development.

The emergence of an enemy incident pattern is of great help in initial assessment. Any number of elements may form a pattern, such as time, location, and economic, political, or social factors. All are good indicators of the stage of the insurgent development. Once an insurgent pattern can be detected, and lines of communications traced, future targets of interdiction are presented as well as valuable opportunities for psychological operations and civic action.

OFFENSE THE BEST DEFENSE: Once initial assessment determines the suitability of an area for a counterinsurgent effort, a nucleus may be established upon which to build an effective waterborne striking force. The subsequent detection of the insurgent presence and the nature of its development and activity is imperative. Advisors must have a larger picture of the situation than the defensive complex of their particular compound or camp. They will meet with greatest success if they continually press to enlarge the sphere of counterinsurgent activity and influence.



The principal means by which such an objective can be accomplished is intensive canal-oriented reconnaissance and combat patrolling, concurrent with waterborne tactical training and, of continuing importance, psychological operations and civic action. The initiation of planned, coordinated movement through the operational area has, as its basis, certain specific objectives: **1)** Advisors and native leaders should agree on and delineate practical boundary lines of the initial base;

2) Personnel should be provided with a fairly intimate knowledge of the area, orienting them to an offensive posture; 3) A positive contact with the populace must be established to lay the foundation for a growing rapport through which a future intelligence effort can be made; 4) A meaningful liaison with the district chief and his local defense commanders must be established, and 5) There must be provision for the immediate commencement of psychological operations against subversive activities, and a program of civic action, the requirements of which are generated from the realized needs of the people as well as advisor standards and pre-determined programs.

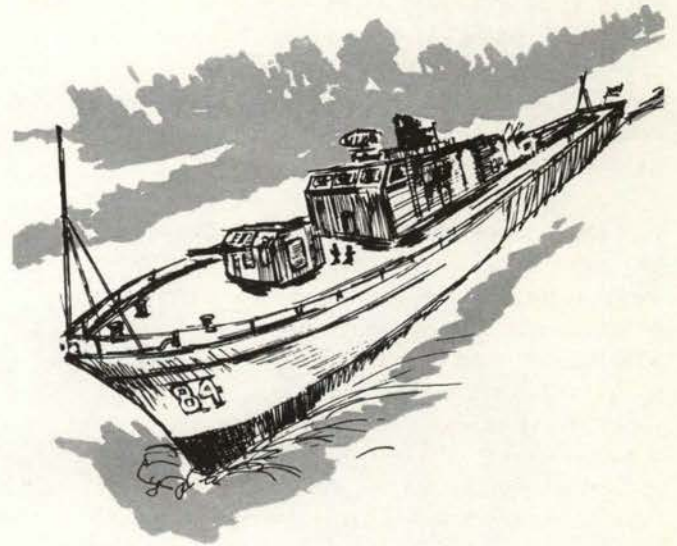
As initial patrolling continues, accomplishing stated objectives, and increasing rapport with the citizenry, additional missions will present themselves, facilitating target area selection and necessary appropriate subdivision.

AREA SELECTION AND SUBDIVISION, AND OPERATIONAL PREPARATION: With the unexpected appearance of counter guerrilla forces on an ever-expanding perimeter and a growing realization of their significance by the guerrillas, areas of opportunity will present themselves for selection as important objectives, which can be subdivided for planning purposes.

Meanwhile, logistical support from higher headquarters and special waterborne training of personnel should be well underway. Guidelines for training are gleaned from the appropriate Army Subject Schedules and modifications. Support, including boats (of the desired model), high-speed power units, parts back-up, maintenance, technical literature, and tools, is of great importance. This is a combined effort of logistics and training, presenting field expedient maintenance techniques to include motor maintenance facilities, emergency repair points, field tooling of parts, and the like. Advisor personnel should be adept at motor maintenance and repair.

Area subdivision may depend on a combination of criteria such as insurgent operational boundaries or routes of access, and should be effected in detail prior to initial waterborne penetration.

FORWARD OPERATIONAL BASE ESTABLISHMENT: The establishment of patrol bases permits the extension of patrol range, bringing under counter guerrilla influence areas in which insurgent activity presently is unrestricted. An appropriate and well secured number of personnel move to a location (previously coordinated by key local personnel and paramilitary leaders) and establish an advance headquarters. Ideally, the new camp would occupy the site of a previous local security force so as to lose no time in making operational the next steps of the plan. Training potential in areas contiguous to the patrol bases should be fully exploited. The main camp coordinates aerial resupply to include material for civic action and public information programs. It is in the advance



base that the strongest bid is made to gain or regain popular support for the counter guerrilla. Mobile sick call is conducted, motion pictures are shown, sanitation improved, farm-to-market facilities more fully developed, and school construction materials and supplies provided in an effort to orient the populace toward the government and away from the insurgent. Meanwhile, the tactical plan is directed towards coordinated action with adjacent forward bases which are conducting similar activities within their own sphere of influence.

EXECUTION OF PLANS: As operational bases consolidate their positions, the central command may review current intelligence and prepare the execution of tactical plans. These two phases should be continual as part of each tactical operation, and present an element which instills vigilance against insurgent re-entry. On a specific tactical operation the main body moves by water to the patrol base assembly area, joining advance elements for penetration of the Viet Cong operational area. Of particular importance to the success of this concept is the employment of high-speed maneuver elements having indirect fire support on call. The problem of present-day use of river mines and close-in ambush can best be answered by a combination of Army Aviation, alert, quick-reacting, mobile troops, and flame warfare.

We have been concerned here primarily with concept and dealt little with technique. Questions dealing with type of craft required, modifications, unit SOPs, training, intelligence, logistics, maintenance, use of flame warfare, civic action, pay of native troops, aviation, communications, and coordination must necessarily also be considered. Our major concern here has been with the nature of guerrilla operations in Delta areas, and their difference from operations in other terrain. Even so, what we have learned in Vietnam may be of value in similar terrain for waterborne tactical operations elsewhere. ■



stand and fight

CAPT ARTHUR C. STANG III, Inf

“WHY, SIR,” asked paratrooper after paratrooper, “won’t they stand and fight?”

They did, in their own backyard, and lost.

During the initial weeks following the deployment of the 173d Airborne Brigade (Separate) from Okinawa to Bien Hoa, South Vietnam, the elusive Viet Cong refused to engage the anxious paratroopers in decisive combat. The enemy was content to limit his actions to sniper fire and squad-size ambushes, from which he attempted to withdraw into the cover of the jungle as our troops closed with him. Many enemy troops did not live to fight the following day, because the paratroopers replied to their ambushes with deadly fire from their M16 rifles, and aggressively executed often-practiced, immediate-reaction drills.

In May and June, the paratroopers conducted numerous search-and-destroy operations, from platoon to brigade in size, virtually unopposed, with the exception of scattered squad-size actions. Numerous documents, weapons, ammunition, and medical supplies were captured, and over 100 fortified Viet Cong villages were secured.

The lack of a decisive battle with the Viet Cong was causing leaders at all echelons to fear complacency among the younger troopers. On the evening of 7 June 1965, I conveyed my personal concern to the brigade commander during the critique of an operation conducted by my company that afternoon. Even though we had encountered almost 200 rounds of 60mm mortar fire during the two and a half hours in the objective area, the Viet Cong had once again fled the battlefield. Many of my men were convinced the enemy would never stand and fight. My concern stemmed from a per-

sonal opinion that the Viet Cong forces previously encountered, with the exception of the operation during which we received the heavy mortar attack, were local guerilla elements and not well-trained, rigidly disciplined, hard core units. Investigation revealed my feelings were shared by practically every commander in the brigade. An energetic program was conducted the following week to insure that every man understood he had not as yet encountered the enemy’s first team.

On the afternoon of 7 July 1965, one month from the day of the critique mentioned above, my unit, Company A, Second Battalion (Airborne), 503d Infantry, engaged two hard core Viet Cong companies in the communist controlled “War Zone D.” The long-awaited, decisive battle was fought and won. It is the purpose of this writing to present a firsthand, detailed account of the battle. Your attention is invited to the tactics used by the Viet Cong during the engagement and to the manner in which the American paratroopers reacted to the rapidly changing situations, and defeated the enemy in their own backyard.

Brigade’s Battle Plan

The brigade plan for the four-day operation was sound, simple, and concise. At 0830 hours on 6 July 1965, a three-battalion heliborne assault, utilizing three separate landing zones, would be executed on a valley running east and west through southern “War Zone D,” approximately 15 miles northwest of Bien Hoa Airfield.

On D-day all elements would attack north from their respective landing zones in an effort to feint the enemy and conceal the real concept, which was a coordinated, three-battalion thrust to the south in an effort

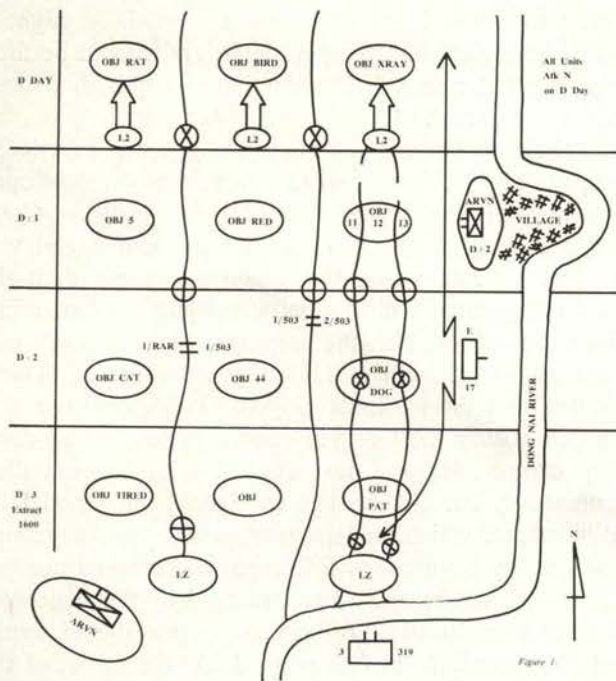


Figure 1.

to trap the Viet Cong against the Dong Nai River and a Vietnamese battalion occupying a blocking position to the southwest. (See figure 1.)

Extraction was to be executed on the afternoon of $D + 3$ from two landing zones just north of the Dong Nai River. (See figure 1.)

The only deviation from the original plan occurred on $D + 1$ when air observers detected the Viet Cong moving east from the Second Battalion's zone of operations. The riverbank on the eastern edge of the battle area housed a large pro-government Catholic refugee village. The brigade commander evaluated the situation and countered with airstrikes against the suspected enemy positions, and with the deployment of an additional Vietnamese battalion west of the village.

Battalion's Battle Plan

The Second Battalion commander's plan was quite simple. The excessive width of his assigned zone of action, coupled with an exposed left (east) flank made it necessary for him to deploy his three rifle companies on line and utilize Troop E, 17th Cavalry (attached) to screen his left flank. (See figure 1.) In reserve he had Headquarters Company, which was organized into two strong rifle platoons. The Headquarters Company normally followed the center attacking rifle company.

Fire Support

Fire support for the operation was provided by the 105 Howitzers assigned to the Brigade's Third Battalion, 319th Artillery. The howitzers were moved into position during the early morning hours of D-day on the southern bank of the Dong Nai River, (See figure 1). United States Air Force provided continuous close air support, weather permitting. Armed fire teams of UH-

1B helicopters were on air alert during daylight hours. As is always the case in brigade operations, commanders had available all required fire support.

D-Day

D-day, 6 July 1965, was relatively quiet. The landing zone was secured with little enemy resistance. It seemed as if the Viet Cong's intelligence system had finally failed him. Late in the afternoon the third platoon discovered a small fortified enemy village 1,000 meters northwest of the landing zone and were engaged by light sniper fire as they assaulted the village. One of the two Vietnamese scout dogs attached to the company had alerted the platoon to the village. The village contained the usual rice, domestic supplies, medicines, school books, small quantities of ammunition, and several anti-U.S. propaganda signs. All captured material was flown to the III Corps G2 on the evening resupply helicopter.

Just prior to darkness the company moved into a tight perimeter, dug in, and established three squad-size ambush patrols. By dark, rations and water had been distributed and consumed. The company position remained silent for the remainder of the night.

At 1950 hours a firefight developed along a small stream, roughly 500 meters southeast of our position. Monitoring the radio, I learned a patrol from the reconnaissance platoon had engaged a Viet Cong patrol with the enemy breaking contact to the south. I was not very concerned as my first platoon had an ambush positioned between the company perimeter and the location of the skirmish.

This operation was the third in "War Zone D" for Company A, and most of the troopers had five or six combat operations under their belts. All platoons had engaged at least one platoon-size enemy force, although the Viet Cong always had broken contact. I knew the men would hold under mortar fire, as they had experienced a savage two-hour mortar attack the preceding month. These troops were good and they knew it. During the combat operations of the preceding two months not one man had fallen from the ranks from heat, exhaustion, or fatigue.

We received a radio message concerning water can extraction, the attack to seize objective, and a 15-minute airstrike of the sector with no mortar or artillery fire until the Air Force cleared the gun-target line.

What more could a commander desire than a brief, clear order, a 15-minute airstrike in the objective area, and good troops? In addition, all AN/PRC-10 radios were still operational.

D-Day + 1

The weather on $D + 1$, 7 July 1965, did not unfold as expected. Heavy clouds hovered at 800 feet, and it was questionable whether or not the helicopters would be able to extract the empty water cans. Battalion S3

informed me at 0700 hours that the airstrike had been cancelled and an extensive artillery preparation planned. I directed the weapons platoon leader to plan fires along the stream 500 meters south. Having doubts about the security of the stream, I ordered the third platoon to move at 0715 hours to secure the far bank of the stream, select crossing sites, and provide guides for the company (-).

The first sergeant reported at 0720 hours that the policing of the perimeter was complete and that the water cans had been extracted. Policing of the battleground is extremely important in guerilla warfare. Expended radio batteries must be chopped into small pieces, burned and buried. "C" ration cans must be gouged with holes and buried. The Viet Cong will construct antipersonnel mines from the empty cans if left intact. The guerillas will salvage even the waxed "C" ration packing cartons and use them for roofing on their huts; therefore, the cartons must be burned. Very few soldiers consume the entire meal contained in the ration carton. Extreme care must be taken to insure all leftover food is destroyed. One distinct characteristic of a well-disciplined unit is continuous policing of the battleground.

At precisely 0730 hours Company A jumped off in the attack for objective 11. The first platoon was leading, followed at 50 meters by the second. A radio transmission was received from the third platoon at 0750 hours reporting the stream secured, with negative enemy contact. Link-up between the third and first platoons was effected at 0810 hours. With the stream crossing completed, Company A continued movement south. The initial formation was a conventional two platoons up with one in the slot. The first platoon was on the left, the second platoon 50 meters to the right and the third platoon trailing by 100 meters in the slot.

Reaching the high ground 900 meters south of the stream, I ordered the weapons platoon to displace forward. Due to the dense terrain the weapons platoon was carrying only one 81mm mortar, and 60 rounds of ammunition. The Viet Cong have repeatedly demonstrated they are willing to pay a high price for a mortar; therefore it's good practice when employing your

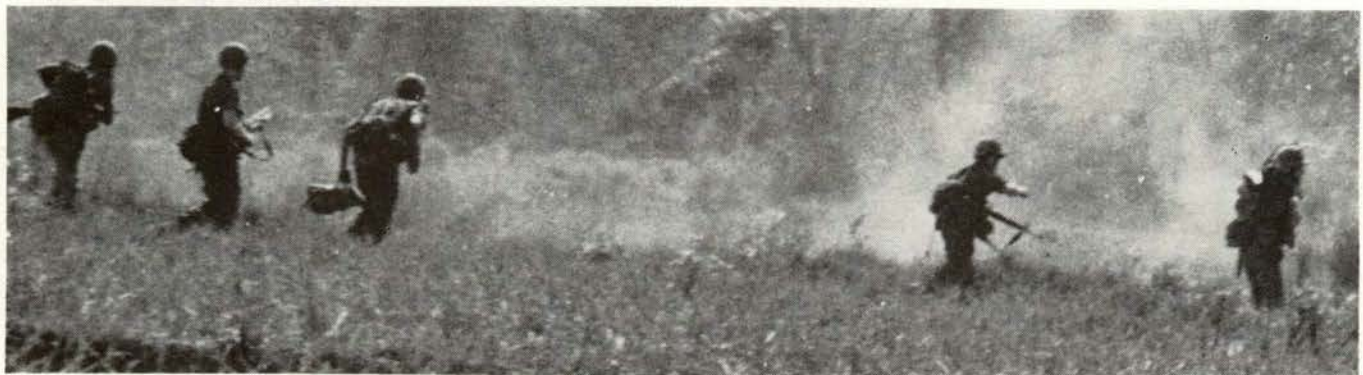
mortar to insure it is adequately protected. At night it should be tucked into the perimeter, and should be fired only as a last resort. If illumination is required, request artillery or aircraft to provide it.

Encirclement of a small enemy village was practically complete at 0845 hours, when a large firefight developed approximately 500 meters to our left rear in Bravo Company's zone. The report of a heavy machine gun was my first indication that the action was more than the usual engagement with a small local guerilla force. The Viet Cong seldom risk the employment of a heavy machine gun with poorly trained guerilla forces. Thirty minutes after the battle developed, Company B was still engaged with a well dug-in enemy platoon. The company commander had lost contact with the battalion commander, but did manage to contact an armed UH-1B helicopter which made several passes over the enemy position. My company and Company C marked our positions with smoke and were informed by the helicopter pilot we were located 500 meters southwest and southeast respectively from Company B. At the outset of the battle we had both set hasty ambushes in an effort to catch the enemy as he withdrew. Company B seized the village at 0920 hours. Company A spent the next hour and a half in ambush with no results. The rain began falling just prior to 1100 hours, and shortly after the order was received to proceed to objective 11.

The village-clearing operation, earlier in the morning, produced meager results, with three enemy 60mm mortar rounds and a small quantity of narcotics captured. One trooper was burned as a result of the improper use of a white phosphorus hand grenade in a tunnel.

At 1200 hours, Company A was 250 meters north of objective 11. The objective was located on a broad, flat ridgeline running east to west through the entire battalion sector and was the limit of the battalion's advance for the day. Our mission was to seize the highest portion of the ridgeline in our sector and conduct a thorough search of the area. At 1300 hours, reconnaissance patrols from the first and second platoons returned from the objective area, reporting a fortified village on the northeastern slope of the ridgeline. No movement

. . . a large firefight developed . . .



was observed on the objective. An artillery preparation was requested on the objective but was denied because "Dust Off" (emergency evacuation helicopters) was in the area.

The weapons platoon, which had rejoined the company at the previous ambush site, was incapable of supporting the attack due to the dense canopy 200 feet overhead. The decision was made to attack the ridge with the first and second platoons, supported by fire by the third.

The assault was unopposed by the enemy, who withdrew south leaving a U.S. steel helmet and an entrenching tool in one of the underground huts. After reorganizing, it was noted the huts were not organized in the normal village configuration. The majority were positioned approximately 15 meters apart, along the northern military crest of the ridge, and the remainder positioned to render security to the flanks and rear. The huts were not of the normal thatch construction but were dug-in completely underground with only the metal roofs constructed about 12 inches above the ground, providing a firing slit. A firing step was constructed around the inner wall and a tunnel ran out the rear of each position. It was obvious the Viet Cong were in the process of preparing for a defense to the north. The number of completed huts would have housed approximately two platoons. Why the Viet Cong decided against fighting a delaying action from this position is unknown.

Objective 11 was secured at 1340 hours with no enemy contact. The warm rice bowls in four of the huts were a clear indication that the enemy had left in a hurry. As I moved from the command post to check the reorganization of the objective, a runner arrived stating that the weapons platoon leader suspected we were being followed. A squad-size ambush was positioned on the northern slope. During this time the first platoon had located a communication wire running east and west along the ridgeline. Further investigation revealed the wire to be new and running from position to position along the ridgeline. The wire was laid from control bunkers on the top of the ridge to the forward huts. This was hardly the work of a local guerilla force.

Reconnaissance of the objective area revealed no suitable location for the construction of a landing zone to accept the evening's resupply and to evacuate the man injured, earlier in the day, by the white phosphorus grenade. The day's march through dense jungle and a driving rain had deteriorated his condition to the point I felt his evacuation was absolutely necessary.

Radio communication was lost with battalion at 1340 hours, contact not to be regained for three and one half hours. As a final alternative I requested any aircraft on the command net to answer my call since it was an emergency. To my surprise, the commanding general, who was usually hovering overhead, replied and asked if he could be of assistance. I marked our position with

smoke and requested directions to the nearest area suitable for use as a landing zone. After a five-minute reconnaissance the general's *aide-de-camp* informed me the only suitable area was a large east-west rice paddy, 500 meters south of our present position. Events which followed made the distance seem more like 5,000 meters. With this information I asked the general to contact the battalion commander and request permission to move one rifle platoon south to the rice paddy. While awaiting the reply, a brief skirmish erupted to our rear. The weapons platoon leader reported his ambush had engaged a small khaki-uniformed Viet Cong force which had broken contact and withdrawn north. The squad leader estimated one enemy soldier had been hit during the engagement. There were no U.S. casualties.

The events of the day had convinced me that we were opposing a hard core Viet Cong unit of unknown strength. The only unanswered questions were: Would he stand and fight, and if so, when and where? My



... a landing zone to accept the evening's resupply ...

thoughts were interrupted by the general's radio transmission informing me I had permission to move one platoon to the proposed landing zone. Hoping the general would not think me too indecisive, I changed my request and asked permission to move the entire company. I explained my reasons and, within minutes, permission was granted. Later, unknown to me, the battalion commander moved the entire battalion to the rice paddy.

A map study revealed the rice paddy to the south extended only 300 meters west from the point where the finger on which we were to travel made its intersection. With the ever-present drone of the UH-1B armed helicopters hovering overhead, I felt certain the enemy to our front would avoid withdrawing across the open paddy during daylight hours. It seemed reasonable to think that if he had a large force he would attempt to delay our movement with small ambushes, while withdrawing the main element through the jungle around the

western edge of the rice paddy. My hunch was partially correct; but, I must admit I never estimated his strength to be two companies.

Prior to movement I briefed the platoon leaders on the tactical situation, and what I expected to encounter to the front. Emphasis was placed on the movement, which would be conducted at a very slow pace with maximum security. Everything was in the enemy's favor; he knew the terrain and our position.

The company was to move in a box formation with the first platoon (base platoon) on the left, followed by the command post group and the third platoon. The second platoon was 50 meters to the right of the first platoon, followed at 50 meters by the weapons platoon. (See figure 2.) All platoons established security well out to their front, flanks, and rear. The leading platoons (first and second) moved with two squads up and one trailing in the slot (See figure 2). This formation offered maximum security to the front while moving down the narrow finger, which was 500 meters wide and dropped off steeply on both sides. The steep drop-off afforded the enemy no route of withdrawal if he attempted to ambush the company from the flank. For this reason emphasis was placed on forward security.

Prior to jump-off at 1400 hours I requested an artillery preparation on the top of the finger. This request was denied because another unit had a priority mission in progress. Two additional fire requests on the same target were also denied because friendly aircraft were in the target area.

The movement south was progressing extremely well. It is obvious that the orders of the platoon leaders had impressed their men as to a probable enemy contact. Numerous halts were taken, as scouting parties conducted extensive reconnaissance to the front and flanks. The weapons platoon established another hasty ambush to the rear to insure the enemy was not following.

The sharp crack of an M16 in the first platoon's sector at 1450 hours broke the silence of the jungle. The platoon's point man had detected a khaki-uniformed enemy soldier loping away to the south and had killed him (see figure 2). As the first platoon leader was rendering his report, three shots echoed from a shotgun in the second platoon's sector. Their point squad had detected enemy movement to the front. Before the platoon leader could complete his report, the enemy commenced firing across the entire front of the second platoon (see figure 2). Three troopers were hit during the initial seconds of the battle.

The enemy was well camouflaged and concealed 50 meters to the second platoon's front. His strength was estimated to be of platoon size.

The second platoon returned the fire, and after achieving fire superiority, began to maneuver forward by squads. After moving approximately 20 meters, the enemy fire suddenly increased and two light machine guns entered the action. Thirty meters from the enemy posi-

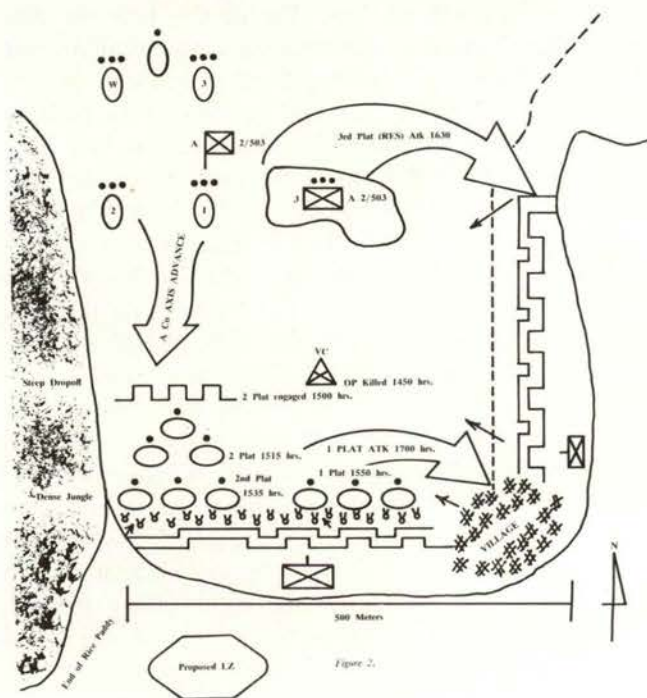
tions, the advance of the second platoon was halted.

The close proximity of the second platoon to the dug-in enemy made the use of artillery impossible. I requested an armed UH-1B helicopter strike, and as always, they were on station overhead. While coordinating the fire mission with the helicopter fire team leader, I maneuvered the first platoon forward, as they had not yet met any heavy resistance. My plan was for the second platoon to provide a base of fire, and the first platoon to assault the enemy from the left (eastern) flank, immediately following the helicopter strike.

The first platoon had maneuvered forward approximately 20 meters when the enemy engaged them from the front (south) and left (east) flank with a tremendous volume of machine gun and small arms fire. The first platoon was immediately pinned down. It suffered one casualty.

The Viet Cong had now employed three additional machine guns in the fight, for a total of five. A .50-caliber, placed to the left (east) rear, had company headquarters pinned down.

The first platoon was receiving effective small arms fire only from the enemy positioned 60 meters to their front (south) and the machine guns on their flank (see figure 2). The enemy company on the left (east) was occupying an ambush position along a small trail 200 meters from our flank. As a result the heavy jungle vegetation was absorbing practically all their small arms fire. Over half the firepower was going into empty jungle since the third platoon had halted just prior to the outset of the battle and was positioned 100 meters north of the enemy's flank. The enemy had calculated we would be moving down the trail into the fortified village which was located at the junction of their two forces. As a result of this miscalculation only the machine guns





. . . the dug-in enemy . . .

on the flank were delivering effective fire through the dense jungle.

Attempt after attempt to establish radio contact with battalion failed. The artillery forward observer had also lost contact with his liaison officer. The helicopters were making their first pass and weren't in the mood to relay radio messages after hearing the enemy machine guns below. It was obvious that Company A would fight this battle alone, assisted by the armed helicopters.

At the initiation of the battle the third platoon had been halted in a reserve position 200 meters to the north of the first platoon. With the first and second platoons pinned down, and no maneuverable terrain to the right (west), I ordered the third platoon to maneuver to the enemy's northern flank and be prepared to attack on order (see figure 2).

From the initial moments of the engagement the weapons platoon had been deployed as rear security. It is a common Viet Cong tactic to feint the attack on one flank and then assault with his main force from another, after you have committed your combat power.

As the third platoon maneuvered for a clear shot at the enemy's flank, I lost radio contact with the first and second platoons. Moving forward to make contact with the second platoon, my radio operator commented how effectively the enemy .50-caliber machine gun was clearing the jungle vegetation. The helicopters were approaching on their final pass when we reached the second platoon's command post. The enemy had fixed the platoon's position and had inflicted two more casualties. I ordered the platoon leader to attack with the support of the armed helicopters. There was no walking or running forward; the only means of travel was the low, low crawl. Seeing his men advance without hesitation into heavy enemy fire must be the greatest reward a commander

can ever receive. The machine gun fire from the helicopter was erupting the ground 50 feet forward of the second platoon. Several small explosions were noted, which later proved to be enemy anti-personnel mines (see figure 2). The mines were approximately the size of an expended M79, 40mm casing and were designed to cripple, not kill. An enemy pull wire-activated hand grenade exploded on the right flank of the first platoon, netting the enemy two additional paratrooper casualties. Shortly after, another was wounded by an anti-personnel mine. The enemy had employed another of his common tactics—that of placing a hasty minefield forward of his defensive position.

As my radio operator and I were crawling forward, the enemy machine gun on the right flank was back in action from a new position. I pulled my operator to the ground, only to find two U.S. hand grenades tied to the tree between us, and a pull wire running to the enemy position. Needless to say, the wire was quickly cut.

A machine gunner from the second platoon had detected an enemy soldier in a spider hole 10 meters to his front. After the first burst from the M60 machine gun, the Viet Cong jumped to his feet, activating several grenades with the wires in his hands. The gunner immediately cut him down.

Much to my amazement, the enemy soldier was uniformed in green fatigues, equipped with helmet, boots, pack, and web gear. His weapon was of Red Chinese manufacture.

With the enemy still 15 meters away and the area to the front mined and booby-trapped, further advancement of the second platoon would have been far too costly at this point. It should be noted that as long as we paratroopers remained in the prone position and maintained a heavy volume of fire, the enemy was incapable of inflicting casualties on us with small arms fire. The area was too dense for either force to use grenades.

Unable to achieve a penetration to the front, I ordered the reserve (third) platoon to attack the enemy force on the left (east) flank (see figure 2). The weapons platoon was then reverted to reserve.

Moments after the third platoon's M60 machine guns commenced firing, the enemy .50-caliber stopped firing. Minutes later the entire khaki-clad, blue-scarfed enemy force withdrew, leaving behind only small trails of blood and several hundred rounds of U.S. .30-caliber ammunition. Why the enemy commander withdrew so quickly, under such a limited attack, remains unknown. My deduction is that he overestimated the size of the attacking force and thought he had been flanked by another company.

The withdrawal of the enemy company on the left (east) decreased the pressure on the first platoon and offered maneuver room to the left (east). The sudden disappearance of his flank unit did not appear to affect the intentions of the enemy force to our front. They were



. . . armed helicopters hovering overhead . . .

determined to hold their position, probably because of the open rice paddy 200 meters to their rear (south).

With the third platoon reorganizing, I ordered the first platoon to initiate a probing action to the left (east) in an effort to locate the limit of the Viet Cong's eastern flank which had been created by the withdrawal of the flank unit.

By 1650 hours, Company A had sustained nine casualties, relatively light considering the bitter fighting of the previous two hours.

Ten minutes later (1700 hours) the first platoon reported they had located the eastern limit of the enemy's line anchored in a small fortified village (see figure 2). The terrain surrounding the village was relatively open and would permit the employment of the M79 grenade launchers. Prior use of this weapon had been impossible due to heavy vegetation. In addition, a fairly covered avenue of approach into the village was available.

My only order to the first platoon leader was to seize the village, as some of the wounded required immediate evacuation.

First Platoon Breaks Through

With the second platoon still heavily engaged and pinned down and the third platoon securing the left (east) flank, the first platoon attacked the village. Following an extensive M79 and machine gun preparation, the assault was launched. The dug-in Viet Cong countered with machine gun and small arms fire. After 30 minutes, a four-man party composed of the platoon leader, two noncommissioned officers, and a private, reached the village. One NCO stormed the machine gun position, silencing it with a hand grenade. The private was firing his M79 at point blank range into the enemy emplacements with devastating results. The platoon leader and the other sergeant were observed throwing grenades into position after position. The courage displayed by these four men inspired the entire platoon to overrun the village. The first platoon's penetration gave Company A a firm foothold on the enemy's eastern flank.

The enemy force, across the entire front, began a disorganized retreat south under a hail of fire from the paratroopers. Their movements were detected by the

armed helicopters hovering overhead. Strikes made on the retreating enemy resulted in an estimated kill of 20 Viet Cong. By 1740 hours the entire enemy force was routed.

After a rapid reorganization the first platoon again moved south, followed by the third platoon and the second platoon carrying the wounded. The weapons platoon continued to provide security to the rear as the company drove for the landing zone to evacuate their wounded.

The General Arrives

At 1805 the first platoon reached the rice paddy and secured the selected landing zone. A helicopter appeared overhead as the mop-up action on the ridge line to the rear (north) continued. The helicopter landed, discharging the commanding general, his operations officer, and *aide-de-camp*. The general directed that his aircraft be utilized to evacuate the wounded. In addition, he delivered the much-needed ammunition resupply. "Congratulations," the general stated in a quiet, sincere tone of voice, "I monitored most of it from above."

Dusk was quickly settling in "War Zone D" as the lights on the general's aircraft disappeared on the horizon. The troopers of Company A, Second Battalion (Airborne), 503d Infantry had fought and won their brigade's first company-size battle against two "main-line" Viet Cong companies.

The names of personnel participating in this battle were withheld from this writing because most are still serving in South Vietnam. Nine men were decorated for valor in this action.

Battle Statistics

American losses in the battle were light.

The Viet Cong paid a much higher price. Enemy losses were eight killed (by actual body count) and an estimated 50 wounded. The wounded figure was estimated from the remnants of enemy bodies on the battleground and the blood they left behind at their positions. It was impossible to accurately count the numerous blood trails leading to the south after the action. An estimate of an additional 30 enemy wounded probably wouldn't

...e excessive. The estimated 20 Viet Cong killed by the armed helicopters when the enemy was retreating are not included in these statistics.

Conclusions

1. "Hard core" Viet Cong units are excellently equipped and well-led. They are experts in the arts of ambush, camouflage, and the construction of field fortifications.

2. Route selection in enemy-controlled territory is of vital importance. The use of roads and trails will result in ambush. Move parallel to the roads and trails and roll up ambushes from the flanks. I cannot emphasize this point enough: *Stay off the roads and trails* during cross-country movement.

3. To fight effectively in the jungle, good communications are a must. The AN/PRC-25 radio has proven itself over and over in Vietnam.

4. Artillery support must be available to the rifle company commander when he requests it. A hundred howitzers lined up hub-to-hub are useless if we cannot clear the gun-target line. The helicopter has brought to commanders in Vietnam a degree of flexibility and mobility never thought possible 10 years ago. Couple the helicopters with the increased tactical air support available, and you have a major problem in the Fire Support Coordination Center. Most commanders in Vietnam will tell you they have mastered this problem in their units. The use of a grid-square numbering system, or a grid-color code, or simply the use of a codeword to identify the target, as was done in Korea. The cold hard fact is that the support coordination in Vietnam can and should be improved. A system is required that can be used throughout all corps areas, and be understood by all units.

When the war is won in Vietnam, a large slice of the credit must go to the helicopter pilots. The armed helicopter fire teams give the company commander the most flexible fire support in the history of warfare. The pilots do, however, require a little information before they can effectively support you. Mark your forward limit with smoke and give the pilot an azimuth and a distance from your position to the enemy. Tell him

The helicopter has brought . . . flexibility and mobility



. . . a large slice of cake must go to the helicopter . . .

how you want him to conduct his passes and the nature of the target. Adjust his fire after his initial pass.

6. When planning operations, staff officers must take into consideration that a rifle company, conducting a search-and-destroy mission in secondary jungle, cannot possibly negotiate more than 400 meters per hour without sacrificing security. Commanders must also take into consideration, when positioning reserves, that to reinforce a unit 500 meters distant in secondary jungle will require an hour's march. A faster rate of march will result in the lack of adequate security and fatigued troops.

7. Prior to deployment of the 173d Airborne Brigade to South Vietnam, many senior Army officers conjectured as to how our young troopers would react when they met the enemy face-to-face. Commanders were reminded of the high percentage of American troops that allegedly would not fire their weapons in Korea. I do not believe these statistics to this day. I do not know of one single man in our entire battalion that failed to fire his weapon in combat. Never during any engagement did I ever see a paratrooper moving in any direction but forward. Our problem was not getting them to close with the enemy, but trying to keep them from bunching up as they charged forward to assist their buddies at the crack of the first shot. Platoon sergeants had to inspect their men closely prior to an operation to insure a sick trooper was not attempting to get on a helicopter, after being ordered by the doctor to remain in camp.

Medics continuously exposed themselves to enemy fire to treat the wounded. When the going got real tough, the platoon leader was up front setting the example, insuring the mission was accomplished.

In summary, my final conclusion is quite simple: The man wearing the green fatigue uniform of the U.S. army in South Vietnam today is more intelligent, better trained, better equipped, tougher, and better led than any Infantryman in history. With a little support from the American public he will win, if the enemy will *Stand and Fight!* ■

combat notes: ben cat iron triangle



BRIG GEN ELLIS W. WILLIAMSON

UNITED STATES ARMY ground combat in Vietnam has become of age. When the 173d Airborne Brigade arrived in Vietnam in May 1965 it found that military operations were always executed in succession rather than simultaneously in support of each other. Artillery was fired, then air support was used, then troopers were moved, then other things happened. Now with fully developed fire support control centers, with the use of good communications, good observation and multiple means of movement, many activities are being effectively executed in concert.

The Ben Cat/Iron Triangle operation has shown that the ingenuity of the American fighting man, well equipped as he is, can accomplish almost anything.

On 14 September, a large operation was begun with the mission of finding and destroying enemy forces and installations in the general Ben Cat area and of making the area safe for the introduction of the arriving elements of the U.S. 1st Infantry Division. With the movement of the heavy fire support elements overland and the Infantry foot elements by helicopter, we introduced

into the area three Infantry battalions, one cavalry troop, one armor company, one engineer company, a logistical operations center, and a five-battery artillery battalion in rapid time with minimum exposure. (Chart 1.)

The first phase of the operation consisted of saturation patrols searching for worthwhile bits of intelligence upon which to plan future maneuvers of units, augmented by civic actions that were designed to win the support of the local people.

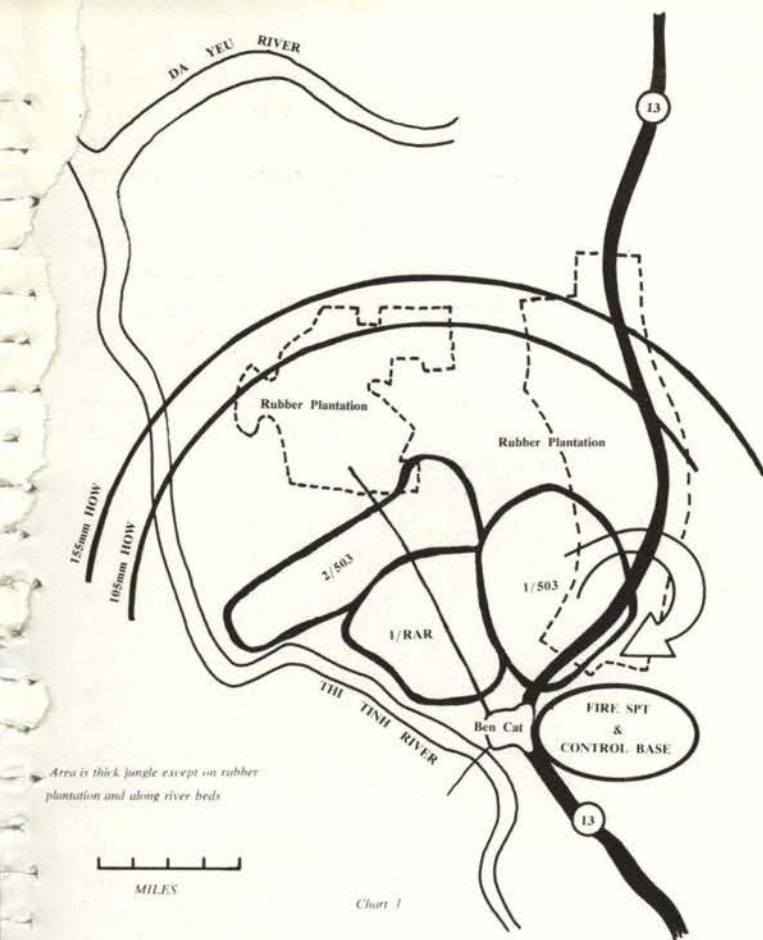
This operation was truly a three-legged stool; intelligence, maneuver and fire power, plus civic actions. Each element served to support and compliment the other.

The saturation patrol efforts (see charts) consisted of each Infantry battalion sending out approximately 30 small patrols each day. As enemy contacts were made and information was gathered, patrols were converged or battalions were assembled to lash out at the enemy gets. As shown in Chart 1, the 1st Battalion, 503d Infantry assembled and moved, even outside its assigned area, in an entire battalion sweep of an area where an enemy battalion was reported assembling to move out.

As the intelligence picture developed and the enemy targets were found to be in the northwest corner of the operational area, battalion-size patrol bases and artillery support weapons were maneuvered into position to support future large operations. Numerous small personnel carriers were lifted by helicopter to get in behind enemy units. Artillery was dragged forward. The terrain was nearly impassable. It took to move one 105mm howitzer battery just and this was accomplished only after hooking personnel carriers in tandem and literally dragging howitzers through the jungle mud. The New Zealand 105mm howitzer battery, however, was moved easily since its weapons could be folded and placed on the APCs.

As these deployments were being accomplished, a B-52 bomb strike was requested and the 1st Battalion, 503d Infantry made ready for its helicopter lift behind the enemy installations which included a reported 2,000-man force. The B-52 bomb strike was denied because of the possibility of hitting a nearby village; however, 50 in-country fighters were made available.

The 1st Battalion, 503d Infantry made its helicopter landing immediately behind massed artillery, air strikes, and helicopter preparatory fires. The landing was almost unopposed but it was immediately obvious that we were deep in the enemy's backyard. The next day the 2d Battalion, 503d Infantry was also helicopter-lifted over the enemy force and placed in his rear. These two battalions with the able assistance of the firepower from the Australian Support Base (two artillery batteries) and the Australians providing the anvil on which the enemy was driven, were able to destroy an enemy support base of a fantastic proportion. (Chart 2.)



After a brief fire fight in which 12 enemy were killed, the 1st Battalion, 503d Infantry destroyed a combination signal school, signal repair shop, psychological warfare school, and long-range radio station. Thirty-six radios were captured at this location. The 1st Battalion came upon two large enemy hospitals that would accommodate approximately 400 patients. One of the many wounded patients that were captured stated that he personally saw eight dead men carried out while he was left to be captured. The 1st Battalion, 503d Infantry continued its move to the south and just prior to reaching its helicopter lift-out area discovered and extremely large weapons and ammunition cache. Among the items captured were 62 new Russian-made sniper rifles with telescopic sights, numerous other types of weapons, several thousand hand grenades, mortar and recoilless rifle ammunition, plus molds for the manufacture of grenades and mortar ammunition. Simultaneously the 2d Battalion, 503d Infantry was taking its toll of enemy installations to include three different battalion-size training camps, what appeared to have been a high level headquarters, and numerous small caches of ammunition and supplies.

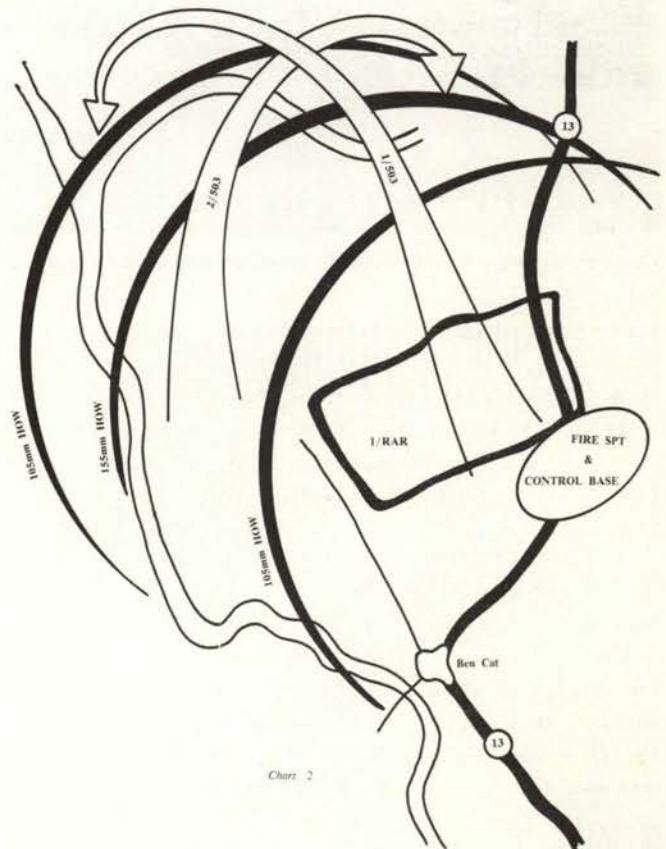
After six days of working deep in the enemy's rear, the 1st and 2d Battalions, 503d Infantry were heli-lifted out of that operational area and the 1st Battalion, Royal Australian Regiment was given the job of bringing the fire support equipment to a hard-surfaced road. Once

again nearly impassable terrain was encountered as it took over 48 hours to move just four miles.

During this period of time our civic actions were used to explain our purpose to the local people. We held sick call, we gave dental assistance, we donated food, and assisted in church services. These actions began to pay off. The civilian populace became friendly. On three different occasions the Viet Cong attempted to solicit the assistance of the civilians and were turned down. In several instances civilians told us of the location of mine fields, of enemy personnel concentrations, of enemy supplies, and of enemy future plans. In one case a woman identified a Viet Cong spy and through this lead we were able to capture the entire roster of the Viet Cong Phu Loi Battalion. Finally, one friendly civilian, seeing a Viet Cong about to throw a grenade at one of our vehicles, physically wrestled the terrorist to the ground. Both were wounded. They were taken to the hospital and treated and the terrorist was then taken to the interrogation center.

After a short rest, we turned our attention to the southwest and tore apart the great unknown, the Iron Triangle. The area known as the Iron Triangle had long been considered a place of myth, dread, and fear. Many tales had been told of the strength and power of the Triangle but none had been confirmed or denied. (Chart 3.)

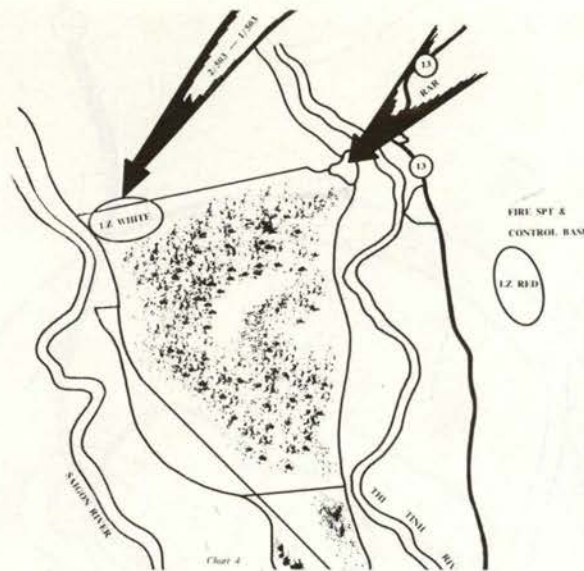
When the civilians saw us on the move again, going after the Viet Cong, their response and appreciation was



evident. Men, women, and children along the road jumped up and down and clapped their hands. Even the district chief stopped on the road and passed out free soft drinks. We had won friends among the people and they had seen by example that when we closed with the enemy we, in fact, destroyed him or pushed him out.

The Iron Triangle was destroyed by just the reverse of the tandem-type operations that were prevalent when we arrived in Vietnam last spring. Under the cover of the noise and confusion of two B-52 bomb strikes, the artillery, cavalry, tanks, and brigade command and control elements were moved to positions immediately beside the Iron Triangle. As the noise and confusion continued, the Australians moved up the road, turned west from Ben Cat, and were in position for an overland assault. The "second echelon" of the leading battalion was also moved forward by helicopter and placed in a ready position.

As soon as the last bombs of the B-52s fell, the Australians stormed across the river. Some 16 Air Force sorties and the fires of 24 artillery pieces began preparation of the landing zone. Instead of lifting as the 1st Battalion approached, the fires were shifted slightly to the south. The armed helicopters strafed and made the final close reconnaissance. They skirted around the firing zones and the lead (half) of the 2d Battalion, using some 65 helicopters, landed on LZ White. The 2d



echelon, having been pre-positioned only 10 minutes away, was on the ground immediately behind the 1st echelon. The helicopters then returned to Bien Hoa, refueled, and shuttled in the 1st Battalion, 503d Infantry as quickly as possible. (Chart 4.)

The Iron Triangle was thoroughly searched and investigated, and all enemy troops and installations were destroyed. (Chart 5.) Within a three-day period 105 enemy were killed and 130 captured. When the sweep



The Iron Triangle was thoroughly searched and investigated . . .



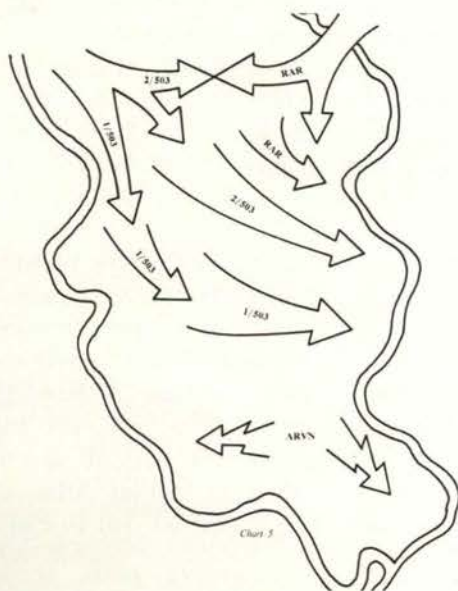
was completed the Australians and the 2d Battalion moved north along the western edge of the Triangle, across the river at Ben Cat, and were positioned along Highway 13. When the enemy continued his resistance, the 1st Battalion was left in the area to complete the destruction. The 2d Battalion, the 1/RAR, the tanks, and the cavalry were moved into position to destroy enemy forces east of the river. As an indication of how tenaciously the enemy held to his ground, we had five C-123 aircraft and nine helicopters hit by ground fire in a two-day period, although not a plane was lost and no crew member seriously hurt.

One enemy captive said that the previous night our massed artillery had caught his entire battalion in a stream bed just as they were preparing to move out.

The enemy used relatively few men and large numbers of electrically-detonated mines and booby traps.



This caused us to make a momentary change in our formations. Instead of continuing the large-unit sweeps, we immediately broke down again into small, widely dispersed units and continued our drive against his static defenses. After placing the 2d Battalion, 503d Infantry, the 1/RAR, and two separate companies in position to cover the west bank of the river, the 1st Battalion was safely helicopter-lifted out of the Iron Triangle. Our return to the Bien Hoa Air Base area was uneventful; however, we had the satisfaction of knowing that we had done a good job.



... we ... continued our drive against his static defenses.

The Viet Cong losses were impressive. Some 2,200 civilians left VC-controlled territory and began life anew in the Ben Cat area. Those who already resided in the area had a feeling of increased security. There were 173 Viet Cong killed, 195 captured, 45 radios and 83 weapons taken. Also taken were over 11,000 pieces of ammunition, 35 tons of rice, 600 pounds of salt, 500 pounds of medical supplies, plus the destruction of camps, huts, training centers, an ammunition factory, and a headquarters.

LESSONS LEARNED

1. Coordinated, simultaneous activities are essential to save time and protect formations.
2. Heli-borne operations to get behind the enemy are essential when he has concealed routes of withdrawal.
3. The forward logistic operation center greatly facilitates resupply of isolated areas (almost all maneuver elements remain isolated during this type operation).
4. The parachute drop of supplies into the forward logistic operations center is preferable to helicopter-lift of supplies.
5. Booby traps and electrically-detonated mines can be defeated by alert, aggressive men operating in widely dispersed formations.
6. Immediate response to intelligence information is necessary.
7. Think during the operation. Change the plan if appropriate. ■

seize and clear

CAPT MICHAEL M. FERGUSON, Inf

*First take small- and middle-sized towns and cities,
and the broad countryside; later take big cities.*

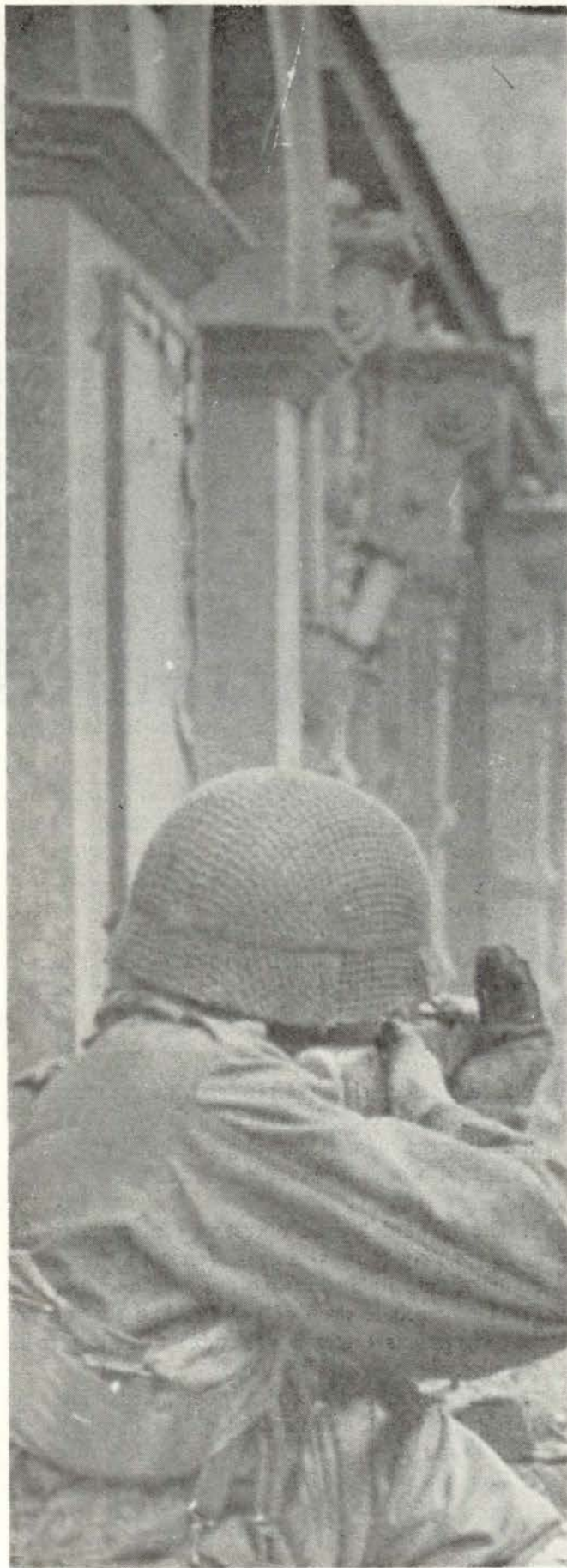
—Mao

AT 0330 hours, 12 October 1962, a Viet Cong force of about 225 men attacked the hamlet of My Hoa in the Phu My District, Binh Dinh Province, Republic of South Vietnam. My Hoa was defended by one platoon, of which two squads were out on patrol, leaving one squad in the defense of My Hoa.

The VC first attempted to gain a foothold in the hamlet. As the initial volley of shots were fired, the two patrolling squads returned to the entrance of the hamlet to find the VC breaching a cement wall. The two squads immediately opened fire on the wall from the outskirts of the hamlet. This startled and confused the VC. At the same time, because the VC had failed to isolate the hamlet before trying to seize it, members of the civilian population moved to the surrounding hilltops, lit prepared fires to light the hamlet, and then returned to aid in the defense. Units from the headquarters of the province, only a short distance away, receiving a report of the action by radio, moved in behind the attacking VC and set up two ambush sites.

The VC were fighting in two directions, against the squad in the hamlet, and the patrolling squads to their flanks. They failed in their attempt to gain a foothold, and at 0430, thoroughly confused and disorganized, the VC regrouped and withdrew directly into the two ambushes. The net results were: the hamlet of My Hoa remained in friendly hands; 150 of the Viet Cong were either killed or wounded; and one defender was killed and one wounded.

This attack of a hamlet is not a type of combat uncommon in warfare. Indeed, battles for hamlets, towns, villages, and cities have been fought since man first grouped together for protection and convenience. Famous cities such as Troy, Carthage, Stalingrad, Berlin, and Seoul have been the scenes of violent and costly combat. In WW II for example, over 40 percent of all combat actions took place in built-up areas—not just large built-up areas like Stalingrad, but in hamlets and villages like My Hoa.



For all the emphasis we must and should place on patrolling and counterinsurgency operations, it would appear, if past experience and present indications can be our basis for assumption, that combat in built-up areas is a topic that should also be stressed in present day training. With expanding control over the countryside in South Vietnam, it is a possibility that more and more the VC will elect to seize and control certain key towns. The recent attempted seizure of two province capitals is a good example of this. Our position in this case may well be that of the attacker rather than the defender.

There are more than enough reasons then, to consider this an important subject that necessitates an understanding of some of the special problems and techniques involved in this type of operation.

Although the term "built-up area" has been used already and a general knowledge of its meaning is apparent, let's go a little deeper into its meaning. Sure, it can be a village, town, city, etc., but for our purposes let's just say it is any group of buildings designed for habitation or commercial purposes. To break this down even further, there are three general types of built-up areas:

a. *Isolated*—Small clusters of buildings surrounded by large open areas, jungles, or tundra, depending on the area of operations. Whenever possible, they are reduced by conventional combined-arms tactics. However, they could require special techniques. If strongly defended, they may even require techniques similar to those used in the reduction of a fortified position.



b. *Semi-detached*—Areas where buildings are spaced relatively close together, such as a residential district. Combat in this area may be conventional or require the special techniques used in the block-type areas.

c. *Block-type*—Areas which have few or no gaps between buildings on the same block. This type would include business districts and/or industrial complexes and will require fighting from building to building and block

to block. Whereas the first two types of built-up areas may be seized through the use of normal tactics, seizure of the block-type area almost always involves special conditions and special techniques to overcome them. These characteristics and the general rules for overcoming them should be well known to the leader who anticipates combat in a built-up area, regardless of type. Consideration of these characteristics should not be made at the time of entry into the area, but previously, while conducting the detailed planning required of this operation.

The first phase of planning must revolve around obtaining as much information as possible about the area in order to ensure detailed and accurate planning. In addition to information gained through reconnaissance of the entire area, other valuable sources of information are our own maps, enemy maps, aerial photos, intelligence reports, and refugees from the area. Detailed knowledge can be obtained of the area by a complete

other automatic weapons, and the taller buildings become valuable possessions in order to secure adequate means of observing the enemy.

Restricted and canalized movement of vehicles is also caused by the relative closeness of buildings in built-up areas. The normal rubble and debris caused by bombing and shelling plus the subsequent fighting, restricts the maneuverability of vehicles tremendously and makes ideal cover and concealment for tank-killer teams. A wise enemy can, through the use of his own road blocks, further canalize opposing forces into areas of his choosing. All of these conditions point to the simple fact that vehicular movement must be closely coordinated with advancing Infantry.

Once entrance is gained to built-up areas, we find that the Infantry is faced with a problem similar to that of forces in Vietnam today—the *nearness of the opposing force*. Although in built-up areas there are different ramifications of this problem, the basic need for



screening of these sources prior to an attack. Such facts may aid in the conduct of psychological warfare which might be conducted in conjunction with the attack. They may also lead to information concerning sewer systems, thickness of buildings, and possible locations of observation posts all of which will assist the planner in formulating a plan of attack. Other items should be considered in the initial planning stages also.

Attention should be given to the conditions that generally influence fighting in built-up areas. They are:

- Limited observation and fields of fire
- Restricted and canalized movement of vehicles
- Nearness of the opposing force
- Difficulty in locating the origin of hostile fire
- Restricted communications

The first of these, *limited observation and fields of fire*, is a result of the relatively few open spaces in built-up areas. Observation and fields of fire become limited normally to narrow lanes provided by streets and alleys. Observation becomes even more restricted with the use of incendiaries and also by smoke and dust created by the actual fighting. Because of this limitation, streets should be covered at all times by machine guns and

training in instantaneous response to an enemy at point-blank range is the key consideration. Combat in a built-up area is characterized by close, small-unit, and individual fighting. The enemy may be in the building next door, the room below, or even in the same room as the attacker. These facts again point to the need for fast reaction and extensive training in techniques such as firing from different positions and searching and clearing an area with close coordination between searching elements and supporting direct-fire elements.

Another problem of this type of combat is the *difficulty in locating the origin of hostile fire*. Because sound magnifies and echoes between buildings and along streets, the location of the enemy and his weapons is extremely difficult to determine. Continued surveillance by all elements and reconnaissance by fire must be the guide to overcoming this handicap.

Restricted radio communications between elements is a difficulty that must be considered in this type of combat. Loss of radio communications can be expected when tons of concrete, wood, and other materials exist between sender and receiver. The gaining of taller buildings will help at times but this is not always possible nor does it alleviate completely the problem of poor



communications. Wire is a possible solution, but because of rubble, falling buildings, and shelling this may also prove difficult to maintain. The use of messengers and visual signals are the best solution to insure sufficient communication for proper control and coordination. Visual signals are particularly useful in marking cleared buildings, booby-trapped buildings, rooms with wounded personnel, etc. A simple color panel system hung out windows will mark and communicate to all those nearby or following the advance of elements.

Aside from these general conditions influencing combat in built-up areas, there are a great many specific problems inherent in this type of operation which must also be considered.

The effect of buildings, rubble, etc. as obstacles necessitates considering means of overcoming them. If combined arms support is available, tanks, combat engineer vehicles, and self-propelled artillery are useful in blowing entrances into buildings or through walls, or clearing rubble barriers. Items such as portable or mechanized flamethrowers are useful in many instances to overcome a heavily fortified building or area. Caution must be used with incendiaries however, for fire can become a detriment to the attacker if it gets out of control. At the lower levels, probably the most readily available instruments to help overcome obstacles and among the most useful, are scaling ladders and grappling hooks with toggle ropes to assist in climbing walls, gaining entrance to the upper stories of buildings, or moving from rooftop to rooftop in order to facilitate rapid clearing of buildings.

The mention of clearing of buildings brings up another problem which must be emphasized. Careless clearing of buildings can be disastrous to rear security. Attacks from behind can be eliminated by careful clearance of a building. Personnel should be aware of all possible hiding places in buildings such as rooftops, attics, closets, basements, underground tunnels, and

"mouseholes" (small, cleverly concealed openings in walls or floors). Booby traps are always a possibility in built-up areas. The individual soldier must be taught to look carefully before touching or moving any objects. This problem leads immediately to another, that of looting. Besides being detrimental to relations with the local populace, souvenir items and items of value are ideal material for booby traps and also present the problem of becoming additional weight for the soldier to carry for which he might compensate by dropping ammunition or some other material he needs for combat.

After considering the range of problems which may face the attacker, the planner should abide by four general rules in preparation of his attack plans.

1. He must insure that his plans for movement emphasize *avoiding streets and open areas*, for they provide "killing zones" with excellent fields of fire. Movement initially should be through concealed approaches into the edge of the built-up area and then through or over buildings, or along sewage or subway systems. Movement across streets or through open areas when necessary should be accomplished by a fast rush in groups rather than singly.

2. Because of limited observation and fields of fire, *supporting weapons and reserves must be with, or close behind, the attacking elements* to remain effective. Many times the rifle platoon will receive direct-fire support attachments if available. The platoon in turn may attach all weapons of the weapons squad to the rifle squads and retain a reserve squad which moves by bounds behind the assaulting squad very much the same as larger unit reserves.

3. Due to the resulting loss of control from elements of a unit being separated by buildings and the unit's communications being frequently restricted, platoons and squads should be assigned a limited number of buildings to clear at a time. This *assignment of definite and limited objectives* prevents confusion and insures

positive clearance of every building. Phase lines and boundaries are also useful in this aspect and should be assigned so as to give complete responsibility of streets or alleys to one unit.

4. To force the enemy out, reduce his resistance, and expose friendly personnel to the least amount of fire, *buildings are entered at the highest level possible.*

Consideration of all factors involved in combat in built-up areas will help insure an operation order sufficiently comprehensive to accomplish successfully the three phases of an attack of a built-up area.

Phase I is the isolation of the area. To isolate the built-up area, the attacker seizes key terrain which dominates approaches and exits. If this is impossible, the attacker must secure positions from which he can support the initial advance of the attacking troops into the area. The tactics used to seize this key terrain are usually those of normal daylight-type attacks. Control of the surrounding area is essential to the successful accomplishment of any further phases. As can be seen by the example of My Hoa, failure to do so leaves the defender freedom of movement to counteract any initial advantage the attacker might have gained through the element of surprise and enables reinforcements to assist their defense or launch counteractions.

Once isolation of the area is gained, troops can be positioned to execute *Phase II*, the seizing of a foothold into the fringe of the built-up area. The attacker must reduce the defender's observation of the approaches into the area. The supporting weapons increase their volume of fire and provide smoke to cover the attacker's initial rush toward the fringes of the area. Once the foothold is gained, the attacker displaces his direct-fire supporting weapons to insure continuous close-in support, and to seal off the foothold from other sections of the area. *Phase II* should be initiated during periods of reduced visibility and from an unexpected direction if possible.

Phase III is a continuation, with no halt, of *Phase II*.



It consists of a methodical, systematic advance through the area to clear it. It must be planned in detail and is characterized by semi-independent, small-unit action. The rifle platoon advances quickly to seize designated areas. Each of the rifle squads assigned to clear is given specific buildings within this area to search and clear. They in turn break down into searching and covering parties and proceed in an orderly and careful manner to clear their assigned buildings. The searching parties (consisting of two or three men) enter rooms after preceding their move with a grenade. One man moves quickly to the nearest wall, places his back to it, and covers the other man who carefully searches the entire room. The rule here is to shoot first and ask questions later. The procedure is repeated by the searching parties, (there may be two to a squad) until the entire building is cleared. The building is then marked as cleared and the searching parties cover the covering parties as they move forward to rejoin them. Throughout this process the supporting weapons and the crew-served weapons of the platoon cover the open areas to assist the continued advance and kill any enemy flushed from buildings. These supporting weapons should displace frequently in order to provide adequate protection for the attacking echelon. All rifle squads of a platoon may have to be committed simultaneously to insure rapid and proper clearance of the area, but many times it is advantageous to retain a reserve squad to eliminate unnecessary confusion or for support reasons. If a reserve squad is designated it should follow about one building behind the lead elements ready to assist or assume their mission. The reserve squad may be given other duties such as ammunition resupply or evacuation of wounded and POWs. When the assigned built-up area has been secured, the consolidation will be such as to prevent the enemy from regaining a foothold within the buildings.

These techniques, if properly executed, will lead to a successful accomplishment of the mission. It is apparent that the VC have mastered sufficiently the areas just discussed, and are willing to apply them. We in turn must be sure that our training takes this type of combat into consideration, for it is a foregone conclusion that villages and hamlets will continue to be fought for and with relatively the same principles and techniques as in the past.

Because built-up areas are the centers of communication, transportation, and industry; because nuclear weapons destroy rather than evict; and because there are many "My Hoa's" in Vietnam today, it would be unrealistic to assume that this particular type of combat is out the window in an age of Special Forces and modern warfare. The burden is still on the small unit, the small-unit leader and sound tactics. Our success on the battlefields of today still depends on the ability to seize and clear. ■

psywar in laconia

CAPT JAMES E. FLETCHER, Inf

The Story of How A Battalion Can Use Psywar In Counterinsurgency Operations.

LACONIA is one of the emerging nations. In the past ten years she has had to rely on economic and technological assistance from the West to bring her into the modern world. Without capital of her own, without technicians, and with few qualified leaders, progress has been slow.

In their recent history the Laconics have been cursed with antigovernment groups of leftists, bandits, and unreconstructed guerrillas from the World War. Insurgents have worked tirelessly to win popular support and to develop a base for guerrilla operations. They have been assisted by Laconia's aggressor-oriented neighbors to the North.

During 1965, the guerrillas have been especially busy. They began a campaign of terror against police and regular forces in Laconia. By skillfully using ambush, sabotage, propaganda, and assassination the insurgents, by May, controlled two of the tiny country's five provinces.

Laconic national armed forces were plagued by low morale. There was a popular feeling that the insurgents were invincible. The Army's efforts to protect the lives and property of the Laconic population had finally become half-hearted, as they retired nightly to safe strong-points, leaving the countryside in possession of the insurgents.

Frustrated and desperate, the Laconic government called upon the United States for assistance. The Area Treaty Organization responded to the call, at the recommendation of the U. S. representative, by fielding the Combined Laconic Field Forces (CLFF).

CLFF planners recognized that conventional forces had not been sufficiently developed by the insurgents to make their continued use likely in the face of a conventional attack: the planners were right. As the first elements of CLFF touched Laconic soil, the insurgents reverted to guerrilla tactics.

CLFF, accordingly, decided to deploy counter-insurgency task forces to pacify Laconia.

L-day—Third battalion alerted for movement as a unit of CLFF. During loading, the battalion staff studied estimates already prepared on the Laconic situa-

tion. Briefings covered the current military, political, and psychological situations there.

L+2—After landing, the staff began to consider the district it had been assigned. Ton Bon District is primarily agricultural, poor, with low standards of literacy and health. The capital is the town of Ban Mop, population about 5,000.

L+3—Reports from MAAG, Laconia and from psychological operations units already in the area indicate that insurgents have a substantial base of popular support. Rural people were apparently the strongest supporters because of the reforms and humanitarian activities advocated by the insurgents. Intelligence reports indicated schools had been instituted to teach reading and aggressor ideology. In at least one area there was an insurgent traveling medical team. There were popular stories among the Laconics about increased harvest yields due to guerrilla help in planting or reaping.

Reported today was the slaughter of village leaders who had not actively supported the insurgency.

The battalion staff was informed by CLFF that government forces and national police had pulled out several months ago for operations in the more friendly South.

L+4—The battalion moved in an approach march to Ban Mop. Little opposition. One or two obstacles encountered by the advance guard; no contact with insurgents.

While the battalion assembled on a clear plateau east of town, a dismounted platoon entered Ban Mop itself. Again, no overt resistance, although children and adults stared at the troops suspiciously. Major Smith, XO, then went into town with an interpreter and a loudspeaker team. He found the village chief, talked informally with him about crops and weather. At first the old chief was hostile, but as he saw that Major Smith knew something about the soil (he had been reared on a farm in Arkansas) he grew warmer. Finally the XO explained that the Third Battalion was near Ban Mop to restore the peace and order that the insurgents had upset and to help the people build a better life for themselves. The chief didn't seem convinced. Then Major Smith said the battalion had a doctor with medicine for almost any illness and offered his services to the village. This made a fair impression. The chief promised to visit the battalion CO at tea some afternoon.

The loudspeaker team delivered a short broadcast to the townspeople, most of whom had stayed in their homes. They made the same offer of the aid station.

The party then left town. As yet, not one smile from the town of Ban Mop.

L+5—Companies A and B moved to their sectors. Late in the afternoon a sentry from C Company (the battalion reaction force) reported a young woman and baby to see the surgeon, and "Doc's" first patient was escorted to the aid station. The baby was covered with sores, symptom of a dietary deficiency common in La-

conia. The doctor did what he could to help the baby and reassure the mother. He called S4 to issue some of the special civic action food supplies issued in such cases.

Again today the loudspeaker team went into Ban Mop with much the same reaction. This time the team had some of the components of the battalian *Friendship Kit* made up by the psychological operations people at Field Force Headquarters. They distributed needles and thread to some of the old women and some simple toys to the more curious children. One of the loudspeaker announcers was able to start a conversation with an old man who sat on a porch facing the village square. He was an old man and quite proud. He told the announcer that Ban Mop was a modern town, that it even had electricity. It seems that the town had fallen heir to an ancient generator, surplus from the last war. It had once lighted the town square for gab fests and folk song fests, but the gasoline had run out; there was no money for more. The generator was rusting now beneath the head man's hut.

L+6—The battalion commander held a conference to determine a way to restore power to Ban Mop. The final suggestion came from Lt Riley of C Company who had been on a patrol along the Ban Mop River not far from town. Lt Riley had been reared in New England and had noted with some interest that the Laconics used waterwheels, somewhat smaller, but similar in construction to ones he had seen near his home in Connecticut. The wheels were turned by the force of the current and carried water from the level of the river to the level of the fields of Ban Mop. Riley suggested that those wheels could be connected to a generator large enough to light the town square. The project was assigned to the Communications Officer.

L+7—Reports from Companies A and B on initial reconnaissance of their areas reported only one contact. Company A had surprised three insurgents carrying supplies to the main force and captured one. Company B requested an engineer team be assigned to repair a ford used by villagers in the area, but damaged by last year's floods.

In the afternoon the Ban Mop village chief came to visit the CO for tea. The Colonel was ready for him and served some prize Laconic tea he had requested especially from CLFF. The chief did not seem particularly impressed. Apparently he had never been exposed to this luxury before.

The Colonel brought up the subject of the village's ancient generator. The chief was surprised the Colonel had heard about it. The CO said he had been looking for just such a machine and would consider it a great favor if the Battalion could buy it. The village chief was suspicious until gifts were brought out to be traded for the generator. There was some bargaining, and the price of three shovels and a guitar was agreed upon.

L+8—Regional news sheets full of stories of the war

and economic development were received from CLFF. Language was simple and illustrations plentiful. They were passed to the loudspeaker teams and rifle company for distribution.

At noon the villagers hauled the battalion's new generator to the CP. It looked pretty hopeless. The Maintenance Platoon had rigged a gear chain for the waterwheel from the old jeep parts, but the generator itself didn't look good. After continuity checks and cleaning, however, it was pronounced ready to generate.

At dusk the generator team moved with a great deal of stealth, and even more trepidation, to what Lt Riley claimed to be the best functioning of the waterwheels. It took about two hours for the device to be connected, but it seemed ready to work. Of course the activity had drawn a crowd, some fearing the waterwheel would be damaged, some only curious. The village chief was notified by one of the former and ran all the way to the battalion CP. The Colonel tried to reassure him as they went to the waterwheel. They arrived just as the first bulb was being connected and emitted a healthy, steady glow. The chief was flabbergasted. Later he was even more amazed when the Colonel presented him with another guitar to pay for the use of the waterwheel. When the project was finished the generator lit only three bulbs in the village square, but this was more light than had been given to Ban Mop in many years.

Reports from Company A that day were not reassuring. One patrol had received small arms fire, but lost contact. Villagers in the Company A area seemed more solidly behind the guerrillas. A civic action patrol was organized at battalion and sent to the area. It was headed by an officer linguist and included two medics and some riflemen armed with pioneer and carpenter tools. Its mission was to make friends, traveling in a difficult area, covering about ten villages.

L+9—Before dawn a crowd of loudly lamenting villagers were outside the Battalion perimeter. To celebrate the new electric lights, the village had held a party at which much "Ban Mop," a violent rice liquor was drunk. One elderly villager had had too much. On climbing up to his front porch to sleep it off, he had slipped and fallen, cracking his head on a stone. The surgeon did his best with the wound but feared a concussion and requested air evacuation. It was easy to arrange for Army Aviation to fly him out; but it was hard to convince the villagers and the old man himself that it was a good idea. Not even the offer of a guitar would suffice. But at last with the personal guarantee of the Colonel that the old man would return, the entire village waved the old man off as he left in the helicopter.

Company B reported that one of the farmers benefited by the improved ford had given names of insurgent cadre in the area.

Company A reported success with a handbill of its own design. CLFF G2 had earlier reported that many insurgents were mercenaries who had been fighting

since the last war and that many had not been paid in the last two months. The leaflet was addressed to the insurgents and promised that all who surrendered to the company would be treated well, moved to a part of the country where the insurgents could make no reprisals, and awarded their last two months' pay. (The part about pay had been cleared with CLFF.) The leaflet was distributed by hand to the villagers in hope that it might be seen by the guerrillas. Results were immediate. The first day five men gave themselves up and were sent up PW channels. The interrogators working with battalion insisted the men prove they were guerrillas. This threw the prisoners into confusion. After thorough questioning, only one man was determined to be an actual surrendered guerrilla; he proved it by giving the location of the current camp. The others were innocent bystanders who had been ordered to surrender by a cadreman.

L+10—The civic action patrols reported that they had assisted in building a hut for a headman in one village and that they had treated 100 civilians to date.

The village chief at Ban Mop promised the Colonel the village would stop sending food to the guerrillas.

Battalion-Level Psychological Operations

Of course, this is a simple example. No real-life district even in the early stages of insurgency presents such easily solved problems. Many of our humanitarian projects would be sabotaged. The pressure of insurgents' combat action might be greater or not, depending on the strength of forces involved and the opportunities offered the insurgents. But the nature of the actions we have to take is not changed.

Psychological warfare is waged on the premise that allegiance is won on an emotional basis and that people give this allegiance in a way which satisfies basic physical and psychological needs. The battalion in the example attempted to determine the needs of the people (electricity in Ban Mop, a ford in B Company, pay for the insurgent guerrillas). Then propaganda and civic action were planned to show that cooperation with the battalion meant satisfaction of needs. In addition, we tried simply to make friends (tea for the village chief; air evac for the old man) so that the attachment of the people to our cause will be one of deep-seated emotion.

The psychological operations techniques were simplified for illustration, but they do proceed from (1) propaganda and (2) action. They are not always initiated by psychological operations units (as were the loudspeaker broadcasts) nor are they promulgated always by a higher headquarters. Often they are the work of the tactical unit in the field. In fact, the personal contacts and conduct of CI units are far more persuasive than many thousands of pieces of propaganda.

Following are some general rules for the conduct of psychological operations in a counterinsurgency atmosphere:

(1) Determine the needs of the people and their attitudes toward the insurgents and the legal government by background study, intelligence activities, and cultivation of friends and informers.

(2) The vulnerabilities identified by intelligence must be acted upon utilizing Psy Ops support available and by committing—to the extent permitted by combat actions—the resources of the unit. The media of psychological operations are generally considered to be audio (loudspeaker and radio), visual (newspapers, leaflets, and posters) and civic action (civic action patrols and teams, medical assistance).

Field Expedients Which Can Increase Unit Capability to Wage Psychological Operations

Silk Screen: Silk screens are simple and inexpensive devices. The screen itself serves to hold a stencil as ink from a brayer is forced through it onto the paper. Advantages of a silk screen are the wide variety of stencils that can be used (including mimeograph stencils) and the materials on which printing can be done (glass, paper, cloth, rubber, plastic).

Hectograph: Hectographs have been used by school teachers for years and rely on the ability of a viscous material (putty or gelatin) to carry an indelible pigment for printing. Indelible pencils, inks or "ditto" stencils can be used. Hectographs are light and require no special materials for construction.

Mimeograph: Mimeo machines are a part of every battalion and can be used to produce leaflets and posters.

Friendship Kit—Suggested Items

- Needles and thread
- Books
- Radios
- Simple musical instruments
- Simple toys
- Hand tools (hammers, saws, shovels)
- Religious articles
- Condiments

Civic Action Projects within Capability of an Infantry Battalion

- Simple road construction and road improvement
- Bridge repairs
- Construction of small buildings
- Repair of light machinery
- Medical assistance

Composition of a Civic Action Patrol

- Linguist
- Two aid men
- One squad (any MOSs)

the walking infantry battalion

The views expressed in this article are the author's and not necessarily those of the Department of the Army, Department of Defense, or the U.S. Army Infantry School.—Editor.

MAJ JOHN T. QUINN, Inf

MILITARY MISSIONS are subordinate to, and they further, our national objectives. In counter-insurgency operations, the missions of the military force will include neutralization/destruction of the insurgents, assistance in stabilizing government, and participation in civic action. All services will usually be required to accomplish these missions. Certainly within the Army, all branches and services will have vital roles. Centralized control of the U.S. effort will insure proper coordination of military forces and non-military agencies.

The purpose of this article is to stress the combat mission of the Infantry battalion when employed in remote areas such as the central highlands of South Vietnam. The stress is not contrary to the foregoing accepted theory of united efforts to accomplish military and nonmilitary missions. Rather it is to emphasize the Infantry mission in remote areas which is sometimes overshadowed by our concentrated efforts to stress civic action and large scale engagements in populated areas and along routes of communications. It is agreed that all these missions must be accomplished and that one complements the others.

Some argue that we need not concern ourselves with an enemy who is in a remote area. They'd use a reaction force to hit the enemy when he moves out of the remote area. Ridiculous! Reaction is the prelude to defeat! If our main efforts are devoted to reaction, then by definition the enemy has the initiative. As long as he is free to train, organize, recruit, and plan his moves then we're on the defense, and the best offense has never been a good defense. Let's think back a few years to a rebel leader who was allowed to regroup and retrain. He used Valley Forge for his remote area. When he came out of there he came out a winner. Let's learn by the British mistake.

Now if we're certain that air power, artillery, and helicopters can do the Infantry job, then we can relax. But if there's a possibility that any of our battalions must traverse remote areas for extended periods in order to disrupt, dissuade, and/or destroy the enemy, then we must mentally project ourselves into that environment and prepare for the unceremonious role of the walking Infantryman. The walking Infantryman is going to be supported by the finest materiel developments

available, and this materiel, plus discipline, American spirit, training, and leadership are going to make him superior to his opponent. However, this superiority cannot be attained by generalities and broad grease pencils. There must be realistic recognition of this mission.

Our Infantry battalion is well organized to fight in Europe, Korea, and some areas of Vietnam. However, it is not properly organized to accomplish its mission in the remote, mountainous jungles of Vietnam. About this time the thought of Rangers, commandos, raiders, green berets, etc., comes to mind. Forget it! I'm still talking about the Infantry battalion. I will say, however, one organization that approaches my concept is the RVN Ranger battalion.

There is no terrain that restricts it except, maybe, a river and it has an effective balance of firepower and foot mobility. The intelligence (other than that furnished by the soldier) and the combat service support must come from higher headquarters. The supply, maintenance, vehicles, heavy mortar, etc., come from above as required by the situation. The lean battalion headquarters is as mobile as the Ranger (rifle)

company. Figure 1 shows my idea of how a commander should organize for the missions described in this article. On some occasions it would have to be fitted up, but it's ready for the mission I'm describing and that which may soon confront many of our battalions. By consolidating the combat support and combat service support at brigade, the brigade commander can "fitup" the battalion or battalions whose missions may require firepower at the expense of foot mobility. The organization in figure 1 requires no major revision. All it does is move platoons from battalion to brigade where they would be formed into companies.

Yes, it does look like the regiment! The fact remains that the battalion is the key command and control headquarters. All it should be required to do is command, control, and request forces from brigade. This is a change from the ROAD theory, but the senior fighter in SE Asia will be more the battalion CO and less the brigade CO. If we want to free the battalion CO to fight his companies, then we must rid him of the 300-man wheeled caravan he

presently has. Support "as required" is the key. The battalion headquarters should be a stripped version of the brigade headquarters of the ROAD concept. The "lean and mean" concept is not new. General Harrell stressed it in 1962. However, we still consider Infantry as mechanized, airmobile, and road mobile.

Certainly the helicopter will be a valuable asset to the walking Infantry battalions and when possible the battalion will ride to "work" and get off at the "main gate" (LZ). However, more often than not, "work" will be a long way from the LZ. We want the Infantryman physically and mentally prepared for the toughest job. We want him organized and geared to travel light—for travel he must. When he needs help we'll do our best to fly it to him. However, we won't tie him to roads and trails by giving him heavy equipment that will preclude his doing his job. Foot mobility versus firepower will always be a tough command decision. However, it has been made before and is being made today. The Battered Bastards of Bastogne did without, but they did their job.

If this outfit moves in remote areas for 30 days or more and aerial resupply is only feasible every seven days, how can it live? We've had soldiers succeed with less during the Bataan and Pacific Island campaigns. However, we may have to educate the doctors to the fact that a soldier can fight with less than 4,000 calories per day. Our troops can fight on vitamin pills, dried soup, instant coffee, a daily can of meat or fish supplemented with enemy livestock and produce. (A good commander will insure that produce and livestock is purchased at a fair price with negotiable currency.) Some of our developmental rations are light enough so that minimum requirements can be carried. Certainly the current seven daily cans of C-rations are not required. Training and leadership will never erase the three-hot-meals concept, but it will convince the soldier that a victory is worth a loose belt.

How do we get from Area Y to Area Z? Can we infiltrate a battalion from Y to Z? Sure we can. There's no guarantee that a unit may not be gobbled up en route, but there is no system with a guarantee.

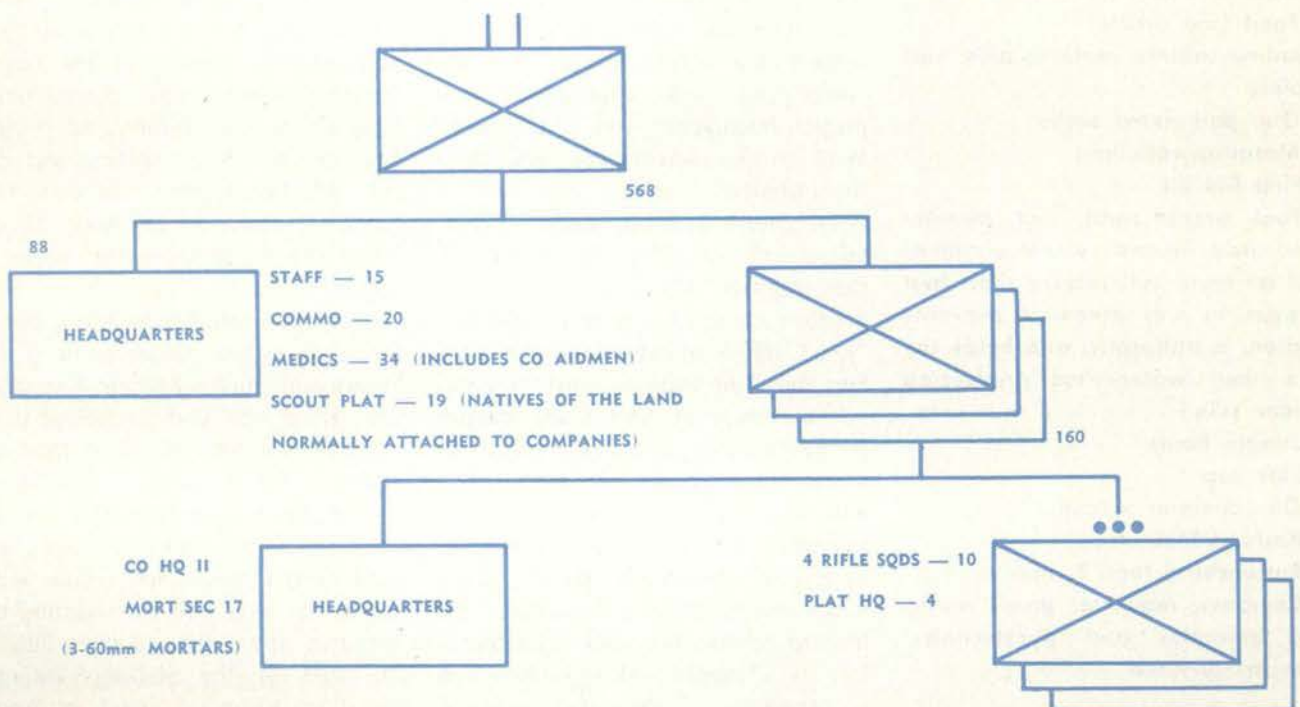


Figure 1

By planning separate routes and departure times, and by decentralized control, the battalion commander can infiltrate his unit. This denies the enemy knowledge of the size of the unit moving to Area Z.

What do we carry? We "travel light and freeze at night." Troops involved in our current area of interest (let's talk specifically about Vietnam's Central Highlands) should carry the items in figure 2. The fighting and existence load concept is false. We'll fight and exist with the home away from home that we carry. It goes without saying that we may drop the pack (12 pounds) to fight—but treat it like a freal friend. A man without his minimum essentials is a liability.

Now that we're out there in this area what are we going to do? Basically, we're going to make this land our own by aggressive patrol-

M16/M79 (180 rounds 5.56 or 12 rounds 40mm) w/oil.

Pack

(Use World War II combat pack due to its size and better carrying characteristics)

Hammock

Poncho with nylon liner

Food (see article)

Iodine tablets, malaria pills, salt tablets

One pair extra socks

Mosquito repellent

First Aid kit

Foot grease and foot powder (bacitracin or undecylenic ointment will be more satisfactory than foot powder in wet areas. It prevents friction, is antiseptic, and helps the skin shed water—thus preventing tender skin.)

Jungle boots

Soft cap

One canteen w/cup

Knife, USMC issue

Entrenching tool/2 men

Compass, machete, panel markers, grenades and pyrotechnics, rope, as directed

Figure 2

ling, skillful ambushing, relentless pursuit, and common sense dealings with civilians. We're going to kill the enemy and encourage friendly folks to move to government-controlled areas. In addition, we'll direct air strikes and assist in the air movement of additional forces and civilian leaders. We'll deny the enemy the opportunity to rest, train, recruit, and organize for large scale offensives. There will be no fixed base for this battalion. That concept was false long before recent examples proved it to be wrong. We work to find, fix, fight, and finish the enemy. He wants to accomplish these same "F's." Why then, would we furnish him the first two? Tactical successes by the VC should not be attributed to his greatness. Sure he's smart, aggressive, dedicated, and takes advantage of weaknesses, but primarily his enemy has helped him by establishing remote, static outposts. Any aggressive unit that is permitted to recon, plan, and time an attack of such an outpost will probably succeed. Certainly we must defend towns, hamlets, routes of communications, etc. However, the backbone of this defense is not the local defensive unit, barbed wire, and bamboo fences—it's the Infantryman who buys the land outside the defended area. In this respect you spell "intelligence" with capitals. Without proper intelligence you can "react." With proper intelligence you have the initiative.

Of course your company or battalion will never have to operate in the vaguely charted area where South Vietnam, Laos, and Cambodia "join." How about areas like Dak Sut and Tou Morong, district capitals currently in Viet Cong hands? If the Infantry isn't ready for these areas, when do we get ready? The guy who says don't practice to be miserable has never been miserable, or else he's forgotten that you learn many things through practice, like how to be less miserable and therefore more capable. Most soldiers can go through a three-day exercise without really being taxed. What's

wrong with planning a 14-day exercise in rugged terrain? Play it straight from the hip—no admin breaks or PXs. The troops will get a little lesson in hardships. The leaders will have to plan and use initiative. You'll find the leaders. How many rifles will not fire? Who's overweight? Who has bad feet? How do you handle these problems? What kind of security do you have after five days? How aggressive is the unit after 10 days? An Infantry commander can have no greater help than the opportunity to see these problems and a chance to begin solving them. An Infantry unit that's soft today will be dead tomorrow.

What tactics will we use? Well, we're sure not going to answer that one beforehand. However, I'm convinced we have capable leaders from squad on up who can make the decision according to the situation. The FM gives us "solutions" from encirclement to fragmenting the disc to hammer and anvil, etc. Ideally we'd like to have the SOP platoon or company reaction force swoop down onto a nearby LZ and clobber the enemy. Many times this will not be feasible. Success will normally depend on the ability of the unit that makes contact to advance aggressively using fire and movement/maneuver. It's tough and it's costly, but these have always been characteristics of the Infantryman's job. Initiative will breed success and success will breed greater success. One battalion's success in Area X will assist other battalions in Areas Y and Z.

No, the walking Infantry battalion isn't a lost battalion or a Jeb Stuart outfit that's fighting a separate war. It's a unit that's enabling us to maintain the offensive and take advantage of our technical advantages of airpower, artillery, helicopters, communications, and so forth. It's winning the people who show a desire to be won and it's wresting the initiative from the enemy. This is the role of the walking Infantry battalion. Know it! Teach it! Apply it now! ■



Infantry Quiz

Infantry Quiz is a regular feature of INFANTRY Magazine and is prepared by the Department of Non-Resident Instruction of USAIS.

We heartily recommend that you test your technical proficiency with this feature, and if any questions regarding the quiz arise, direct them to:

Chairman, AEC Committee
DNRI, USAIS
Fort Benning, Ga. 31905

Answers to the quiz may be found
on page 67.

1. When a patrol encounters a barbed wire obstacle, the patrol leader should first attempt to

- A. crawl under the wire, head first.
- B. find another route around the obstacle.
- C. pass over the wire by cautiously stepping through one or two strands at a time.
- D. cut a gap in the wire, being careful to leave the upper strands in place.

2. You are demonstrating the method of determining the range to an enemy weapon by having a demonstrator out to the front of the class fire a blank round. You see the flash of the weapon and, counting at the rate of four counts per second, you have counted to six when you hear the sound of the rifle. You estimate the range to the weapon to be

- A. 400 meters.
- B. 600 meters.
- C. 900 meters.
- D. 1,200 meters.

3. When conducting a damage ambush on a truck convoy, you should plan to place your assault element so that it

- A. blocks likely avenues of approach into the ambush area.
- B. prevents the enemy from escaping or reinforcing the area in which the ambush takes place.
- C. can provide security on the far side while designated teams make a hasty search for documents and materials,

and kill or capture any remaining enemy.

D. covers the withdrawal of the security element after accomplishment of the mission.

4. In preparing a plan for conducting a damage ambush on a motor convoy, you should plan to

A. knock out the lead vehicle and then open fire on all others.

B. open fire on all vehicles at the same time.

C. knock out the first vehicle, then the second, and so on down the convoy.

D. seal off the area with the security team, inflict maximum damage with fire and then assault to complete destruction.

5. Which statement below best describes the staff responsibility within the battalion for planning and assigning reconnaissance missions?

A. It is a combined S2/S3 responsibility.

B. The S2 alone has staff responsibility.

C. The commander and the S2 have this responsibility.

D. The S2 or assistant S2 has this responsibility.

6. What are the primary considerations in determining the number and location of battalion OPs?

A. Proximity of the enemy and limits of observation.

B. The mission of the battalion and limits of observation.

C. The area of responsibility

and limits of ground observation.

D. The terrain and availability of observers.

7. It is generally accepted that an observer's efficiency decreases after _____ minutes.

A. 30

B. 60

C. 120

D. 240

8. The Estimate of the Situation is a(an)

A. method of determining the effects of an enemy capability on a friendly course of action.

B. examination of the factors affecting the weather in relation to accomplishment of the mission.

C. problem-solving process.

D. mystical process guaranteeing success to its user if all steps are included.

9. The usual governing factors pertaining to comparison of own courses of action and found in most situations involving a unit of brigade size or smaller are

A. enemy dispositions, friendly strength, and examination of combat power.

B. characteristics of the area of operations, avenues of approach, recent significant enemy activities, and relative combat power.

C. visibility, trafficability, men and equipment, and weather and terrain.

D. terrain, own dispositions, enemy dispositions, enemy capabilities, and, occasionally, time.

10. In a tactical situation the commander is most concerned with the adverse effect of a heavy rain for a relatively short period on

A. the physical well-being of personnel.

B. soil trafficability.

C. the morale of personnel.

D. observation. ■

ON 15 June 1965 over half a million television viewers in the Philadelphia area saw a realistic presentation of urban warfare. This presentation was in the form of an exercise conducted by the Dyer Institute of Interdisciplinary Studies, of New Hope, Pa., utilizing, as participants, political science students from the University of Pennsylvania and ROTC cadets from Penn State and the University of Cincinnati.

The principal purpose of this article is to trace the course followed in "The Warsaw Story" and chart the

The Warsaw Story

DR. GEORGE B. DYER

pitfalls, in order to shorten the process for anyone who might wish to repeat this experiment in enlivening and up-dating training in urban warfare, and to heighten interest in this crucial area.

This exercise, "The Warsaw Story" was the 12th in a series combining political and military aspects of warfare. With growing numbers and increasing complications, these maneuvers had been developing since 1957. One such exercise took place in the New Jersey salt marshes and paralleled the conditions in the Mekong Delta.

The classic situation posed in "The Warsaw Story" was: a growing resistance to tyrannical rule has sprung up in a fictional country. Sparked by extremists on both sides, the situation has become first closed to compromise and then totally out-of-hand in a civil war. When the students picked up the story, it was the beginning of the last day of armed resistance. The government troops (the ROTC cadets) had closed in on the resistance (the political science stu-



dents). Cornered, the resistance was making one last-ditch effort to salvage victory, or at least the ability to continue their movement at a later time.

The principal action centered around two multistoried brick buildings within 100 yards of each other. One was designated "Building No. 1, The Hospital." The whole north face of this structure had been knocked into rubble on the sidewalk below, and the floors hung drunkenly unsupported. The effect was that of continuous artillery bombardment. At the other end, a corner tower had been brought down in wreckage, as though a conventional air bomb with delayed fuse had penetrated to the third floor and then detonated. "Building No. 2, The School" was even more damaged, a whole end smashed in, all but one wing burnt out to the sky as though by incendiaries, and the streets around it half-filled with debris.

The cadets mounted their attack on Building No. 1 and, after "surviving" sniper fire, booby traps, and machine guns, took the building and forced the resistance back to Building No. 2. It was in the maze of cellars under this building that the resistance had established its deepest and best concealed control center, and it was around this building that the last desperate stand was planned.

The building was surrounded and the campaign begun to flush out the guerrillas. At this point, the only chance for the resistance was to escape. They were low on supplies. At least one leader was captured trying to get water from a fire hydrant. The plan for escape was to exfiltrate the women through the regular's night patrols and across the river to safety, while the men fought their way to the river bank. The plans were moderately successful.

After the "battle," the cadets and others were given a demonstration, under the guidance of a "pro" from Fort Bragg (who came up especially for this), of the approved methods of entering or clearing a house or room.

All the cadets were also taken up on the roof of the hospital to emphasize the vital importance of cover and concealment. Everyone saw how he had looked through the telescopic sight of the "snipers" who had been "picking them off" all through their advance to the building.

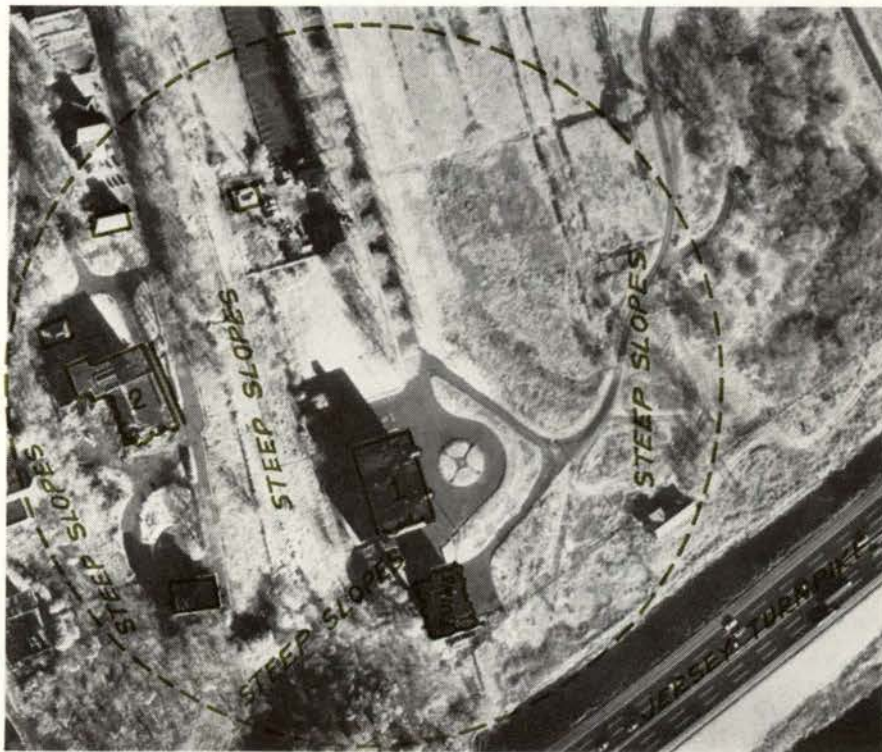
The class members, and those cadets who wanted to go, were then taken to see the elaborately prepared underground resistance control center which would have been going full blast all night had the original plan for an overnight exercise been practicable. A member of the class found the door of the resistance hideout without much difficulty. (The last-minute changes in plans for the exercise had hardly given enough time to do a real job—but the same experts who prepared this one, on an-

other occasion in the recent past have produced, an entrance which couldn't be found by the engineer who had designed that particular cellar!)

There are many problems involved in an operation of this sort. The four most troublesome are: locale, safety, cost, and control. These were solved, after much leg work, to everyone's satisfaction in "The Warsaw Story." There is much that is not said in this article about the solutions of these problems, because of space limitations, but it is questionable as to how much value our special problems would be to others. (Some of these were handled with little cost or risk to us by the people who controlled the locale for this particular exercise.) The problems are stated and the solutions given for "The Warsaw



The Resistance occupies Building 2, "The School" (facing page). Above, the assault on Building 1, "The Hospital," reaches its final stages. Below, aerial photo shows exercise area.



Story" without the behind-the-scenes maneuvering.

LOCALE

The two considerations important when determining locale are authenticity and isolation. The question was solved when the resemblance between urban renewal and artillery barrage wreckage was noted. It was decided that an urban renewal project was the answer, but a special type was required, one which was in the right stage of demolition and which was remote enough from any populous area to inhibit "gate-crashers." The setting for "The Warsaw Story" was ideal, a collection of administrative buildings in New Jersey abandoned when semi-rural county offices were moved to a new installation. The site came complete with natural and man-made barriers. It stood in a park well-insulated from any other community by a wide network of railroad tracks and swamps on two sides and by swamps and a river on the others. The park had been fenced, and when the county leased the park as a quarry, this fence was patrolled.

The complex contained all the usual county activities: an old-folks home, various hospitals, a theater, a church, power and heating plants, and the like. The battered and grim wrecks of at least two of these buildings still resisted the wrecking crews: the hospital and school mentioned above, intact enough to be perfect for urban warfare training. The setting certainly provided the desired realism. The interiors left in the complex of ten or twelve buildings looked as though they had been looted by armies and ransacked by desperate civilians in search of food.

SAFETY

Selecting the location was only the first of the problems. Implementation of the project was to be much more difficult. It shortly became apparent that the risks involved in simulating this sort of combat would be

considerable—possibly fatal to the whole project. Added to the chances of killing or injuring an ROTC cadet or Regular Army cadre member were two other factors:

(1) By definition, a maneuver with political elements involves civilians, who are likely to be less well-disciplined than the military personnel and less covered by insurance. In case of mishap, the chances of a liability suit against the sponsoring organizations are much greater with these people.

(2) The results of repercussions might be staggering. Unlimited suits against the sponsors could be initiated by any third party in the neighborhood of the exercise who felt himself in any way aggrieved or damaged by it.

The experience gained in the previous exercises helped minimize the risk. Elaborate safety instructions and briefings were backed up by strong safety requirements. All participants had to wear heavy boots, leather gloves, and, at least, helmet liners, and had to show evidence of an anti-tetanus inoculation within the past year. An "own-risk" certificate, holding the sponsors blameless, was required. No one got by the security desk without having this certificate, immunization, and protective clothing approved.

All precautions were reinforced in the exercises by adequate insurance. In "The Warsaw Story" general liability was assumed by the Philadelphia TV station which presented a film of the exercise under the title, "The Cruellest War."

COST

Costs for "The Warsaw Story" were kept at a minimum; except for the TV technicians' participation, the total cost to everyone was probably less than \$900. Transportation, the bulk of that figure, was mainly met out of official military or institutional funds.

CONTROL

It was decided that "The Warsaw



Perched on a rooftop, a Resistance sniper draws a bead on "government" troops below.

Story" would be a free maneuver, so that the only controls enforced would be those concerned with safety and some minor ones dealing with umpiring. The boundaries of the exercise were patrolled and the safety instructions and briefings followed through to keep risks within limits. The only other controls consisted of having umpires accompany "snipers" to take out of action any regular who was deemed too visible. The umpire with the sniper would radio to his counterpart on the field to notify the "victim" of his removal from action.

CONCLUSION

It is practicable to simulate combat among big city buildings, using specialized situations of urban renewal as locale. Such a project can be effected without large funds, but is likely to involve a great deal of leg work. Legal and physical risks can be kept within acceptable limits by tight discipline and control and by specialized safety briefings, requirements, and documents. Risks could be reduced by having only military personnel play both sides but a lot would be lost in realism, color, and imagination without civilians.

Military training of a particularly valuable and unusual nature becomes possible with such a project, and taking trainees into such unfamiliar surroundings can result in a higher learning ratio, a heightened interest in the whole training program, and even recognizably better morale among the trainees taking part. ■

training: the key to success in combat

IT SHOULD BE a great source of pride to every Infantryman to read in the newspapers and hear television reports of how the combat leaders in Vietnam are expressing confidence in their men and the ability of these men to accomplish any assigned task. Frequently heard are such remarks as, “. . . they are tough, courageous, well-disciplined, well-trained; . . . they were so aggressive we couldn't hold them back; . . . the finest troops I have ever seen, even in Korea; Our men have a real heart for the fight.” Similar remarks are daily describing our Infantrymen and their brothers-in-arms as they chalk up successes in the jungles, swamps, mountains, and rice paddies of Vietnam.

What the United States Army Infantryman, in coordination with other combat arms and the sister services, is doing in Vietnam, and has done in other critical areas around the world for years, should definitely prove to all who would be our enemies that we are not a nation of “softies” who will turn tail and run when the going gets rough. The fact that our troops have again proven they can take whatever is thrown at them by the enemy and then dish it back many times over is a credit to their individual abilities and initiative as well as to their leaders.

All this hasn't happened by accident. It requires tough, realistic training. It requires tenacious attention to detail. It requires the development of an indomitable individual and group determination to be victorious, regardless of the circumstances.

As we expand our number of military units and prepare them for combat duty, whether in Vietnam or elsewhere, the importance of interesting, challenging, and, above all, realistic training cannot be too strongly emphasized. Time is at a premium, and we must make the best use of every available training hour.

In preparing our units we must continue with the attitude of “sweating more in training and bleeding less in combat.” Reports from Vietnam indicate all too clearly that the proper application of fundamentals in training is still necessary and cannot be stressed too often. The employment, firing, and maintaining of individual and crew-served weapons; proper use of cover, concealment, and camouflage; squad, platoon, and company tactics; patrolling and ambush techniques; map reading; proper use of tanks and artillery; adequate and timely maintenance of equipment; communications; resupply; and leadership are a few examples of the areas that demand perfection in fundamental procedures and techniques before men and units are combat ready.

In training, a fierce desire to “play the game” must be instilled in, and demanded from, each soldier and leader in order to develop the confidence, *esprit*, and habitual responses necessary to be successful in winning battles. In “playing the game” the soldier must be mentally conditioned to train as if he were truly in the presence of the enemy, even though he may be in a simulated combat environment. This is true anywhere—Fort Benning, Fort Riley, Hawaii, Alaska, Korea, or Vietnam. By training realistically at all times, and under challenging circumstances, we will not be caught short when we are called upon to respond quickly and correctly in the face of a live enemy who is also tough, determined, resourceful, and fighting to win.

Although wars are fought with weapons, they are still won by men. As the individual trains, so will he fight. The successes in battle we have seen in Vietnam attest to the validity of our training methods and techniques; they must continue to be emphasized and practiced. The survival of our nation as a free country depends on it. ■

—An Editorial Comment by the Company Operations Department, USAIS.



THE DANISH HOME GUARD IS, at the same time, the oldest and the youngest of Denmark's military forces. Though its official establishment was not until 1949, its roots date back much further, to the 12th century. In those days Denmark had no actual army or navy and it was therefore with "Home Guard" units that Archbishop Absalon (1128-1201) defeated the Wends, a German tribe, during their periodic invasions of the country up until the year 1169.

Through the succeeding centuries, every man was called upon when the country was in danger. When, in 1659, the Swedish Army assaulted Copenhagen, the capital was defended with great success by companies of students, tradesmen, shopkeepers, and townsmen. At the same time, there was a resistance movement against the Swedish troops in other parts of the country. In South Zealand the first "combat patrols," under Svend Goenge, made life unpleasant for the invaders.

Throughout the history of Denmark there have always been some type of "Territorials" or volunteers. After the defeat at the hands of the Prussians and Austrians in 1864, the so-called "Rifle Clubs" emerged as a result of popular feeling against the loss of Schleswig-Holstein. Those clubs were originally a kind of Home Guard, but as time went on the military look of the clubs faded. In

1866, the Academic Rifle Corps was formally established, the origins of which go back as far as the wars in 1658-59. Between World War I and World War II, corps equipped with light machine guns (Recoil Corps) and Orderly Corps were established in most counties in Denmark.

In 1937 every kind of volunteer corps were prohibited by law because of political fear. A great number of these corps later re-formed to become active in building up the resistance in World War II.

During the German occupation, the resistance grew in numbers and, at the capitulation in May 1945, The Danish Armed Forces consisted of The Danish Brigade, trained and equipped in Sweden, and of 54,000 men from the resistance.

In the summer of 1945 the last contingent of men from the resistance was demobilized and in autumn Home Guard unions were created based on the men, equipment, and organization of the old resistance. Expenses in connection with these Home Guard unions were paid by the Ministry of Defense.

With the Communist expansion in Europe in the years following World War II, it became imperative to extend the Home Guard unions and it therefore became necessary to draft a law covering them. The law was passed in July 1948, and in 1949 the Home Guard became an official part of the Danish Armed Forces. The law has since been revised to cover developing conditions, the last time in 1961.

ORGANIZATION

According to the "Law of the Home Guard" of 31 May 1961, the command of the Home Guard is divided into a Military Branch and a Civil Branch. The duties of the Civil Branch are to arrange meetings, exhibitions, addresses, and to further recruitment of the Home Guard. In short, its duties are concerned with public relations. The Military Branch encompasses the three Home Guard branches (Army, Navy, and





THE DANISH HOME GUARD

SGT B. A. HARTMANN-MADSEN

Air Force), the Home Guard School, and the School of Non-Resident Instruction, as shown in Figure 1.

The Commander of the Home Guard holds the rank of major general or rear admiral and is called the "Inspector General." In times of peace, each of the three branches are also under the command of an "Inspector General." In case of war, the Home Guard branches will be commanded by the commands of the Army, Navy, and Air Force. In such a case, the Commander of the Home Guard will act as an advisor on training, equipment, mobility, etc.

Denmark is divided into a certain number of Home Guard regions. Each region is then divided into Home Guard districts, then into Home Guard companies. The commander of a region is usually a colonel or lieutenant colonel; of a district, a major; and of a company, a captain or first lieutenant.

Compared with the Regular Army units, a Home Guard region would contain the same manpower as a regiment. A district would be comparable to a battalion; and the company, to a Regular Army company.

The standard Home Guard company is set up as in figure 2. This will vary, however, according to its duty, depending on whether it is a "city company," "suburban company," or a "country company." The company is composed of a company headquarters (platoon), two to four "light" platoons, and, as supporting units, a "company patrol," a sapper squad, a mortar squad, and an anti-tank squad.

The company staff consists of the company commander, the executive officer (lieutenant), and the administrative officer (lieutenant, or, if NCO, sergeant first class). The CO is in charge of all tactical matters; the XO will take care of supply and training; and the administration officer runs the "paper warfare."

A company area is assigned to every Home Guard company for which it is tactically responsible. In attending to its tactical area respon-



sibility the company forms the basic element of the regional defense, or safety net.

The Home Guard company differs from a Regular Army company in that its average age is higher, its mobility, training, and equipment less, and it has a shorter service time. Thus a Home Guard company cannot solve quite the same problems as a Regular Army company.

There is compensation for all that. The Home Guard company is always "on-the-spot" for immediate intervention against any hostile action. In short, it can be said that the tasks of a Home Guard company are:

- (1) To control the company area
- (2) To provide the Army with as much up-to-date and detailed information as possible
- (3) During resistance, to provide the Army with additional time
- (4) To fight minor enemy units, guard important installations, civilian and military
- (5) To free the Army for higher priority tasks
- (6) To bolster civilian morale as well as to provide the necessary support for the Army.

SERVICE AND TRAINING

Personnel of the Home Guard are all volunteers. Any medically fit man over 18 who has been approved by the District Committee can volunteer. If the applicant has

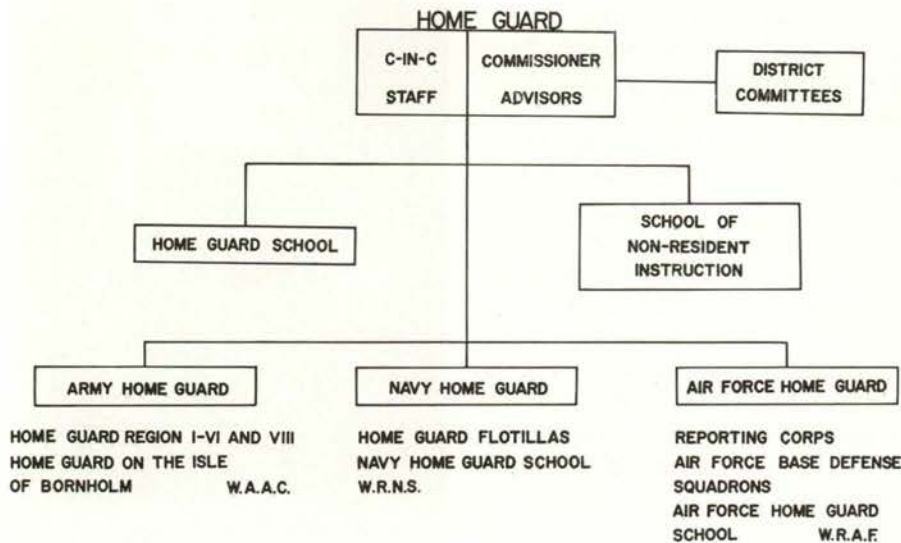


Figure 1

not yet been drafted for national service the first training takes place at company level. For those not drafted service time is: first year, 100 hours; second and third years, 50 hours; fourth year and up, 24 hours. Those who have been drafted must only serve 24 hours each year. However, it must be noted that the majority of Home Guard soldiers serve more time than the law prescribes.

ACTION AND PREPAREDNESS

It is imperative that the Home Guard can take instant action quickly and safely. Alarms are exercised at certain intervals. Therefore, the individual keeps his weapon, ammunition, and equipment at his home, ready for immediate action. In sudden situations the units involved take action stations as prescribed, while all other units will be alerted "by command."



Private in full battle dress

TACTICS

In regard to tasks and placement, the Home Guard has divided its tactics into different phases, with the purpose of giving guidelines for the Home Guard in action.

Surveillance Phase. In this phase every Home Guard unit, company, platoon, section, and squad will primarily have as their task surveillance of the company area with regard to

fighting fifth-column units, controlling traffic, and guarding depots, stores, and the axis of advance.

Bridgehead Phase. The company's tasks include: battle reconnaissance of the bridgehead and all possible support to field army units; resistance inside the bridgehead area with the purpose of preventing cooperation and coordination between landed enemy units; demolition of own installations in case of capture; every home unit will report to its superior unit while maintaining any obtained enemy contact.

Resistance Phase. If enemy units break through the bridgehead area, they must pass through company areas in order to reach their objectives. The tasks in this event are similar to those of the bridgehead phase, surveillance of the company area with respect to reconnaissance and support of field army units, and support of arriving field army units. Resistance will take place within preplanned lines (*i.e.* systems of obstacles).

Guerrilla Phase. In this phase the area is controlled by the enemy in such a way that coordinated resistance is no longer possible. In this situation the tasks will be guerrilla warfare, tactical intelligence, and withdrawal of units for reorganization and renewed actions.

Advance Phase. When the field army units recover lost ground the Home Guard units will have to re-establish the company areas, clear the area of minor enemy units, guard transports and POW camps, control traffic, and take part in planning the establishment of areas for further

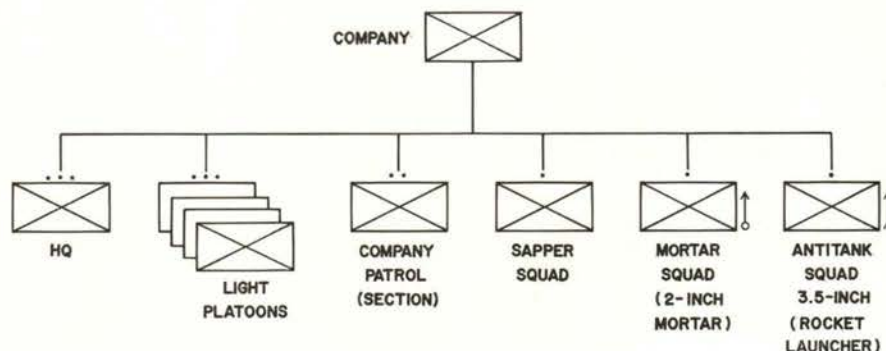


Figure 2

penetration into and through enemy occupied areas.

These phases may not be clearly distinguishable but will, in each case, characterize the employment and action of Home Guard units.

WEAPONS AND EQUIPMENT

The smallest item of personal weaponry is the Swiss Automatic Pistol SP 47/8, known in Denmark as the 9mm Pistol M/49 (Neuhausen). It is issued to officers, staff personnel, mortar and antitank personnel.

The standard rifle is the 7.62mm Rifle M/53(17), known in the U.S. as the U.S. Enfield, caliber .30, M1917. It has proven suitable because of its sturdiness and simplicity. The 7.62mm Rifle M/50 (Garand), or U.S. Rifle, caliber .30 M1 (Garand Semi-automatic), is also used with rifle grenades and grenade launchers, primarily for antitank purposes. Extensive tests are being conducted with new rifle systems in order to find an up-to-date replacement for these rifles. Among the rifles being tested are: the Belgian



84mm recoilless rifle "Carl Gustav"



FN Light Auto Rifle, caliber 7.62 mm NATO; the German CETME, 7.62 mm NATO Assault Rifle M/58; the M14; and the Armalite AR-10.

Two types of submachine guns are in use, both of Swedish construction. The 9mm Submachine Gun M/44(37) Husquarna and the 9mm Submachine Gun M/49 HOVEA. The latter is being made in Denmark under license. Both types have a rate of fire of 550 rounds per minute. The "fist of the squad" is the German 7.62mm NATO Machine Gun M/62. It is belt-fed, fires 1,200 rounds per minute, and has a range of 600 meters. It replaced the Light Machine Gun 7.62mm M/48 Madsen in 1962.

In order to support the light platoons the company commander has at his disposal a two-inch mortar squad and an antitank squad. The latter is equipped with the 3.5-inch rocket launcher. However, this weapon is being replaced by the new Swedish crew-served 84mm Recoilless Rifle M/64 "Carl Gustav." Data for the 84mm Recoilless Rifle M/64:

- Practical firing range:
- HEAT
- Moving targets 450 meters
- Stationary targets.. 550 meters
- HE and Smoke
- Shells1,000 meters
- Flare Shells1,500 meters
- Weight of Weapon31.2 lbs.
(14.2kg)
- Weight of Mount 1.8 lbs.
(0.8kg)
- Weight of Telescopic
- Sight 2.2 lbs.
(1.0kg)
- Length of Weapon44.5 in.
(113.0cm)
- Maximum effective
- rate of fire 6 rounds
per minute

The "Carl Gustav" is capable of penetrating more than a foot of armor plate and may be used against pill boxes, bunkers, machine gun emplacements, and armored personnel carriers. It has been adopted by

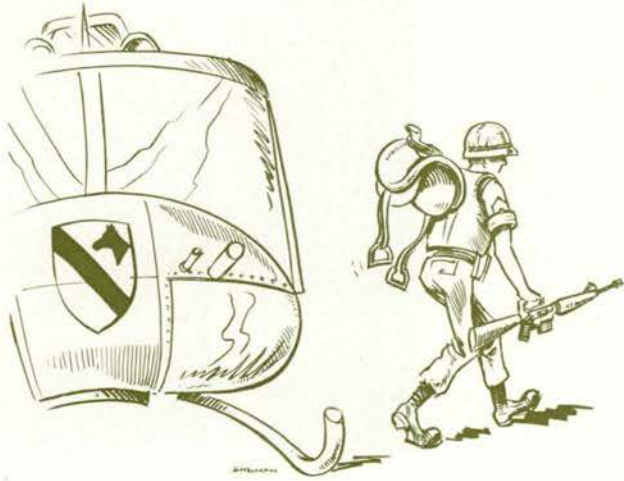


Soldiers in combat uniform M/58

Great Britain, West Germany, and Belgium, among others.

The Home Guard soldier wears the standard uniform M/44, battle-dress type, of British origin adopted after WW II. The web gear (belt, rucksack, canteen holder, etc.) are also of British origin. Special units, such as combat patrols, wear the new combat uniform M/58 adopted from the Regular Army. It is now being decided whether to provide the Home Guard with the M/58 battle uniform or to create a new one for the Home Guard only.

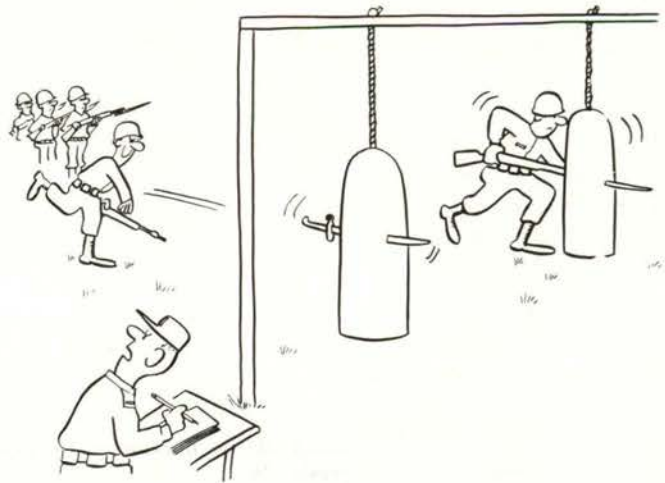
Everywhere and nowhere might easily be the motto for the Home Guard. Even in the smallest hamlet of the country a unit can be found. When the Home Guard was officially established in 1949, it consisted of 300 companies and 30,000 men. Today it is able to review 600 companies, squadrons, and flotillas and more than 70,000 men and women are on active status. ■



ROUTE STEP



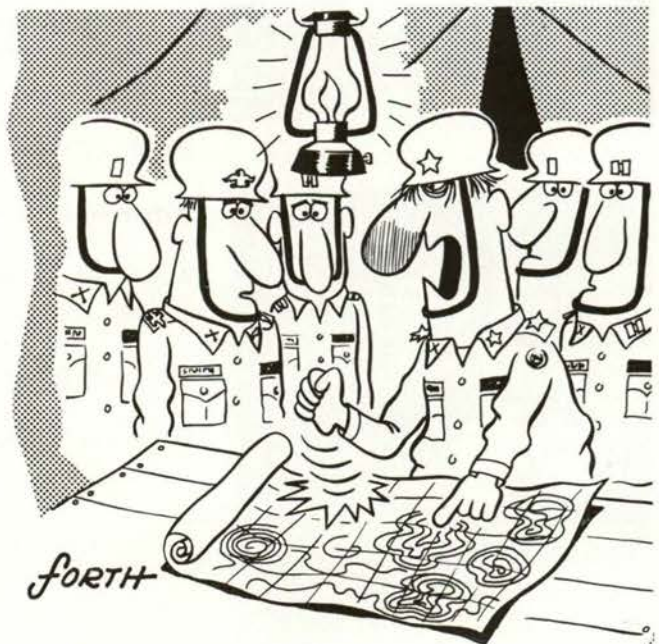
"Oh, Lieutenant . . . I've been taken prisoner . . . do you remember what my serial number is?"



"That's very effective, Tiger! But let's do it the Army way!"



"As a matter of fact, I bought it at the PX toy store."



"Attack . . . attack . . . attack on all fronts regardless of casualties . . . 'Hic' . . . !"

Book Reviews



The First World War by the editors of *Life*, Doubleday and Company, Inc., New York, N.Y., 1965. 128 pages, 180 illustrations. \$4.95.

Col Henry E. Kelly (Ret.)

In some 128 large-size pages this slim volume crystallizes a graphic picture of the far-flung fighting of World War I. In fact, based upon the old Chinese adage that "a picture is worth ten thousand words," its 180 photographs and contemporary paintings, many in color, create an impression far more striking than more detailed written accounts. Terse, well-written commentaries amplify the illustrations and each of the eight chapters includes a brief, though insightful, word description.

The Western Front, naturally, receives major attention, beginning with the opening battles along the frontiers through the bloody prolonged stalemate of trench warfare to the final collapse of the Axis Forces. A special chapter deals with American participation. It includes some photographs which will re-create long-buried memories to World War I veterans. Other chapters dealing with the air and sea fighting include vivid illustrations of the fighting and photographs of renowned individual participants. A special chapter deals in detail with the epic battles for Verdun. Many of the illustrations in this section have been unpublished previously.

A final thought-provoking section, by William E. Leuchtenburg, Professor of History at Columbia University and winner of both the Francis Parkman and Bancroft awards, discusses the chaotic aftermath of the struggle. The end of the age of European supremacy, the dawn of many new governments and the entrance of the United States as the major world power are brilliantly outlined. Americans would, indeed, fight again on world-wide battlefields but never again with the naive optimism of the World War I doughboy.

To many of the younger generations, this volume will bring home for the first time the intensity of the fighting and the terrific casualties incurred. The hardships of the mud of Ypres, and the carnage of Verdun have not been equaled since. In the July 1916 battles on the Somme, British and German losses exceeded any suffered before or since for so brief a period. On 1 July 1916, of 100,000 British who went forward at 0730, 20,000 were dead and 40,000 wounded by nightfall. Before the fighting died down, casualties on both sides totaled 1.2 million and the lines stood almost where the campaign opened. World War I truly demonstrated the supremacy of the defense which was to delude French military thinking in the preparations for the war to come two decades later.

The coverage of the fighting on the world-wide battlefronts other than the German Front is particularly fine and will come as a revelation to many who considered the Second World War as the most dispersed conflict. Palestine, Gallipoli, Italy, Africa, and the Russian Front all receive due consideration. Many of the illustrations dealing with these fronts are superb.

This compact history will be treasured by veterans of the fighting and will afford an intensive, though vicarious, educa-

tion to those too young to have known the fighting of the "War to End All Wars."

Mission With LeMay, by General Curtis E. LeMay with MacKinlay Kantor, Doubleday and Company, Inc., Garden City, New York, 1965. 581 pages. \$7.95.

Lt Col Mark W. Magnan, USAF

The General LeMay known to the American public, indeed the entire world, has always been associated with adjectives, good or bad—brilliant, dedicated, outspoken, defiant. Whether you idolize or dislike the General, there is one point on which all must agree. He is not a professional writer. This is unfortunate because he has a tremendous story to tell, firsthand, regarding the evolution of airpower; he was there, he was Mr. Airpower.

When one considers the responsible positions held by General LeMay during his military career (he was a general officer 22 years, a four-star general for 14 of these years) the reader naturally expects a profound insight into the great military decisions of our generation. While such information is in abundance, it is diluted with far too much trivia and distracting flashbacks to earlier episodes.

No matter how one may feel toward General LeMay and his convictions, no one can deny his great dedication and sincerity. And above all, the book clearly portrays General LeMay as an American first, who believed in the need not only for airpower, but for balanced military power to guarantee the security of our nation, the free world, and our way of life.

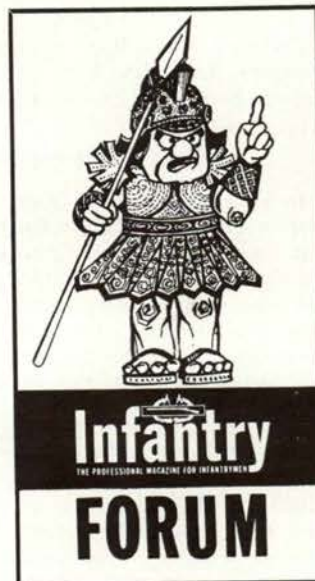
General LeMay attempts to set the facts straight regarding decisions he made or in which he participated. Even as an airman, many facts were new to me. For example, it is unknown perhaps to many Air Force men that General LeMay spent a considerable portion of his early bombardment days primarily as a navigator. He served in this capacity on those pioneering B-17 goodwill flights to South America in 1938. As commander of the 305th Bomb Group in England during World War II, General LeMay greatly increased the bombing accuracy by proving the concept of longer, straight and level bombing runs (initial point to release point). As an old B-17 pilot myself I must admit that it required considerable intestinal fortitude to fly without being able to take evasive action during the critical bomb run when the flak was usually heaviest.

Low-level, (7,000- to 8,000-foot) fire-bomb raids over Japan by B-29 aircraft were another important innovation by General LeMay. But these facts and others were not in the public's eye since General LeMay was not yet the world figure he was later to become.

Of more concern to a wider range of readers is the last chapter which deals with General LeMay's eight-year tour in the Pentagon as Vice Chief and as Chief of Staff, USAF. In this chapter General LeMay frankly explains his position on many noteworthy and sometimes controversial issues. Included are: his assessment of our power balance *vis-a-vis* the Soviets; the fundamentals of deterrence and a counter-force concept; reasons for his strong belief in a mixed strategic force; the advantages, and sometimes misconceptions of space programs and possible military roles; most importantly, his candid remarks regarding the *modus operandi* of the Joint Chiefs of Staff including discussions, differences of opinion, decisions, and relations with DoD and Secretary McNamara.

This book is, perhaps, of more direct interest to Air Force personnel and those interested in military history. The last chapter, however, is recommended to all military personnel for the reasons listed in the preceding paragraph.

PROFESSIONALISM AND THE ROTC OFFICER



COL ARTHUR J. DeLUCA (Ret)

The views expressed in this article are the author's and not necessarily those of the Department of the Army, Department of Defense, or the U.S. Army Infantry School.—Editor.

MAJ GEN ROBERT H. YORK, the Commandant of the Infantry School, presented his recipe for the effective modern Infantryman in the September-October *INFANTRY* (page 5, "Commandant's Notes"). I was especially interested in this formula and would like to analyze it with respect to our current officer-producing programs.

General York's Infantryman is imbued with **professionalism** as evidenced by his image, confidence, and mental capacities. The image is related to outward physical attributes such as neatness, posture, and saluting; confidence is associated with awareness of responsibilities, pride in heritage, morale, and *esprit de corps*; while mental capacities are manifest in resourcefulness, courage,

and competency.

How do the Army officer programs produce this ingredient called motivation. The OCS student undergoes a one-time, intensive training experience and thus is highly trained at the practical application level.

A second ingredient stipulated by General York relates to the kind of training necessary to counterinsurgency and airmobile needs, training that is interesting, challenging, realistic, strenuous, imaginative, and two-sided.

The ROTC student receives this kind of training, for the most part, after receipt of his commission; some is gained at summer camp between the junior and senior years. The Academy student is exposed to more such training each summer and is more skilled, therefore, at graduation than is the ROTC graduate. The OCS student graduates with the greatest amount of practical skill since his program is primarily designed to meet current needs. In fulfilling the training requirement then, the OCS graduate ranks first, followed by the Academy man, and the

"professionalism?" To answer this question, a quick review of the officer procurement and training programs is necessary. An individual may be awarded the gold bar through ROTC, OCS, or the U.S. Military Academy.

The ROTC program produces approximately 85 percent of the new second lieutenants each year; OCS provides about 10 percent; the Academy graduates the remainder. On the other hand the selection processes for the three programs are just the reverse in specific relation to General York's ingredients for the professional officer. Whereas admission in the academies is extremely sensitive to mental, physical, and medical requirements, such is not the case at the many institutions and colleges which offer ROTC. Selection criteria for OCS varies as does emergency need; yet, the selection process is controlled to a high degree.

ROTC and Academy training gives the students generally the same basic knowledge, but they leave the institution with varying skills and



DOUGHBOY'S SWAP SHOP

The Problem: To determine areas in which we need to put additional training emphasis for units deploying to Vietnam.

Some Ideas: Reports back from combat leaders in Vietnam indicate that we could use additional training in:

- a. Land navigation.
- b. Independent squad, platoon, and company operations of three- to five-day intervals.
- c. Ambushes and patrolling in dense brush or jungle terrain.
- d. Target detection at night and night vision.
- e. Indoctrination of the individual soldier, stressing the capabilities and vulnerability of the enemy.
- f. Booby traps, mines, and command-detonated weapons.

A Challenge: How have you solved this problem—share your solution with other Doughboys. Write INFANTRY. ■

ROTC graduate, in that order.

The third York ingredient is stated substantially as follows: "Doing the little things right." Whether this requirement is fulfilled through procurement or training is problematical. Perhaps it embodies something of each of the other two ingredients. Nevertheless this is the ingredient that, according to General York's recipe, the Infantryman uses to achieve success in battle. How do the graduates of the three officer-producing systems fare in this respect?

A searching look at the ROTC program reveals that the ROTC officer will enter the commissioned ranks woefully deficient in the practice of "doing the little things right." The OCS man will be more than aware of this requisite. The Academy man will be generously endowed with the ingredient. Thus, it can be stated rather confidently that the order of attainment for this ingredient is first the Academy graduate, next OCS, and last ROTC.

Reflecting on the discussion of the previous paragraphs, it has been stated that for the first ingredient—

professionalism—the order of merit was:

1. Academy
2. OCS
3. ROTC

The order for the second ingredient—training—was:

1. OCS
2. Academy
3. ROTC

The order for the third ingredient—doing—was:

1. Academy
2. OCS
3. ROTC

Although it is a statistical fact that the Army receives 85 percent of its junior leaders from the ROTC program, these are the leaders who rank third or last by General York's measurements.

It can be concluded that the current programs for producing and training the modern junior leader require immediate review with the spotlight focused on the ROTC student. Although he is tops in quantity, he does not measure up in quality until he has had additional training. ■



Answers

- | | |
|------|-------|
| 1. B | 6. B |
| 2. B | 7. A |
| 3. C | 8. C |
| 4. C | 9. B |
| 5. A | 10. B |

LIST OF INSTRUCTIONAL MATERIAL

Material may be purchased from the Book Store, USAIS, Fort Benning, Ga., at prices indicated, by any member of the U. S. Armed Forces who so identifies himself when ordering. Requests must include name and address of the military unit to which assigned or attached, and a statement that the material will not be re-sold or otherwise released to individuals not assigned to the military establishment or to agencies not an integral part of the military establishment. Mail orders must be accompanied by full remittance, including postage surcharge (25¢ for orders less than \$5.00; 5% of total cost of orders over \$5.00). Orders will be mailed to the requester through his unit.

Infantry Battalion Task Force in Coordinated Attack. As a result of this problem when given a tactical situation and mission, you should be able to develop a plan for and conduct an attack of an organized defensive position by an Infantry battalion task force under nuclear conditions. Problem includes maps and overlays. \$2.40

Defensive Operations. Problem will enable you to recall the following fundamentals of defensive combat: types of defensive operations; characteristics of the defensive battlefield; techniques for conducting a mobile and area defense; methods for conducting delays; techniques of conducting daylight and night withdrawals. 45¢

Planning the Offense. Problem will enable you to recall the steps of troop-leading procedure and apply them when planning an attack. Problem includes tactical plan; current tactical concepts; items of an attack operation order; command and staff actions; deliberate versus the accelerated method of troop-leading procedure. 90¢

Mechanized Infantry Battalion Task Force in Area Defense. Problem will enable you, given a specific tactical situation and mission, to plan the tactical employment of the mechanized Infantry battalion task force in an area defense. Problem includes analysis of an assigned defensive mission; terrain analysis; courses of action; commanders decision; commanders concept; and development of a detail plan of defense to include fire planning, obstacle plan, and antitank defense. \$1.10

Infantry Battalion Task Force in Coordinated Attack (Nuclear). Problem will enable you, when given a specific tactical situation and mission, to develop a plan for and conduct an attack of an organized defensive position by a dismounted Infantry battalion task force under active nuclear conditions. Problem includes maps, overlays, and nuclear employment equipment. \$1.30

Infantry Battalion in an Airmobile Operation. Problem will enable you to plan an airmobile operation to be conducted by a reinforced Infantry battalion. Problem is a tactical map exercise and includes influence of weather; use of space method; ground tactical plan; landing plan; flight routes; logistical support; and withdrawal by air. \$1.10

Infantry Battalion (Reinforced) in Night Attack. Problem will enable you to determine the methods and techniques to be applied when consolidating and reorganizing on an objective and when conducting a night attack and to apply troop-leading procedure to develop a tactical plan. Problem includes maps and work sheets. 70¢

Mechanized Rifle Company Team in the Attack. Problem will enable you to plan for and conduct an attack by a mechanized rifle company team. In addition to a practical map exercise you will prepare a company team operations order, conduct a passage of lines and prepare a rifle company team blocking position.

Tactical Operations Handbook. This handbook is a guide for the student of tactics at the United States Army Infantry School. Its scope of coverage primarily concerns the tactical employment of combat elements as maneuver forces; i.e., Infantry, tank, and armored cavalry units. \$10.00

Tactical Employment of Army Aviation. Problem will enable you to employ all Army Aviation organic to the ROAD division.

Material in this problem is applicable to both nuclear and non-nuclear warfare. Problem contains practical map exercises in employing different types of Army Aviation. 55¢

Movement by Air. Problem will enable you to: (1) establish initial unit plans and standing operating procedures (SOPs) for movement by air employing U.S. Air Force and Army aircraft; (2) review and determine validity of existing unit air movement plans and SOPs; (3) discuss air movement factors and considerations with the supporting Air Force or Army Aviation commanders; and (4) understand the planning methods, considerations, procedures, and techniques common to tactical and administrative, joint and unilateral air movements. 25¢

Problems of the Battalion Commander. Problem will assist you in the solution of leadership problems at battalion level, to include privileges of the commander, the restoration of attack momentum and fighting effectiveness, the necessity for continual unit evaluation, considerations in recommendation for battlefield commissions, basic responsibilities of the commander, and considerations in selection of subordinate leaders for promotion. 10¢.

Selected Readings in Counterinsurgency/Counterterrorism. This 230-page handbook contains chapters on United States Policy; United States Concept; Communist Theory; Historical Survey; Considerations; Pre-World War I and World War I Period; World War II Period; Cold War Period. The handbook contains historical examples of counterinsurgency and counterterrorism operations.

Problems of Command. Problem will enable you to gain a knowledge of techniques and principles that will assist you in obtaining the proper senior-subordinate relationship, developing correct social relations with enlisted men, proper utilization of the chain of command and the selection of subordinate leaders at platoon and company level. 5¢

Rifle Company Team Operations (Foot Mobile and Mechanized). Problem will enable you to plan for the employment of a foot mobile and mechanized rifle company team in varying, related tactical situations. Problem includes practical exercises with maps covering troop leading procedures; the plan of attack of a rifle company team; conduct of the attack; passage of lines; rifle company team as the battalion advance guard; and planning a night attack using daylight techniques. \$1.30

Weather and Terrain Analysis. Problem will enable you to apply the techniques involved in analyzing an area of operations to determine the effect of the weather and the terrain on both the enemy's and our own courses of action, at the brigade and battalion level. Problem also includes the purpose of an analysis of the area of operations and its relationship to the intelligence estimate; the weather in a given situation and its effect on military operations with respect to visibility, trafficability and men, equipment and the five military aspects of terrain. 45¢

Fundamentals of Offensive and Defensive Combat and Estimates and Orders. Problem will enable you to explain how the fundamentals of offensive tactics apply to the rifle platoon and to describe the control measures and the methods of maneuver used in the offense; to apply troop-leading procedure, develop an estimate of a situation and to explain and set forth an operation order; to explain the reasons for defending and the organization and conduct of the defense. 55¢

Planning the Defense. Problem will enable you to recognize the application of troop-leading procedure and the tactical methods and techniques when planning an area defense. Problem requires you to perform mission analysis, given a mission to defend an area; identify key terrain and avenues of approach in an area to be defended; recognize courses of action to accomplish an area defense mission; select and explain the items to be included in preliminary planning guidance; explain the technique for using the commander's estimate to make a decision in an area defense; explain the commander's decision in an area defense and the elements included in the commander's concept; explain the steps involved in detailed tactical planning for an area defense; and recognize the various items included in a defense order and its supporting plans. 80¢

Tactical Methods and Techniques (Offense I). Problem will enable you to understand the doctrine of the offense; apply the fundamentals of offensive tactics and the methods and techniques of offensive operations in future tactical operations problems; relate the characteristics of the battlefield to offensive operations; recall and differentiate between the types of offensive operations; and apply knowledge of the functions and capabilities of the forces. 60¢

Artillery Fire Planning. Problem will enable you to explain the fundamentals of artillery fire planning, and the graphic symbols and terminology used in fire planning. Map exercise

includes planning procedures at company, battalion and brigade levels. 50¢

Airmobile Division Supplement to Infantry Reference Data. This 110-page supplement to Infantry reference data contains the current TOE, of men and equipment, within the U.S. Army Airmobile Division. 50¢

Rifle Platoon of the Forward Rifle Company in Defense. Problem will enable you to plan the employment of a forward rifle platoon in defense and retrograde operations. Problem includes information on primary and supplementary squad positions; missions of the platoon machine guns; location and direction of fire of the platoon antitank weapons; location of the platoon CP-OP(s); employment of infrared equipment. Problem includes maps and self-instructional text. 80¢

Mechanized Rifle Platoon in Attack. Problem will enable you to plan and execute a mechanized attack. Problem includes example of platoon attack order and information on both the advantages and disadvantages of the armored personnel carrier; platoon plan of attack; mechanized tactical formations; and control measures used in a mechanized attack. 20¢

Mechanized Rifle Company and Platoon Operations. Problem will enable you to apply, in a practical exercise, the fundamentals of offensive, defensive, and retrograde instruction at the company and platoon level. Problem includes troop-leading procedures; logical sequence of action; execution of a mounted attack; employment of the forward rifle platoons and weapons platoon of the rifle company in the defense; location and composition of the company observation post, command post trains; and execution of a night withdrawal. 85¢

Personnel Functions. Problem will enable you to understand the combat-related responsibilities of the S1 as applied within the Infantry battalion, company and platoon and to explain the major operational procedures utilized to discharge these responsibilities. 5¢

Logistical Planning and Administrative Orders. Problem will enable you to explain the purpose and use of the logistical estimate. Problem explains the role of the logistics officer in the preparation and dissemination of administrative instructions, to include the preparation of an administrative order. Problem is complete with maps and overlays. 70¢

Enemy Strength, Activities, Indications and Capabilities. Problem will enable you to determine enemy strength, capabilities and indications from the standpoint of the brigade and battalion S2. 15¢

Elements of Combat Intelligence. Problem will enable you to explain the role of combat intelligence in the exercise of command and the influence of weather and terrain on small unit tactical operations. 10¢

Training Schedules. Problem will enable you to develop, through the use of a practical exercise, a master training schedule at battalion level and to recognize the principles involved in preparing a weekly training schedule. 10¢

Processing of Information and Use of Intelligence. Problem will enable you to explain the principles involved in processing information and the use of intelligence at brigade and battalion level. Problem includes an example of a 32-page S2 work book. 45¢

Personnel Functions. Problem will enable you to recognize and discharge the duties of the brigade and battalion S1 pertaining to maintenance of morale, discipline, law and order, the unit journal, records of radiation dosage and prisoners of war. 25¢

Rifle Company Team Operations (Offensive and Defensive). Problem will enable you to plan for the employment of a footmobile and mechanized rifle company team in varying related tactical situations. Problem includes practical map exercises and situations to be solved. \$1.30

Rifle Company In Attack. Problem will enable you to apply the basic principles involved in planning and executing a dismounted attack by a rifle company. Problem is a map exercise and includes organization of the rifle company; rifle company plan of attack; control measures; use of the reserve; and plan of fire support. 60¢

Rifle Company in Airmobile Operations. Problem will enable you to plan and conduct an airmobile operation at company level. Problem is a practical map exercise and includes the airmobile planning sequence; ground tactical plan; selection of landing zones; linkup; and marshalling. \$1.60

Rifle Company Team in Defense and Retrograde Operations. Problem will enable you to apply the fundamentals of defense and the troop-leading procedure necessary for the planning and successful accomplishment of a company defense mission, and plan a retrograde operation and the organization of a delay position for a mechanized rifle company team. 35¢

Rifle and Weapons Squads in the Attack. Problem will enable you to plan, conduct and critique a daylight attack by a rifle squad and a weapons squad. 10¢

Mechanized Infantry Division in Mobile Defense. Problem will enable you to plan a mobile defense employing a mechanized Infantry division. Map exercise over the German countryside includes the aspects of the terrain; control of forces; service support; operation plan for a mobile defense and counter-attack by the division reserve forces. \$3.75

Preparation of a Battalion Field Exercise. Problem will give you an understanding of the preparation of a field exercise at battalion level. Problem includes steps of development; fire marking and simulation systems; elements of the directive; use of the planning schedule; outline plan; scenario; and purpose of supporting plan. 60¢

Mechanized Infantry Heavy-Brigade and Tank-Heavy Brigade in the Exploitation and Coordinated Attack. Problem will enable you to analyze the tactical considerations in a given tactical environment and determine the type of offensive operation indicated; isolate the influencing factors present in a given situation and select appropriate tactical methods to be employed; to apply these methods in a map exercise; to make tactical determinations concerning maneuver, distribution, organization, security, and coordination and control of a tank-heavy brigade and a mechanized Infantry-heavy brigade in offensive operations. \$5.80

Test Manual Bayonet Training (Experimental Form). This 96-page test manual covers special test bayonet training to include positions; movements; pupil training; assault course; group assault tactics; multi-purpose bayonet target; bayonet training court; advice to instructors and lesson plans for BCT. 75¢

Tank Company Team, Offensive Action. Problem will enable you to explain the organization and characteristics of a tank company team, and apply the basic techniques, formations, and control measures used in its employment in offensive operations. 10¢

Mechanized Infantry Battalion Task Force and Tank Battalion Task Force in Coordinated Attack. Problem will enable you to understand and apply, in a map exercise, the tactical methods and techniques employed by tank-heavy and mechanized Infantry-heavy task forces when conducting mounted and dismounted operations; to develop a tactical plan for the coordinated attack of an organized defensive position by both types of task forces; to understand and explain the different techniques and procedures employed by each type task force; to determine tactical considerations which require changes in the scheme of maneuver and develop fragmentary orders to implement these changes; to develop a plan for employment of engineer support and the use of toxic chemical munitions. \$4.50

Rifle Company Team Operations. Problem will enable you to plan for the employment of a rifle company team in varying, related tactical situations. Problem includes a practical map exercise with a rifle company as advance guard, night attack, passage of lines, tactical infiltration and linkup operations. \$1.50

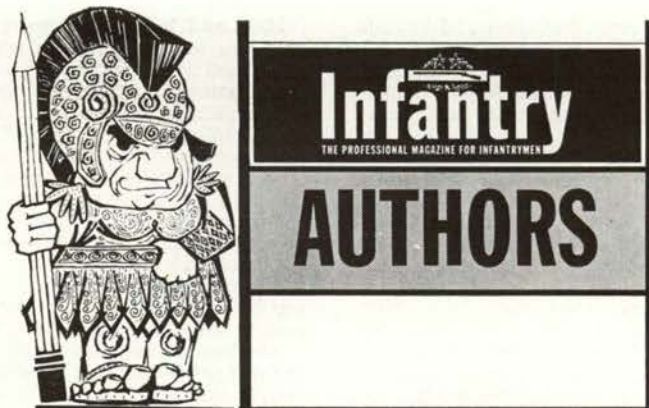
Infantry Brigade in Area Defense. Problem will enable you to apply the fundamentals, methods, and techniques of employing an Infantry brigade in area defense under both nuclear and non-nuclear conditions. \$1.40

Development of a Physical Training Program. The information contained in this guide has been compiled to bring the principles and procedures used in the development of physical training programs to the attention of unit commanders and staff officers, in one reference. This guide is based on current Army Regulations, Special Regulations, and other Physical Training Directives. The 22 page booklet "Your Individual Physical Fitness" is included. 30¢

Fire Support Planning and Coordination. Problem will enable you to explain the purpose of, and procedures involved in, artillery fire planning and fire support coordination for both offensive and defensive operations. Problem contains maps and overlays. 30¢

Support Units of the Battalion. Problem will enable you to tactically position the combat and combat support (reconnaissance platoon, heavy mortar platoon, antitank platoon, and ground surveillance section) elements of the headquarters company, Infantry and mechanized Infantry battalions, in map-type offensive, defensive, and retrograde operations. \$1.00

Separate Airborne Brigade in Joint Task Force Operations. Problem will enable you to discern the additional dimension inherent in joint task force (JTF) operations and recognize the need for time-phased training preparation planning, and coordination required to execute United States Strike Command (USSTRICOM) contingency plans involving U.S. forces and allied forces. \$2.20



Lt Col William F. Boiler, Artillery, is a 1945 USMA graduate, presently commanding the composite HAWK-AW air defense battalion in the Canal Zone. He is also a graduate of the Command and General Staff College.

Capt William R. Dean, Infantry, received an ROTC commission from Florence State College, Florence, Alabama in 1957. He is currently Assistant Professor of Military Science at East Tennessee State University. Capt Dean has served as Plans Officer, G2, XVIII Airborne Corps; Company Commander, Company C, 1st ABC, 325th Inf, 82nd Abn; G3 Plans Officer, 8th U. S. Army Support Command (Korea).

Col Arthur J. DeLuca, USA (Ret) works for the Human Research Unit (Infantry HumRRO) at Fort Benning. He was commissioned a 2nd lieutenant of Infantry in 1939 through ROTC at Ohio University. Col DeLuca did graduate work at the University of Toledo and is a graduate of CGSC. While on active duty he served as PMS at the University of Toledo, and as instructor at CGSC and at the Infantry School.

Dr. George Bell Dyer is the Director of the Dyer Institute of Interdisciplinary Studies. He was a co-founder of the Institute in 1952. Dr. Dyer holds his PhD in political science from the University of Pennsylvania. He served as a 2nd lieutenant in the U.S. and Europe during 1940-47. He was recalled in 1950 to Fort Riley, Kansas and released again in 1952.

Capt Michael L. Ferguson, Infantry, was commissioned from USMA in 1960. He has attended Infantry Officer Basic Course, Airborne School, and Ranger School. Capt Ferguson is presently completing requirements for an MA in International Relations at American University in Washington. At the time the article was written, he was assigned to the Platoon Tactics Committee, Company Operations Department, USAIS.

Capt James E. Fletcher, Infantry, was commissioned in 1957 through ROTC at the University of Arizona. He is presently assigned to J3 Section, USMAC, Thailand. Capt Fletcher has attended Infantry Officer Basic Course, Infantry Officer Career Course, Airborne School, and Psychological Operations Course, USASWS. He is the author of "Psychology in Civic Action" in the November-December 1963 INFANTRY.

Lt Col A. L. Goodwin, Infantry, was commissioned through OCS at Fort Benning. He served with the 38th Infantry Division in the Pacific Theater in World War II, and was advisor to the 2nd Bn, 10th Inf, 8th ROK Division during the early part of the Korean conflict. Col Goodwin spent more than two years as a prisoner of war of the Chinese Communists. He has attended the Infantry Officer Career Course and CGSC. He spent three years as a tactics instructor at the Infantry School and is presently the Assistant Commandant, U.S. Army Northern Warfare Training Center.

SFC Bjorn A. Hartmann-Madsen (equivalent of Specialist 8) of the Royal Danish Air Force has served in the Danish Home Guard and taken the platoon leader, demolition, administration, and patrolling courses of the Danish Home Guard School.

SMaj Grady M. Jones is Operations Sergeant, 1st Brigade, 101st Airborne Division. He attended MATA at Fort Bragg in 1963; was G3 Advisor to a Vietnamese Division, and then to a Vietnamese Corps in 1963-64; and was Senior Enlisted Advisor to a Vietnamese National Training Center in 1964.

Maj John T. Quinn, Infantry, received his commission in 1952 from USMA. He is presently Plans Officer, Brigade and Battalion Operations Department, USAIS. He previously served as a Company Commander in the 7th Cavalry Regiment; as a Company Commander, 101st Airborne Division; and as a Battalion Advisor to a RVN Battalion.

Sp6 Russell A. Kraemer is presently assigned as an instructor at the Army Security Agency Training Center and School at Fort Devens, Mass. Specialist Kraemer has served as a nuclear weapons maintenance chief for an ordnance company, and is a graduate of the Defense Language Institute's Russian language course, and the Microbarograph Equipment Repair Course at Fort Devens.

Lt Col W. H. Silber, Infantry, graduated from OCS at Fort Benning in 1943. He participated in the initial landings in Normandy on D-Day with the 4th Infantry Division. Subsequent service included attendance at the Associate Career Course at Fort Benning and a tour on Okinawa. He studied Chinese-Mandarin at the Army Language School, followed by a tour with MAAG-Taiwan. Col Silber attended the associate course at CGSC, followed by a one-year tour in South Vietnam as a sector advisor in zone D. He was subsequently assigned as an instructor of defensive tactics at the Infantry School and is currently serving with COMZEUR at Orleans, France.

Capt Arthur C. Stang III, Infantry, received an ROTC commission from Pennsylvania Military College in 1959. He has attended Infantry Officer Basic Course, Airborne School, Ranger School, British Malayan Jungle School, and Marine Corps Amphibious Warfare School. Capt Stang has served as Platoon Leader, Co C, 2nd Abn BG, 503d Inf, USARPAC, Assistant S3 Air, 173d Abn Bde, and as Company Commander, Co A, 2nd Bn Abn, 503d Inf, USARPAC.

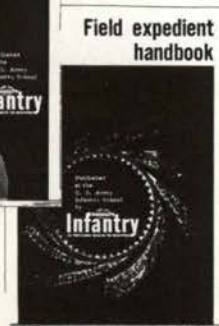
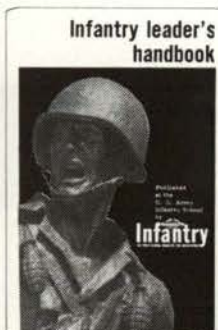
Dr. A. Porter S. Sweet, Cmdr, DC USNR was commissioned as Lt Commander in 1942. He was the Of-

ficer-in-Charge of the School for Dental Technicians, USNTC, Samson, N. Y. from 1943 to 1945. Since his retirement as editor of *Dental Radiography and Photography* he has authored over 60 nonfiction articles.

Capt Kenneth L. Teel, Infantry, received his BA in Journalism and his ROTC commission from Oklahoma University. He has attended the Infantry Officer Basic Course, Ranger School, and Airborne School. He is presently assigned as Chief of the Special Editing Section, Secretary's Office, USAIS, and is the Infantry School Historian.

Brig Gen Ellis W. Williamson is now the Commanding General of the 173d Airborne Brigade in Vietnam. He received his commission in 1941 after graduation from Atlantic Christian College in 1940. Gen Williamson has attended the basic and advanced courses at the Infantry School 1942-43; the Command and General Staff College, 1950; the Armed Forces Staff College, 1953; and the National War College, 1960. His continued civilian education includes the Graduate School of Business at Harvard, 1962, and a Master's Degree in International Affairs from George Washington University, 1963. Among his decorations are included: the Silver Star (4 OLC), the Legion of Merit (1 OLC), Bronze Star (3 OLC), and the French *Croix de Guerre*.

Capt Kenneth E. Yoder, Infantry, was commissioned through the University of Colorado ROTC in 1958. He is now en route to the 8th Special Forces Group (Abn), Fort Gulick, Canal Zone. Capt Yoder has attended Infantry Officer Basic Course, Airborne School, Ranger School, Special Forces Staff Officers Course, Special Forces Guerrilla Warfare Course, and Infantry Officer Career Course. ■



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Continued from page 2

however, details on this and the DAF-developed PONY were not available for general release when our article was submitted for publication. When additional details of the PORTER are released, we believe that the resemblance between it and TBS-30 will be found to be superficial, since the vehicles are quite different.

Robert W. Forsyth
John P. Forsyth

1517 E. 3rd Avenue
Upland, Cal. 91786

THE VIETNAMESE INFANTRY SCHOOL

• Reference the article, "The Vietnamese Infantry School" (Jan-Feb 1966). The candidate shown with the Thompson sub-machine gun is holding the weapon improperly. There is an overwhelming tendency to grasp the magazine of the weapon while firing it instead of the hand guard, but this must not be done as it causes the magazine to become loose with subsequent "failure to feed." There are not many things a soldier can do wrong with the Thompson, but this is one of them.

Maj W. G. Bacon, Inf
University of Arizona
Tuscon, Arizona 85721

CARTOONS IN INFANTRY?

• A profession without humor is a sorry profession. The humor page is an asset to INFANTRY. When my present 3-year subscription expires, I intend to subscribe for 3 more years. Without humor a man would have a hard time keeping his right mind in the Army or most any other profession. KEEP THE HUMOR PAGE!!

Bill Nolen

4625 Gore Blvd, Apt 23
Lawton, Oklahoma 73501

• As one reader, I enjoy your new humor and cartoon section and find that I never tire of Bill Mauldin's cartoons, so you can always use them for fillers if not for the entire set-up. I do have one idea that you might look into and for which you could solicit contributions—which is the use of children or animal pictures in poses or action to which you can add captions that are related to common military terms or events of the day. I was feature editor of the yearbook at C&GSC in 1958 to 1959 and we used this idea for several page layouts and it seemed to go over pretty well.

Also, I see nothing wrong with copying the "Humor in Uniform" idea of Reader's Digest under a heading of "Tales of Military Life" or so forth.

Lt Col Thomas T. Jones, Inf
Office, Chief of Staff
Dir of Coordination & Analysis
Washington, D.C.

• I agree with Col J. C. Woodard (Letters, Nov-Dec, page 2) that INFANTRY is a professional magazine and should not carry cartoons or humor, certainly not the kind you have been carrying. The introverted-undergraduate-house organ type of humor just doesn't fit in the tone of a publication which should emphasize leadership, tactics, techniques,

doctrine, concepts, military history, and so forth.

To be specific, the cartoon on page 15 of the Nov-Dec issue is hackneyed, puerile, and very poor quality. I would have rejected it on any one of the three counts. Ditto for the one on page 20. Before I read Col Woodard's letter, the illustrations on pages 26-28 and on page 53 struck me as not in keeping with the magazine. Being an Infantry lieutenant may be a lot of things, but cute isn't one of them.

You have a good magazine. Don't try to be all things to all people. Present Infantry material for Infantry professionals. Leave the other junk to other media.

Lt Col William E. Burr, Inf
USACDCIAS
Carlisle Barracks, Pa. 17013

MORE ON "FREEDOM TO FAIL"

• Your article by Pete Dawkins entitled "Freedom to Fail" was one of the best I have ever read in your magazine. As an Infantry officer now running a mechanized rifle company his point is well taken. Nowadays, the unit is there to serve the equipment and not the other way around. Individual and unit training has really taken a back seat to CMMI's and AGI's. A unit can fail an ATT and pass a CMMI and still be the best, but would we really care to go to combat with it? My unit has four men taken from rifle platoons just to maintain PLL and logbooks. Maybe we can throw those damn logbooks at the enemy when we go to war. I believe a little self-criticism is good for an organization and believe more articles dealing in these areas might change the system or at least make us question it more.

Capt Edward B. Burley, Inf
Quarters 7221-B
Fort Carson, Colo.

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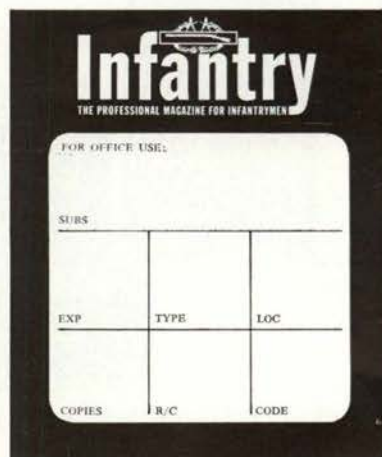
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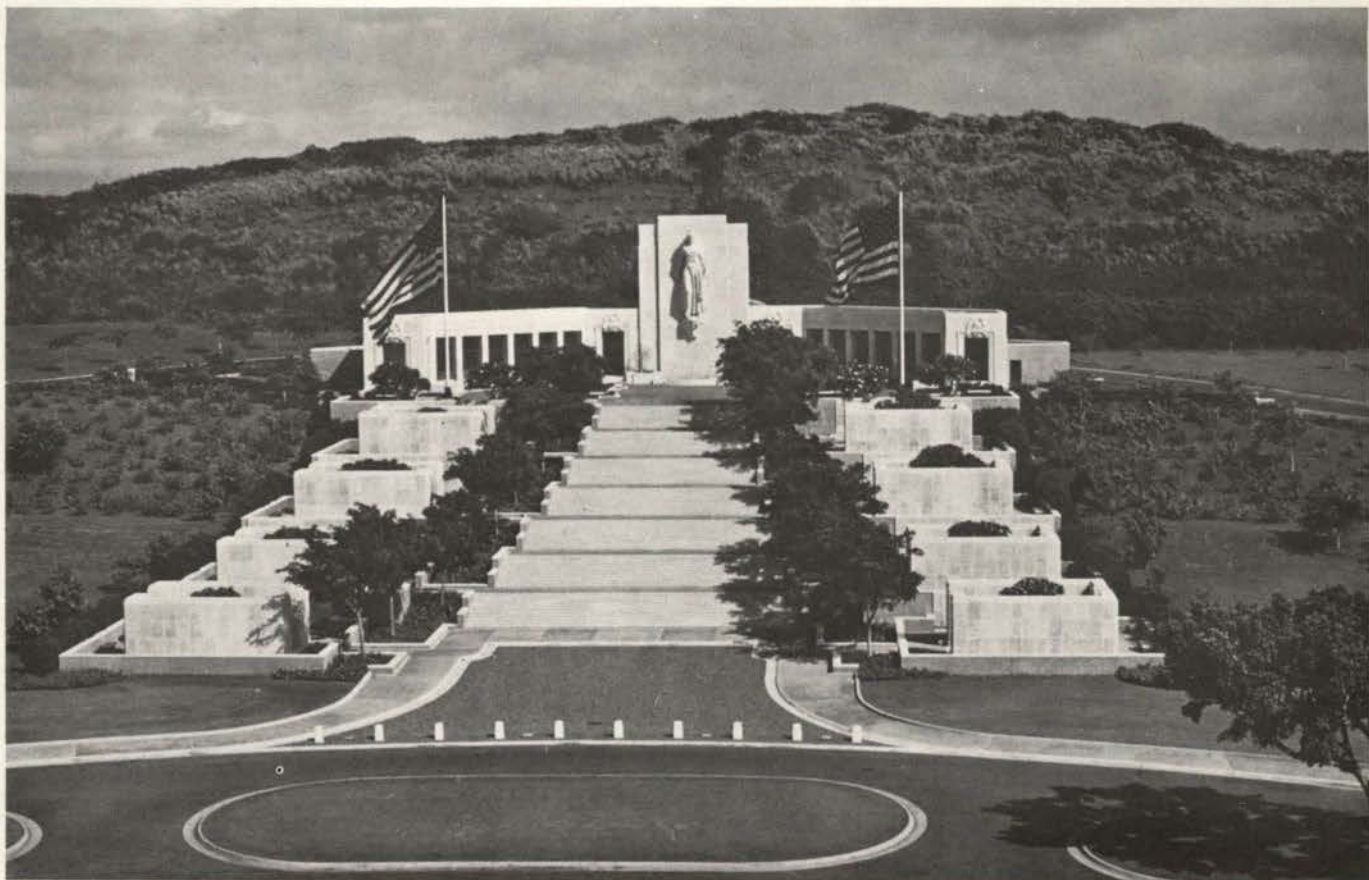
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The Honolulu Memorial

The Honolulu Memorial, erected at the National Cemetery of the Pacific in Honolulu, Hawaii, will be dedicated on 1 May 1966. This is the last of 19 major World War II memorials which have been built by the American Battle Monuments Commission and is the only one which also commemorates the lost and missing during the fighting in Korea.

The memorial stands on the inner face of the Puowaina crater overlooking the National Memorial Cemetery of the Pacific. Designed by architects Weihe, Frick, and Kruse of San Francisco, it consists of a Court of Honor high on the crater wall; a chapel in the Court of Honor with a 30-foot statue on its front façade; two galleries extending laterally from each side of the chapel, in which are located 10-foot-high World War II and Korea battle maps; a monumental seven-tiered stairway rising from the cemetery floor to the Court of Honor; and eight memorial Courts of the Missing, four flanking each side of the monumental stairway. Engraved in lasting tribute on the walls of these courts are the names of 18,093 servicemen and women of World War II missing in action or lost or buried at sea in the Pacific war regions (other than the Southwest Pacific) and 8,187 servicemen and women of the Korean conflict. Those lost and missing in the Southwest Pacific during World War II are memorialized at the Manila American Cemetery and Memorial in the Philippines.

Puowaina crater in which the Honolulu memorial and the National Memorial Cemetery of the Pacific are located is an extinct volcano popularly known as the "Punch Bowl," a few miles from downtown Honolulu. The repatriated remains of 13,000 American servicemen and women of World War II and 1,200 American servicemen and women of the Korean conflict are interred in the cemetery. Since this is a national cemetery under the supervision of the Memorial Division, Office of Support Services, Department of the Army, other military decedents and their dependents are also interred in the cemetery.

The American Battle Monuments Commission, which constructed the memorial, is an independent agency under the Executive Branch, whose members are appointed by the President. It is charged by law with commemorating the achievements of our Armed Forces. General Pershing became the first Chairman of the Commission in 1923; he was succeeded by General George C. Marshall. The present chairman, General Jacob L. Devers, USA (Ret.), succeeded General Marshall in 1960. ■





Infantry

THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN

MAY - JUNE 1966

75 CENTS

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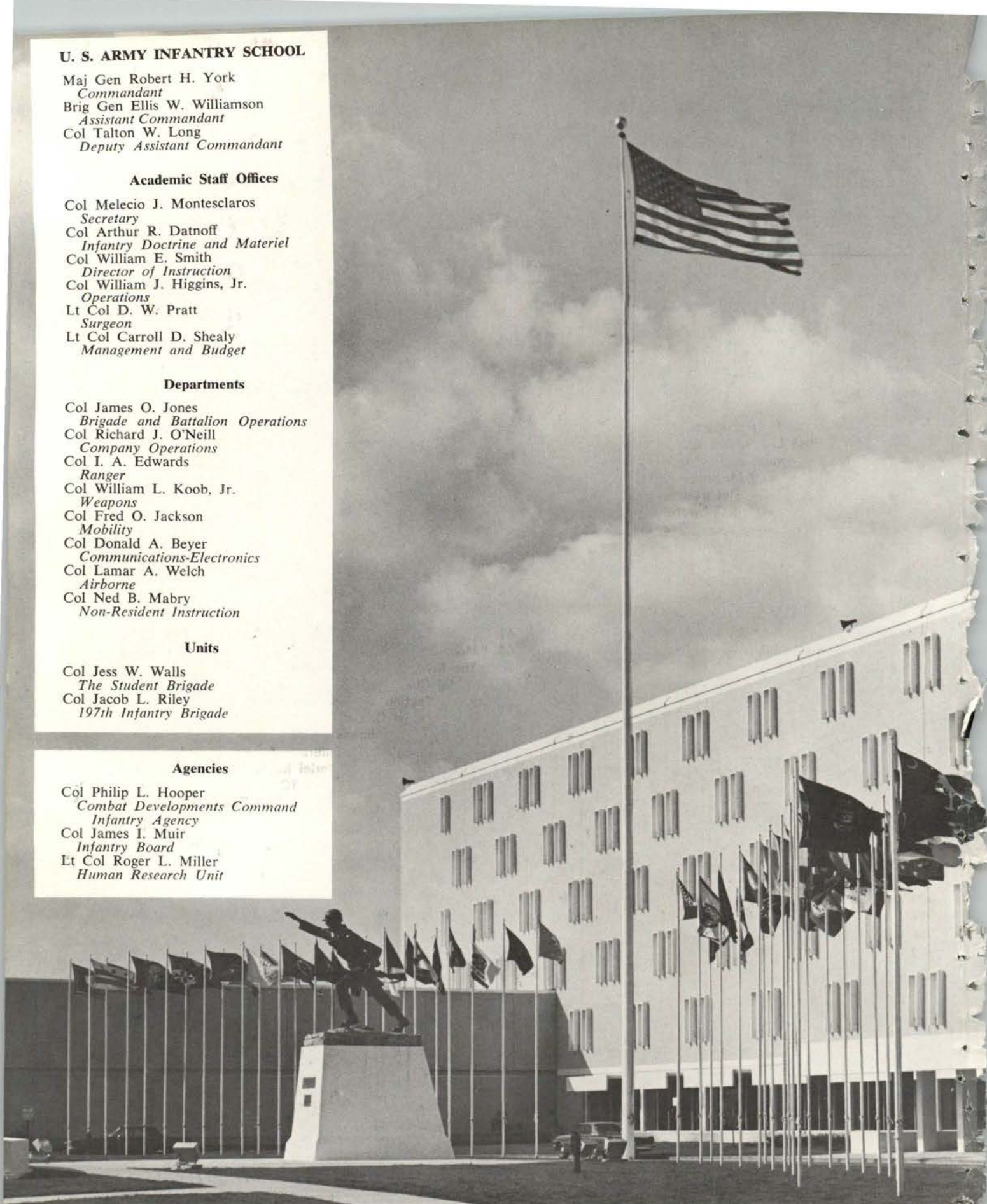
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UNITED STATES ARMY INFANTRY SCHOOL



Infantry

THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN

Vol. 56

MAY-JUNE

No. 3

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INFANTRY, published bimonthly at the U. S. Army Infantry School, is supported solely by subscription. It provides current doctrinal information in Infantry organization, weapons, equipment, tactics, and techniques. It serves also as a forum for progressive military thinking through thought-provoking articles. Unless otherwise stated, material does not represent official thinking or endorsement by any agency of the U. S. Army.

Subscription Rates: 1 year, \$4; 2 years, \$7; 3 years, \$10. For bulk orders of ten or more, deduct 10 percent from normal rate. On such bulk orders, remittance must accompany the order. Foreign (non-APO) subscribers add \$.85 per year postage.

Expiration of subscription is shown by the first three-digit number on address label. First two digits show month; last digit shows year. Example: 079 indicates 7th month of 1969 as terminal issue.

Correspondence: Address all correspondence to Editor, INFANTRY Magazine, Box 2005, Fort Benning, Ga., 31905. Please use full address. Renewal, changes of address, or any correspondence concerning your subscription should be accompanied by an address label or by the number that appears on the label's first line.

Manuscripts: Payment on publication at minimum rate of \$.01 per word. Acknowledged within 30 days. Manuscripts will not be acknowledged or returned unless accompanied by self-addressed, stamped envelope. Queries answered promptly.

Postmaster: Entered as second-class matter 11 June 1948 at Columbus, Georgia.



"INSTANT GUERRILLA WARFARE"

• I have just finished reading "Instant Guerrilla Warfare" by Lt Col Ralph Kinnes. I wholeheartedly agree with him that the U. S. Army should have an instant guerrilla warfare capability.

Colonel Kinnes has spelled out very clearly two misconceptions that are very widespread among both military and civilian readers. First, the fact that Special Forces is not an operational guerrilla warfare unit but primarily a training unit. Second, that there is a difference between guerrilla warfare and counterinsurgency when guerrilla warfare is used in conjunction with operations by conventional forces. To me there seems to be a widespread belief that guerrilla warfare is synonymous with counterinsurgency.

While this explanation in itself is very worthwhile Colonel Kinnes has completely overlooked the Ranger concept that is included in our present doctrine. Most ROAD TOEs call for a certain number of personnel to be Ranger-qualified. In theory these Ranger-qualified personnel are, at the commander's direction, to train other personnel within the unit in Ranger tactics and operations. If this inherent capability would be used to its fullest extent we would then have our instant guerrilla warfare capability.

Charles M. Jackson, Jr.
5136 South Parkway
Chicago, Ill.

ONE RIGHT, ONE WRONG

• While reading the Sept-Oct issue of INFANTRY, I noticed a mistake in one of your "From the School" items. In explaining immediate action procedure with the M60 machine gun, the article stated that 200 rounds fired within a two-minute period would make the gun hot enough to produce a cook-off. According to FM 23-67 (1964 edition), para. 43, *Immediate Action*, 150 rounds fired in a two-minute period may heat the barrel sufficiently to cause a cook-off. Is 200 rounds in 2 minutes a change?

PSgt Charles R. Wright
Co D, 1st Bn, 3rd Bde
Fort Polk, La. 71459

Two-hundred rounds fired in a two-minute period is the correct figure. This figure first appeared in Change 4 to the

29 October 1963 edition of TM 9-1005-224-12, *Organizational Maintenance Manual, Machine Gun, 7.62mm, M60 and Mount, Tripod, Machine Gun, M122*. This appears in the September 1965 edition of TM 9-1005-224-12 and will appear in the revision or next change to FM23-67, *Machine Gun 7.62mm, M60*.—Ed & Wpns Dept.

• In your September-October 1965 issue, page 68, "Combat Notes" by Brig Gen Ellis W. Williamson, you show a sketch of the units that formed the task force organization of the 173d Airborne Brigade (Separate) in May of this year.

In this sketch, under "TF Staigers," you show the Support Bn (Abn) of the 173d. If you take a look at FM 21-30 (*Military Symbols*) you will see the mistake made. Page 12 of this manual clearly establishes that the gull wing symbol can not be used alone, as you did. It must be depicted with the appropriate branch symbol.

OC Carlos R. Romero
53d OC Co, 5th Stu Bn, TSB
Fort Benning, Georgia

It seems that we are both wrong. INFANTRY, however, was "wronger" than you.

You do not state which edition of FM 21-30 you used to base your contention on, but editions prior to June 1965 prove that you are correct. Things are, however, changing at a rapid pace in the Army, and military symbols are no exception. The June 1965 edition of FM 21-30 outlines a whole new system of unit symbols that make us both wrong. The diagram below shows what I mean.—Ed



RULES AND THE GAMEBOARD

• I enjoyed studying "The Battlefield: A Gameboard?" in the January-February issue of INFANTRY. But a part of the fourth paragraph troubled me, possibly because an image of the individual American Infantryman as I know him is always in the back of my mind when I study military writing.

This is what was written:

The battlefield, unlike the football field, has no referee to enforce the rules. In fact, no enforceable rules prevail. Little consideration can be given to the published rules of land warfare which are habitually violated. The single rule applicable to the battlefield is simply 'kill or be killed.'

Force and violence must dominate in battle. But the leader, whether he wears stripes or stars, *controls* the force and violence applied by his men. The American Infantrymen with whom I was privileged to fight did not habitually violate the rules of land warfare. We did not win World War II in Europe by becoming super-Nazis. One might expect that the massacre of over 100 American soldiers by the Nazis at Malmedy, Belgium, on 17 December 1944 stemmed from a philosophy that no enforceable rules prevail on the battlefield. The trials and convictions of the Axis war criminals after World War II indicate that violation of the rules ultimately will result in punishment.

American military leaders at all echelons are the referees that enforce the rules of land warfare in battle as far as American soldiers are concerned. With the few exceptions that understandably occur in the maelstrom of battle *the trained and disciplined American Infantryman under competent leadership will habitually abide by the published rules of land warfare.*

May it ever be so.

Lt Col Frank L. Brown (Ret)
3513 Irwin Way
Columbus, Georgia

ALASKAN GARDENS

• I recently received a copy of the May-June 1965 INFANTRY from my son, Major General Nelson M. Lynde, Jr. (Ret), and read with great interest your article ("Is It Really a New Problem") about the garden at Fort Egbert, Alaska, where I served at that time. Co C, 8th Inf, arrived at Fort Egbert June 13, 1902, relieving Co E, 7th Inf, commanded by Capt Wright. Wright took Capt Fredrick Perkins, the commander of Co C, on a tour of the post. Showing him the garden, which at that date looked like a patch of newly plowed ground, Capt Wright said he wanted \$50 from Co C's company fund for it, and he gave Capt Perkins his word that the bare-looking ground was planted with beans, radishes, lettuce, beets, and other garden truck. Barring frost, it would furnish our company mess with all the fresh vegetables we would need. The bargain was closed and we had no frost that spring. There was plenty of green stuff for our table.

I was a corporal in Co C at that time and was a Spanish War Veteran. I have one son, Major General Lynde, and a grandson, Capt Nelson Lynde III. I am 84 years of age and I guess I am the only one alive out of Co C at Egbert.

Nelson M. Lynde, Sr.
1609 Jackson St
Denver, Colorado

Continued on page 16

FUNCTIONS AND CAPABILITIES

CAPT ARTHUR M. HARRIS, Inf

"Non-motorised Infantry divisions are only of value against a motorised and armoured enemy when occupying prepared positions. If these positions are pierced or outflanked, a withdrawal will leave them helpless victims of the motorised enemy, with nothing else to do but hold on to their positions to the last round . . . they cause terrible difficulties in a general retreat—for, as I have indicated, one has to commit one's motorised formations merely to gain time for them."*

FROM OUR EARLIEST MILITARY TRAINING we are told that we should become thoroughly familiar with the organization, characteristics, capabilities, and limitations of those forces within our area of interest. As we pass into positions of leadership and command we are taught that one of the leadership principles is to "employ your command in accordance with its capabilities." The capabilities of squad-, platoon-, and company-size units are easily understood and appreciated since these units usually have one pure function. For example every rifle squad leader knows that the basic Infantry function is, "to close with and destroy the enemy by fire, maneuver, and shock effect;" every tank commander realizes that the basic armor function is "to attack, disrupt, and destroy enemy forces by fire, maneuver, and shock effect."

CLASSIFICATION OF FORCES

The importance of the functions of our forces becomes apparent when we graduate to battalion, brigade, and divisional levels. At these levels the commanders and their staff officers are required to carefully blend a mixture of divergent functions to arrive at the precise balance which will best accomplish the mission. We have four types of forces all performing different functions: (1) command and control elements, (2) combat elements, (3) combat support elements, and (4) combat service support elements. (Figure 1)

As an artist becomes skilled in the recognition and use of certain pigments to create his effect, so must the tactician become proficient in the proper balance of

forces to achieve his effect. So, now let us identify the colors on our maneuver battalion palette.

Command and Control Elements

The commander visualizes his tactical movements and maneuvers on the battlefield not only with respect to the enemy force but also in terms of his major tactical control headquarters. The major tactical control headquarters in the Infantry and tank battalions are the battalion headquarters, and the headquarters of the three combat companies.

Combat Elements

Combat elements are distinguished by their ability to employ fire and maneuver to close with the enemy in combat. Their mission may be to destroy or capture the enemy; seize, control, or deny terrain; protect a large force; or gain information. They use both direct and indirect fires and are trained, organized, and equipped to operate in direct contact with the enemy. The organic combat elements of all five types of Infantry battalions (Infantry, mechanized Infantry, airborne Infantry, airmobile Infantry, and light Infantry) are the three rifle companies and the reconnaissance platoon. The organic combat elements of the two types of tank battalions are the three tank companies and the reconnaissance platoon (the airmobile Infantry battalion has a *scout* platoon).

Combat Support Elements

Combat support elements are those units whose principal function is to furnish operational assistance directly to combat elements. One important type of combat support is fire support. Fire support elements provide the commander with a powerful means of rapidly influencing the course of battle, especially since the advent of tactical nuclear weapons. The fire support elements of the Infantry battalions are the 4.2" mortars (except in the case of the airmobile and light Infantry battalions which use the 81mm mortar as the battalion mortar), Davy Crockett weapons section (when augmented to the battalion), and the battalion antitank platoon. The fire support elements of tank battalions are the 4.2" mortars in the battalion heavy mortar platoon. Although the combat elements and fire support elements (combat support elements) are the primary sources of combat power within a unit, important elements of combat power are provided by other organic or attached combat support, such as Engineer support, Signal support, and Army Aviation support. All combat maneuver battalions of ROAD divisions have communications platoons and ground surveillance sections (except the light Infantry and airmobile Infantry battalions which have no ground surveillance sections and no radar equipment; the airborne Infantry battalions have radar equipment, but it is found in the recon platoon) which assist their combat elements in performing these necessary tasks.

* Erwin Rommel, *Rommel Papers* (New York: Harcourt, Brace & World Inc., 1953), page 198.

poles, rice bowls, staw hats, roof thatching, fake jungle foliage, and the lot. But there it was, 16 crates, each of which could house two automobiles.

Not only did we have to unpack it and transfer it to trucks, but we had to set up what Lieutenant Hobson called "Zone D." This only took a week. And Lieutenant Hobson had maps and diagrams for everything. Between the lieutenant and Sergeant Hewitt, we in Alpha Platoon were worked liked skunks in a forest fire. There was no let up. Build this, build that. Dig this, carry that. Finally our Viet Cong camp and camouflage were complete.

All during this time we were isolated out in the boondocks of our wooded training ground. Daily a truck came in with rations and mail. Sour and gimlet-eyed, Major Doolittle showed up one day with just one word to say: "Lieutenant Hobson you better be right about something, particularly the bill for all these Hollywood props. We have no training funds for this sort of junk."

With his wry, grinning manner, Lieutenant Hobson saluted smartly, and never uttered a word except, "Yes, sir!" Then he drove us like mad.

During the second week we had to build a whole South Vietnamese village out of scrounged lumber and things. This was about a mile away

from "Zone D" which was our VC "living land."

Finally, things began to look Hollywood-real, and we were rather proud of our efforts until Lieutenant Hobson's last words of the day.

"This platoon will play Viet Cong aggressor against all other units in the battalion. From here on you will all wear Vietnamese clothing and speak nothing but Vietnamese—no English whatsoever!"

So we spent a day memorizing the three mimeographed sheets of pidgin Vietnamese and got used to wearing sloppy pajamas and laughing at each other.

We existed another week in complete isolation. Then from somewhere, more crates arrived and we divided up some antique rifles, but still retained some of our own, plus MGs, so we could later fire blanks.

"Looks like Washington has got into this act. All we need is John Wayne." Comments in the platoon ran sour and sarcastic.

For another week we did nothing but train as Viet Cong guerrillas. Lieutenant Hobson all but lost his leadership when he used grease paint to make his eyes slant, and then tried to give us special orders in Vietnamese. We all got confused. There was a day's delay until three more mimeo sheets of "Vietnamese" were printed because we were running out of tactical language from the first issue of tissue. For example, there was nothing in Vietnamese to tell us "dig a latrine," or "you are on KP tonight."

We kept a few of our radios as "captured equipment," thank God, and lived amid a lot of stacked up TNT, fuses, primacord, and smoke pots.

We worked more at night than we did in daytime, but we got very little sleep even in the sun. Sergeant Hewitt's big-shouldered frame was "bushed" each morning—and we were more so!

Momentarily, there was some enthusiasm—but the grumbling rose, all in whispers of course, because we could not speak out loud except in

Vietnamese. This "dinged" us no end.

"I've never heard a real sergeant whisper before, and I don't think anyone in the Army ever has. But finally Sergeant Hewitt was forced to whisper. His leadership was at stake when after weeks of hard work we had had nothing but rice and fish to eat. Lieutenant Hobson had us living the low life of the VC. Morale wasn't low, it was just mean.

Squad to squad Sergeant Hewitt blasted the same whispered message:

"Listen you chumps, I'm still wearing stripes even if you can't see any on my cotton-pickin sleeves. I'm in charge, and what the lieutenant says, goes. Get it?"

"But sarge—"

"Don't call me sarge, you ape! I am your people's leader."

Poor sarge, he had a hard time keeping discipline since we were all getting the swing of the Viet Cong way of irregular life. And boy, we sure were irregular by now.

Then came "the day." Four more sheets of Vietnamese and English translation were issued to us so we could understand the maneuver scenario. By this time Lieutenant Hobson had again run out of verbal vocabulary, so we read his instructions in English while paying lip service to the Vietnamese phonetics below.

On Thursday night the maneuver began.

Bravo platoon, as our enemy, occupied the village. We VC were to attack in darkness and then when Charlie platoon came to the rescue we were to ambush it. Standard VC tactics. The gimmick was that neither of the opposing platoons knew what we had hidden in the village, and under it—and along the rescue convoy route. Oh we had dug tunnels all over the place and had laid out TNT in wholesale charges—but screened and "protected" we thought, so no one would get blown up—just knocked down for concussion.

I won't say that Lieutenant Hobson was exactly faced with court-martial charges later—but he had an awful lot of explaining to do before



higher commanders. Seems everyone up the chain of command ladder got word of this training maneuver experiment and was out on the ground when we went to work. Oh it was awful for a while because things didn't always work out as we had planned.

As it turned out later, this inviting of the brass to this maneuver was the work of Major Doolittle. If "lean and mean" Lieutenant Hobson was over-imaginative, then our heavy-set Major Doolittle was not only under-imaginative, but jealous and conservative. Doolittle sensed that he could either capture the glory of Hobson's noble experiment in training or see that Hobson was nailed to the wall for its failure.

So on the night of the maneuver we teetered on a rim between heaven and hell. We slipped a lot. Sometimes we fell.

We had orders to rope, tie, and carry off any prisoners taken, and this we did. Our attack on the village started at 0200 after we had silently inched forward on our bellies for over four hours. But our "big ace" was tunnel infiltration. Then the fire-works and the shooting and blasting began. Blanks and TNT explosions provided the combat atmosphere but the real casualties were from hand-to-hand scuffling and rapid capture, roping, and carry-off.

For an hour we skirmished in this fashion and got a good many prisoners back into our Zone D. Some of them we captured rather easily, that is, they did not have rifles with which to butt us.

As we were roughly tying these prisoners to trees our fingers began to

get scratched on metal pieces and those pieces turned out to be stars and eagles—and an oak leaf or two. As officers, these POW's began pulling rank on us, saying "We are observers, can't you see the white arm bands?"

We had too much work to do to argue. Besides "No spika da English!" For the first time we could legally be insubordinate. Mentally, we thanked Lieutenant Hobson for his foresight and language discipline. It was fun slinging Vietnamese jargon at a captured and tied-up Marine general instead of saying, "Sir!"

We left our sputtering prisoners tied to trees and raced off for the ambush part of the maneuver scenario.

Good thing there were no umpires in this maneuver because it turned out to be a free for all—and a lot of good confusion. Even for us. But it was fun in a rough sort of way.

To simulate our mortar fire we had two-pound charges of TNT wired up in various tree tops along the route where we noisily ambushed the enemy relief column. We set off these charges from hidden positions on the ground.

The battalion commander was with the convoy when we halted it in a hail of fire, yelling, and TNT explosions. We actually blew up a small bridge as the lead convoy vehicle got within 75 yards of it. The men in the convoy dismounted firing.

My big TNT charge was atop a pine tree 50 yards away and I was about to touch the two wires to the battery when I heard Major Doolittle say "Colonel, this is getting too dangerous. Someone is going to get hurt. Lieutenant Hobson has gone too far. We must stop the maneuver."

Both Doolittle and the battalion commander were crowded under *my* tree which had TNT near its top.

The colonel muttered something amid the noise.

Explosions were going off everywhere and amid the flashes I would see my pajama-clad friends dashing like mad. They were really playing it VC.

Suddenly a hand touched my shoulder and I shook in fright.

"Set your charge off, quickly."

Then I saw the grease-paint slant eyes. It was Lieutenant Hobson.

"But the battalion commander and Major Doolittle are under my tree."

"An order is an order. Blast it!"

Wham! The flash didn't blind me too much, and I saw the tree top slam down on Doolittle and the colonel.

There was a lot of cursing and it was mostly in Doolittle's voice. Next he was screaming, "Colonel, are you hurt? Oh my God, Hobson has killed the colonel."

Events got confused, but someone must have captured Doolittle because I heard him shrill, "You can't do this to me . . . White arm band . . . observer . . . take that gag out of my . . ."

I was worried about the colonel and I crept up to where he had been. Smokepots were shrouding the area and there was a lot of coughing here and there. Suddenly a strong arm slung itself in a choke hold around my neck. The other arm slammed my rifle smack to the ground. In two grunts I was dragged away and flung to the ground.

"Here's a prisoner for you, corporal. Take him away!"

I had been captured by the battalion commander.

I won't go into the confusion that followed except to say that Lieutenant Hobson's Viet Cong plan of operation was a huge success—at least in violence. There was the enemy reserve, that tank platoon that noisily barreled up the road to rescue the convoy. Boy, where those tankers surprised!

Lieutenant Hobson had drilled into our minds that the real VC had to make the utmost use of limited manpower and let devices and mines do extra work. So, along this particular part of the forest we had TNT charges already prepared at the base of many trees. It was here that Lieutenant Hobson and six men next went to work. They rigged a special wire across the road, about 14 feet up in the air. This wire was tied



between two trees, one on each side of the road. At one end of the wire was an ordinary closepin, one metal-plated jaw of it connected to a positive wire; the other one, also plated, was connected with a negative wire. An insulating piece of wood held the closepin jaws open, and the wood was attached to the main wire which a tank aerial was to snap. Sure enough, it worked. Then both wires were battery-connected with a series of TNT charges at the base of many trees down the road. This was the key.

The tanks clanked up the road and the radio aerial of the first tank snapped the suspended wire and the closepin jaw closed after the wire-attached piece of wood was yanked out. Then whammo! For 75 yards in back of the lead tank TNT explosions blasted down a series of big trees and they fell across and on top of these tanks. Talk about immobilizing armor. Quickly Lieutenant Hobson became a tactical genius because he and his men were atop those tanks when the turrets opened and the smoke grenades they tossed inside made those tankers natural prisoners in a few seconds.

Tactically this was the *coup de grace* for that part of the operation but it seems that everyone on the opposing side got awful mad about that time.

I was still a prisoner with the convoy group when I noticed that there was less and less shooting of blanks and more crawling and crunching. Then I began to sense that there was a lot of jumping and grappling. All of a sudden bodies were roughly flung down beside me amid considerable

cursing on the part of both parties. Suddenly, half of Lieutenant Hobson's "VC platoon" was prisoner.

But they never caught the lieutenant. Not that night!

The enemy rescue convoy spanned the blown bridge with some cut down timbers, and at daybreak got to the village, still "half defended."

But the enemy truck and jeep drivers were a little careless when they got in the village. They backed and twisted their vehicles around knocking over wire obstacles we had placed around the TNT charges. So from hidden tunnel peep holes, Lieutenant Hobson and his few remaining men—and they were few—set off the TNT charges that blew apart tires on a variety of vehicles and scared the hell out of drivers and others.

With no umpires, Major Doolittle and most of the brass captured, it was pretty hard to stop this maneuver. Especially since Lieutenant Hobson still had TNT and a few men left—and they were everywhere until it got light.

The tanks finally got untangled from the fallen trees after some engineers arrived with saws. The village defenses were strengthened and later our VC Zone D was invaded. But Lieutenant Hobson and his VCs were not there.

Then there was just a lot of milling around as the high-ranking and other prisoners were freed. No one seemed in command except the battalion commander, and for a long time Lieutenant Hobson and his few men were just AWOL.

By the time the sun was really up, Major Doolittle had a stack of notes

on his clip board when a general officer asked for a look at them.

The major saluted and was all "Sir" this and "Sir" that, but this didn't bother the general. He just read the notes and smoked a big cigar.

Finally the general spoke: "Some good critique points here, major, but you are a little emotional and rough on Lieutenant Hobson. You treat him as if he were an enemy!"

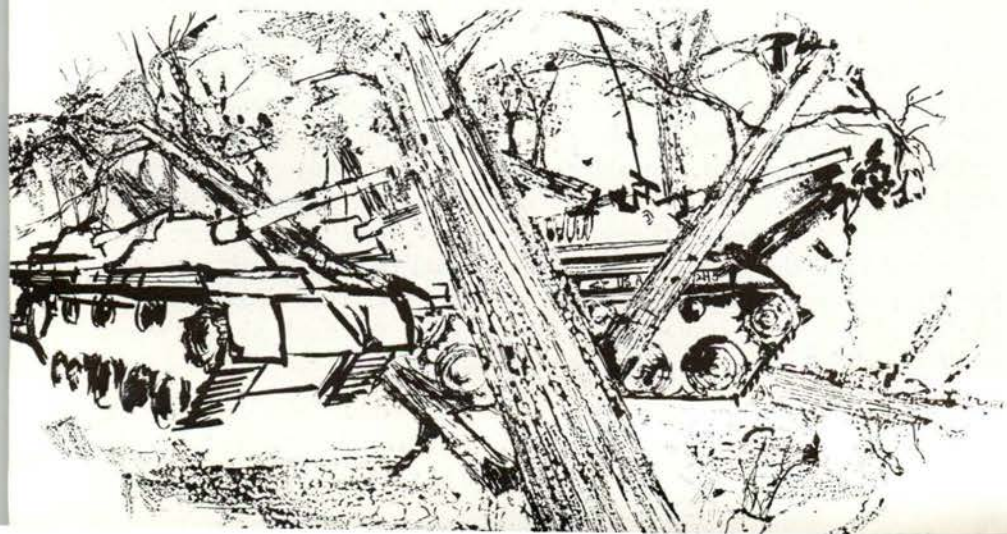
Major Doolittle was miffed, but he pulled his one ace: "Sir, who is going to pay for all those Hollywood props Lieutenant Hobson rented?"

"Don't worry, major," the general laughed, "Before this maneuver I had a letter from Acme Picture Studios, and they acknowledged how unusual a request they had received from Hobson. In fact they were so touched by it and his ideas on training realism that in the interest of our national effort in Vietnam they notified me that there would be no charge whatsoever."

Well that was not the end of the story of this maneuver. Lieutenant Hobson and his men were simply nowhere for the next five days. Everyone got so worried a new maneuver was started and we labelled it "Get Hobson." The brass was worried for fear he had buried himself from a blast of fallen earth in one of the tunnels.

Everyone got into the act, particularly Alpha Platoon, which had dug the tunnels. The catch was that Hobson had the one and only map of the tunnels. So we searched while Hobson and his few men practically starved while playing the tactical game of hide and seek.

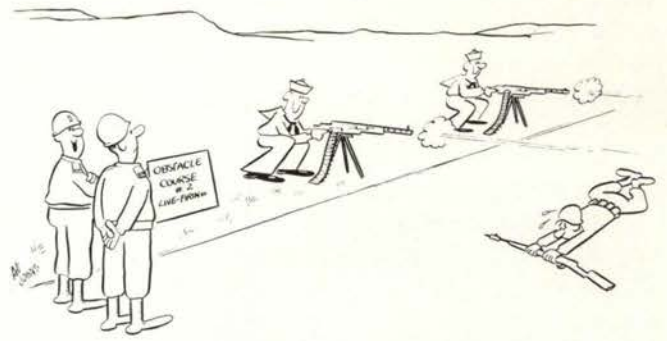
They always say that no one ever wins a maneuver, but we all had to concede that Lieutenant Hobson won this one. Unshaven and as muddy-crummy as an officer could look, he showed up at the battalion headquarters one afternoon with his men. He reported to the battalion CO and simply said, "Colonel, we're too hungry to play Viet Cong anymore, but I have a new idea for another training exercise." ■





"According to my calculations, we're exactly four miles beyond aggressor lines."

ROUTE STEP



"It's really put the men on the ball!"



"Light meat or dark?"

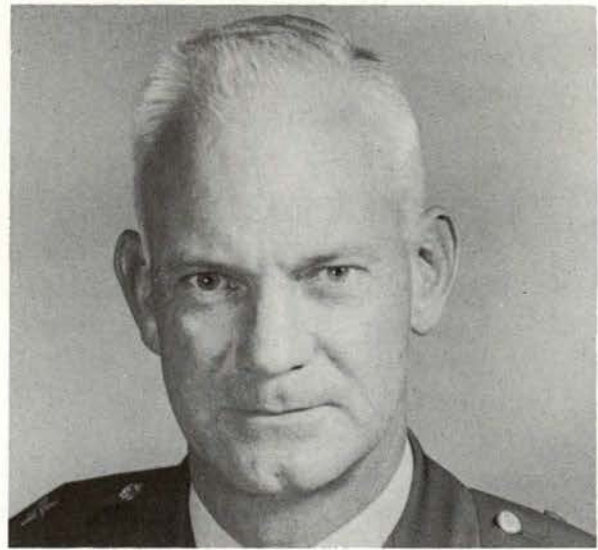


"It's only three floors . . . I'll jump."

Change of ASSISTANT COMMANDANT



General Forsythe



General Williamson

THE UNITED STATES ARMY INFANTRY SCHOOL honored departing Assistant Commandant Brig Gen George I. Forsythe at a farewell review 11 March and welcomed its new Assistant Commandant, Brig Gen Ellis W. Williamson, 29 March.

General Forsythe departed Fort Benning for his new assignment as G3, U. S. Army, Pacific, at Fort Shafter, Hawaii and on 1 April, he was promoted to the rank of major general. General Forsythe received his commission upon graduation from the University of Montana and served in the European and Pacific theaters in World War II. In 1958 he was assigned to MAAG, Vietnam, where he served as the first Senior Advisor to the Field Command of the Vietnamese Army.

General Williamson arrived at the Infantry School after commanding the 173d Airborne Brigade (Separate) in Okinawa and in Vietnam. The 173d was the first U. S. Army unit to be deployed to the war in Vietnam. General Williamson served with X Corps during the Korean Conflict and participated in European operations in World War II. General Williamson is probably best known to INFANTRY readers for his two "Combat Notes" articles describing the 173d's combat operations in Vietnam. (Sept-Oct 65 and Mar-Apr 66.)

Letters, Cont'd from page 2
FREEDOM TO FAIL

• I have recently finished "Freedom to Fail" by Capt Peter M. Dawkins.

During my five years of service as both an NCO (three years active and one NG) and an officer I believe this to be the most revealing article I have read on the modern military.

In order to counter any accusations that he is trying to cover his own mistakes, you may point out that Capt Dawkins has excelled from the Point to the present Rhodes scholar, etc.).

Thank God for at least one man willing to stand up for his beliefs!

Now that you have honored his prowess with a pen, what do you intend to do to help honor his ideas?

If called to serve my country again, I hope I'll have the honor of serving under Capt Dawkins.

Lt Leo R. Orenstein, Inf Co C, 16th SFGp (A), 1st SF, USARNG Wilmington, N.C.

• I believe that Capt Dawkins award was richly deserved. I was particularly impressed by the statements made after

the sentence, "What is this labyrinth?" Herein lies the nitty-gritty of the retention problem.

Lt Stephen E. Gregory, Jr., Inf 10 Woodland Ct Laurel, Md. 20810

VIETNAM GAZETTEER AND DESERT STRIKE INFO

• In some future issue, how about reproducing sectional maps of the tactical areas of South Vietnam. Also, a guide to pronouncing Vietnamese names and places would be most helpful.

Personally, I was glad to see the article on DTOC communications (Sept-Oct, '64 issue). Our signal battalion, the 250th, developed a rack of pre-wired telephones for use in the Division Tactical Operations Center during annual field training in 1965. It worked quite well in what proved to be a fairly static CPX situation. The question remains, however, to what degree can we rely on this amount of wire comms in fast-moving situations? It would have been interesting to know, for example, whether the 5th Infantry Division (Mech) used

this DTOC comms setup during DESERT STRIKE.

INFANTRY has come a long way in a few short years. Today it is, without question, one of the best of the professional military journals. You and your predecessors are to be commended.

Maj Bruce Jacobs, Armor P. O. Box 7 Park Ridge, N.J. 07656

It would be appropriate for INFANTRY to take the lead in publishing a pronouncing gazetteer of Vietnamese place names in an attempt to standardize American pronunciation and spelling of these names with which the American Infantryman doubtless will become increasingly familiar. Whether we could be much help in furnishing a useful guide for pronunciation of Vietnamese surnames and given names is questionable. Comments from readers would be appreciated.

Any readers in the 5th Mech who have the info on the comms setup in DESERT STRIKE should be able to provide Maj Jacobs with the answers on this.
—Ed.

Some Notes on the Infantry School Emblem

COL HARRY D. TEMPLE, AGC

The artist item is a manufacturing drawing for a proposed Infantry School "shoulder insignia". This bears the notation that the drawing was unsigned, and it is not officially approved, and the date 25 September 1920. There are several peculiarities about this design: first, the shield has nine sides instead of today's seven; second, the bayonet (or shield?) points downward; third, there is a wreath behind the bayonet; and fourth, the motto does not appear on the device.



The design dated 1920

The design

A drawing of the 1920 approval dated 20 September 1920, was located which is very similar to today's design except the 'top' has 'low nine sides' instead of seven.

In relation to the Arnold Field's article "Follow Me" by Walter A. ... in the November-December 1965 issue of the Army Heritage & Education Journal, the author states that the original material.

A copy of a letter to the Quartermaster General, dated 8 June 1922, was found which approved the "device" for the Infantry School. This authorization specifically approved its use as a "badge." Whether a shoulder sleeve insignia or a distinctive insignia or neither was intended is unknown. At any rate, the 1935 approval did mean a distinctive insignia. (The sample of the insignia was approved on 21 January 1936.)



This article was an entry in last year's Short Story Contest and is published in this issue to remind readers of the 1966 contest, announced on the back cover of this magazine. Capt Booker's entry did not win either of the two prizes, but was held for possible future publication at our regular payment rates. You've got from now until August to come up with ideas and get them on paper.

THE UNKNOWN SOLDIER

CAPT JAMES A. BOOKER, Inf

IN ARLINGTON NATIONAL CEMETERY stands the Tomb of the Unknown Soldier. This monument houses the remains of fallen soldiers from three of our country's major wars. The inscription on the tomb reads, "Here rests in honored glory an American soldier known but to God."

It was late afternoon when our truck finally stopped. The guards quickly dismounted and motioned for us to do likewise. There were five of us prisoners; all of us young, all of us privates, and all of us scared. For several hours my throat had burned with thirst, pushing all other thoughts to the back of my mind. But the sight which confronted me made me forget even my thirst. We had reached a POW camp. I later learned that it was one of a series of temporary compounds built to house prisoners while they were interrogated in detail before being shipped to Japan. The compound was austere in appearance, consisting of a barbed-wire quadrangle with machine gun towers at opposite corners. But what first caught my attention was the half-naked body of a blond Australian lying near us. His body showed the raw, open gash of a Japanese bayonet wound. It

couldn't have happened more than two hours earlier.

A sharp blow to the small of my back from a guard's rifle butt reminded me that I had hesitated too long. Not wishing to share the fate of the Australian, I suppressed an urge to cry out and moved along quickly.

Once inside the compound I found a place near another American and an Australian and sat down. It had been two days since my capture, and my fear of what lay ahead had diminished somewhat, as well as my mortification at being captured. After listening to some of the stories of Japanese brutality that had filtered back after the fall of Bataan and Corregidor, I had once said that I'd shoot myself before I'd let the Japs capture me. But there I was, squatting beside a dismal hut in the middle of a Japanese POW compound, trying to get a little shade from the blazing tropical sun.

The details of my capture have never been too clear in my mind, consisting mainly of a few vivid but disconnected scenes. We had been advancing for several days along the northern coast of New Guinea. After one exceptionally uneventful day we stopped for the night, ate a K-ration supper, and half of us tried to get some sleep. The chatter of several automatic weapons nearby brought me wide awake instantly. In the flickering light of a burning vehicle I saw two Japanese riflemen chasing a barefoot, weaponless soldier. The whole camp was in a state of chaos. I sat up, pulled on my boots, grabbed my rifle, ran about ten steps, and tripped on my dangling boot laces. As I struggled to my feet someone grabbed me from behind. Another shadowy figure thrust a rifle muzzle into my belly, and I realized that further resistance would be futile. The gnawing rage I felt was tempered by a growing sense of fear. They motioned me forward and I went with them, sickened by the carnage they left in the camp. There weren't many prisoners. Two days later we reached the compound.

No one in the camp had much to say. We were too discouraged and too thirsty. No one looked as if he had been there very long, but only one man failed to wear the dejected look of utter despair. That man was a corporal named Warren. I don't even remember how I learned his name. I first noticed him carefully observing the guards. His eyes were red and swollen from the dusty truck ride, but they moved furtively back and forth, taking in every detail. Then he drew a little map on the ground, plotting every guard position he could see. When the two guards on each tower were changed, he cautiously glanced at a pocket watch that had somehow escaped the probing search of his captors. Here was clearly a man who never intended to see Japan as a prisoner. He never did.

It was nearly dark when supper came. An unarmed Japanese noncom accompanied by two armed guards entered the compound carrying a bowl of some nondescript substance. It was apparent that some thirty of us were supposed to eat from one bowl. To my dismay, they brought nothing for us to drink. The noncom

set the bowl on the ground and turned to leave.

"Don't you have any water?" called a voice near me. It was Warren. The Japs turned around and Warren made a motion as if drinking from a glass. The noncom smiled. It was a humorless smile, which displayed a mouthful of bad teeth.

"Wan' watta?" he asked in pidgin English. "I give watta."

With this he promptly unbuttoned his trousers and proceeded to relieve himself into the bowl containing our supper. The two guards howled with laughter. Warren didn't think it was funny. As he stepped forward one of the guards raised his rifle to stop him. The Jap was too slow. Warren tore the rifle from his grasp and swung a vicious butt stroke. I thought he'd knocked the guard's head off. The other guard hesitated, dumbfounded. That was the last mistake he ever made. The bayonet on Warren's newly acquired weapon plunged squarely into his chest. Somebody grabbed the noncom before I fully realized what was happening.

As Warren struggled to free the bayonet from the guard's body, a guard on one of the towers began to yell and focused a spotlight on us. Wrenching the weapon free, Warren turned and shot the spotlight out. The machine guns from both towers began firing blindly at us. We scrambled in all directions. Warren emptied his rifle into one tower, putting the crew out of action. Someone hollered, "For the luvva God, you're gonna get us all killed!"

But it was too late to quit then. We were committed. Warren ran to the base of the tower he had inactivated, scrambled over the barbed wire, and started climbing. I found the other guard's rifle and fired on the opposite tower. I don't know if I hit anything, but I distracted the crew enough that they didn't stop Warren from reaching the top of the first tower. One burst from his captured Nambu machine gun silenced the guards on the other tower. Then he began raking the guard positions near the gate.

I leaped up with several others and rushed the gate. In a moment we were free and racing for our lives. Once into the jungle I stopped for a second to listen. From the volume of fire I heard, I'm sure Warren couldn't possibly have escaped.

After the realization that I was no longer a prisoner had fully registered, I was faced with a new problem. I was unarmed, without food or water, and alone in the jungle with no idea which way to go to reach friendly forces. At least I could forget the Japs until morning, I thought. Then I heard dogs barking. Apparently they were just pets kept by the natives nearby, though, because they quit barking as soon as the other noises subsided. This realization brought a sigh of relief, because without dogs the Japs stood virtually no chance of finding us in the dark, just as I stood little chance of finding the other escapees. I was sure the Japs would be out looking for us at first light, though, so I set out to put

as much distance as possible between them and me.

A night spent alone in the jungle is a sobering experience, to say the least. Sound carries a long way, and distance is deceptive. The death screams of a small animal caught by a predator can be heard for a surprisingly great distance. It was rather ironic, I thought. At one time I had fancied myself a sort of predator, particularly the first time I killed one of the enemy. But at the moment I felt more like one of the small animals being hunted.

Each time I reached a clearing I checked the Southern Cross. I had decided to travel eastward, not because I had any great faith that east was the right direction, but merely to make sure that I was traveling consistently in the same direction to avoid walking in a circle.

At dawn I was exhausted and soaked with sweat. I stopped by a small, murky stream, took my shirt off, and plunged the entire upper half of my body into the water. Then I lay back on the grass to enjoy the coolness. To my astonishment I heard women's laughter. I thought I had gone mad. Then I heard it again. I walked down stream about a hundred yards. From there I could see two women washing clothing in the stream. A small village stood nearby. When the women saw me, they both ran into the village. I decided to take a chance and follow them, since most of the islanders hated the Japanese. Inside the village I was greeted by three short, dark men. We had no common language, but my situation must have been pretty obvious. They fed me a meat and herb

stew. It's probably just as well that I didn't know what it was. I rested that day, got a good night's sleep, and left the next morning with a guide. He took me to the next village, held a brief conversation with some of the inhabitants, and departed. The next morning I started out with a new guide. This process was repeated several times as I traveled for six days. My last guide brought me to a town on the coast, where I was happy to see a group of Australians. My guide pointed to them, turned around, and started back to his village. I was sorry that I had nothing to give him and no words to thank him. I found my battalion the next day.

After the war I tried for a long time to find out who Warren was, but with no success. I wasn't even sure whether "Warren" was his first name or his last. Once I thought I had narrowed his identity down to two or three possibilities, but I couldn't identify any of their pictures as the man who bought my freedom with his life. The only time I saw him he wore several days' growth of beard and was covered from head to foot with dust, which obscured his features to the point that I really didn't know what he looked like.

A few years ago a special award of the Medal of Honor was made to the Unknown Soldier. I was never able to see that Warren got the recognition he deserved, but I like to think that he was included in that award. He certainly earned it. To an American soldier known but to God—for gallantry in action above and beyond the call of duty. ■



DOUGHBOY'S SWAP SHOP

ITEM 6

Write Infantry
Box 2005
Fort Benning, Georgia
31905

The Problem: To conduct realistic camouflage training.

An Idea: Success and realism in camouflage training can be achieved by pitting two squads or even larger units against each other in "hide-and seek" fashion. The first element is given a head start along a specific route and establishes a well-concealed defensive position. The second element is given the responsibility to search for and to find the first element using proper scouting and patrolling techniques which involve, of course, the use of cover and concealment. The winner of the competition is determined by detection. The element detected first is the loser. It is to be expected that the moving unit is normally detected first, but by rotating the elements (having the seeker becoming the defender) and by authorizing sufficient time for stealth, the expected advantage of the defender is overcome. A further refinement is to authorize the seeking unit to employ its force in echelon and require the defender to identify the location of at least 75 per cent of the seeking force once detection is claimed. If the defender locates less than 75 percent after claiming detection, he has lost the contest.

A Challenge: How have you solved this problem? Share your solution with other Doughboys. Write INFANTRY. ■



COMMANDANT'S NOTES



**General
York**

The Army's Unit Readiness Program in its present concept has been in existence for two years. During this time much has been accomplished, but its full potential has not yet been reached. Past difficulties have resulted from a number of misconceptions and from our failure in too many cases to "get the word down to the man who does the job." The purpose of this article is to relate what we at the Infantry School are doing to improve the situation.

Experience has shown that the crux of the problem in teaching the Army's Unit Readiness Program, as in all others, is to motivate or "sell" the student on why he should learn. With this in mind we refer to the Unit Readiness Report as a quarterly command letter which can obtain results when administrative or supply channels have failed. It is also a letter which can result in directed action along the chain of command while, at the same time, providing the Department of the Army with information needed to make realistic decisions on contingency deployments and the annual procurement program. In this respect, the student is made aware from the beginning that the Unit Readiness Report does not **measure** effectiveness since such factors as morale, teamwork, physical fitness, courage, and other intangibles are not included. Nevertheless, the information presented by the Unit Readiness Report does furnish reliable indicators of a unit's potential combat capability.

Upon my arrival at Fort Benning, I was pleased to note that the Infantry School already had revamped its program of instruction in unit readiness. The program combines the readiness aspects of our mobility, communications, and weapons instruction in conjunction with related staff presentations in the personnel, training, and logistics fields. Emphasis is placed on three areas: the desired standards; how to identify, on a continuing basis, deviations from standards; and how to initiate corrective and follow-up actions.

We are not attempting to make a communications or motor officer out of the student. We are trying to produce commanders and staff officers who are trained inspectors and who can ascertain whether operators and supervisors are doing their job in maintaining the unit at the highest state of readiness. To this end, detailed instruction is given on the equipment log book and the use of appropriate technical manuals and other media necessary to make equipment serviceability evaluation of a unit. The officer student is also given instruction on the Prescribed Load List (PLL) and its importance in maintaining readiness. In the area of preventive maintenance, a detailed class in preventive maintenance services is given in which students actually make preventive maintenance inspections of all types of equipment.

To enable the student to apply what is learned in the classroom and provide a transition from the academic to the actual unit environment, the student evaluates the unit readiness of a TOE mechanized Infantry battalion located at Fort Benning. This practical training is intended to prepare the officer for effective performance in the field of unit readiness immediately upon graduation. In this regard, we are attempting to graduate an officer from career level classes who would qualify for an MOS "prefix" in unit readiness, if one could be awarded, much in the same manner as he qualifies for a "prefix 5" after successful completion of nuclear weapons instruction.

My recent experience as commander of the 82d Airborne Division during its contingency deployment to the Dominican Republic demonstrated to me the vital contribution being made by the Army Readiness Program. Constant attention to the application of the program helped us maintain our state of readiness. In fact, one member of the Division CMMI team was wounded while inspecting front line vehicles. It was unfortunate that the man was wounded, but the incident is an example of how maintenance-minded a unit must be.

Although much has been accomplished, we will continue to improve our unit readiness instruction so that the graduate of the Infantry School will become as renowned for maintaining peacetime readiness as he is for his small unit leadership in wartime.

A handwritten signature in black ink that reads "Robt. H. York". The signature is written in a cursive, slightly slanted style.

ROBERT H. YORK
Major General, USA
Commandant



Figure 1. The H&R G3 (M) Rifle (right view). CHARACTERISTICS: Overall length, 36.1 inches; overall weight (combat loaded) approximately 8 pounds; ammunition fed from 20-round detachable straight box magazine; Cyclic rate of fire, approximately 600 rpm.

5.56 mm WITH A GERMAN ACCENT

CAPT THOMAS M. JOHNSON, Inf

THE HARRINGTON AND RICHARDSON G3 (Modified) is a 5.56mm military rifle developed by Harrington and Richardson, Inc., of Worcester, Mass., in association with the Heckler and Koch Company of West Germany. The rifle is nothing more than a scaled-down version of the standard service rifle of the West German Forces (Automatic Rifle, 7.62mm X51, NATO, G3) developed by Heckler and Koch under contract for the Federal Republic of Germany.

The H & R G3 (M) was designed to conform with current U.S. military rifle trends and accepts the new,

smaller, 5.56mm cartridge. The Heckler and Koch designation for the weapon is "Automatic Rifle HK 33."

Let's examine the G3 (M) from front to rear (see figures 1 & 2). A flash-suppressing grenade launcher on the muzzle assists in the dissipation of both muzzle flash and gases. Located above the 15.4-inch barrel is the operating rod tube which features an operating handle on the left, toward the front. A fixed front sight post, which is encircled by a protective steel ring, is mounted over the operating tube (see figure 3).

The front handguard, constructed of a shock-resistant fiber, serves a dual purpose: It protects the firer's hand and dissipates the heat from the barrel.

The unusual rear sight consists of a circular dial which is rotated to obtain range settings of 100, 200, 300, and 400 meters (see figure 4). The 100-meter setting is an open "V" notch, and the other three settings are apertures. No sight adjustments for windage are made on this weapon. The rifleman must use "Kentucky Windage" or "holdoff." The soldier is taught to compensate for various wind conditions by use of the adjusted aiming point method of target engagement (see FM 23-71, RIFLE MARKSMANSHIP, Para. 36). The sight radius



Figure 2. The H&R G3 (M) Rifle (left view). Note the unusual location of the operating handle (left front portion of the operating rod tube mounted over the barrel).

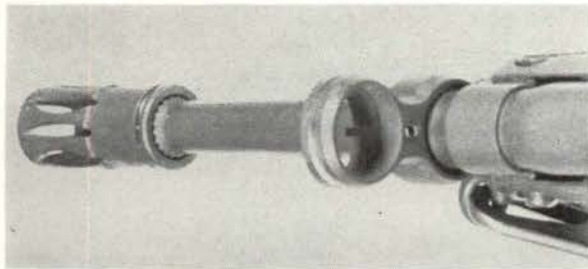


Figure 3. The H&R G3 (M) Front Sight and Flash Suppressor. The front sight assembly is mounted around the barrel and operating rod tube, and features a fixed front sight post encircled by a protective steel ring.

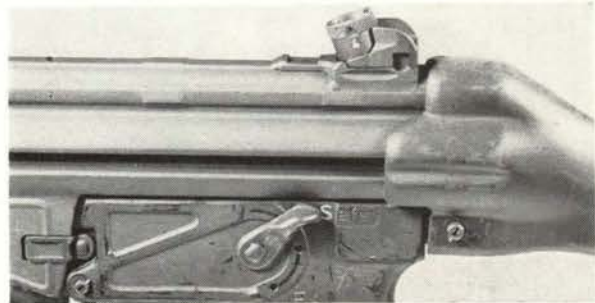


Figure 5. The Selector Lever. Without removing the right hand from the pistol grip, the selector lever can be thumb-manipulated to one of three positions: Safe (safety), SA (semiautomatic) and FA (full automatic).

(distance between the front and rear sights) for the rifle is 18.7 inches.

Featured on the left side of the receiver group, above an irregularly shaped pistol grip, is a selector lever which can be thumb-manipulated without removing the hand from the grip (see figure 5). The selector lever can be set in one of three positions which can be checked from either side of the rifle: Safe (safety), SA (semiautomatic) and FA (full automatic). A 20-round, detachable, straight box magazine fits into the bottom of the receiver.

A unique system of operation features a delayed-blowback system using a semi-rigid bolt composed of two major parts: the bolt head and the locking piece (see figure 6). The bolt head, which contains two locking rollers, is considerably smaller than the locking piece which contains the firing pin. When a round is fired, pressure is exerted on the back of the cartridge, forcing the two locking rollers back against the nose of the locking piece, starting it to the rear. The rifle fires from the closed bolt position in both the semi-automatic and automatic modes. One disadvantage of a delayed-blowback

system is that this type of system precludes slow initial extraction (there is no slight turning and/or short rearward movement of the bolt to loosen the spent cartridge case before it is withdrawn from the receiver) and, consequently, can result in pulling the base off the cartridge case during extraction.

The stock is constructed of a lightweight fiber and has a rubber recoil pad on the butt. A web sling extends from the rear sling attachment on the left side of the stock to an "eye" located on the left side of the base of the front sight assembly.

The G3 (M) has an overall length of 36.1 inches and an empty weight of 6.6 pounds. The firing weight (fully loaded with sling) is approximately eight pounds. A cyclic rate of fire of approximately 600 rounds per minute and a claimed muzzle velocity of 3,182 feet per second provide the G3 (M) with quite a powerful punch.

In the preface of their brochure, the Heckler and Koch Company sums up their conception of modern weapons: "Formerly, combat tactics had to be adjusted to weapons available. At present, weapons are being designed to meet the tactical requirement of the art of war." ■

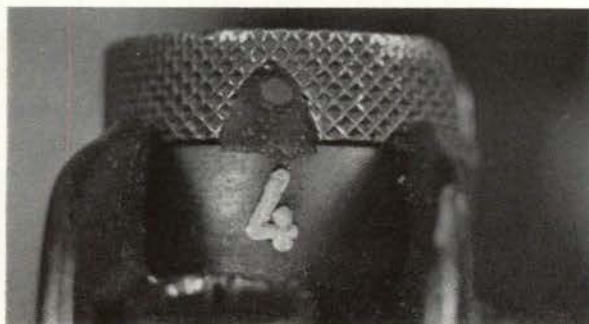


Figure 4. The H&R G3 (M) Rear Sight. The rear sight consists of a circular dial which is rotated for range settings of 100 (an open "V" notch), 200, 300 and 400 meters (apertures).

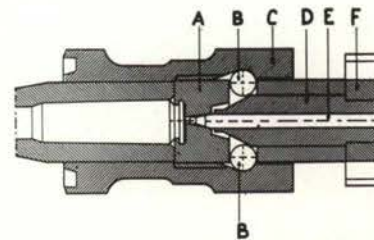
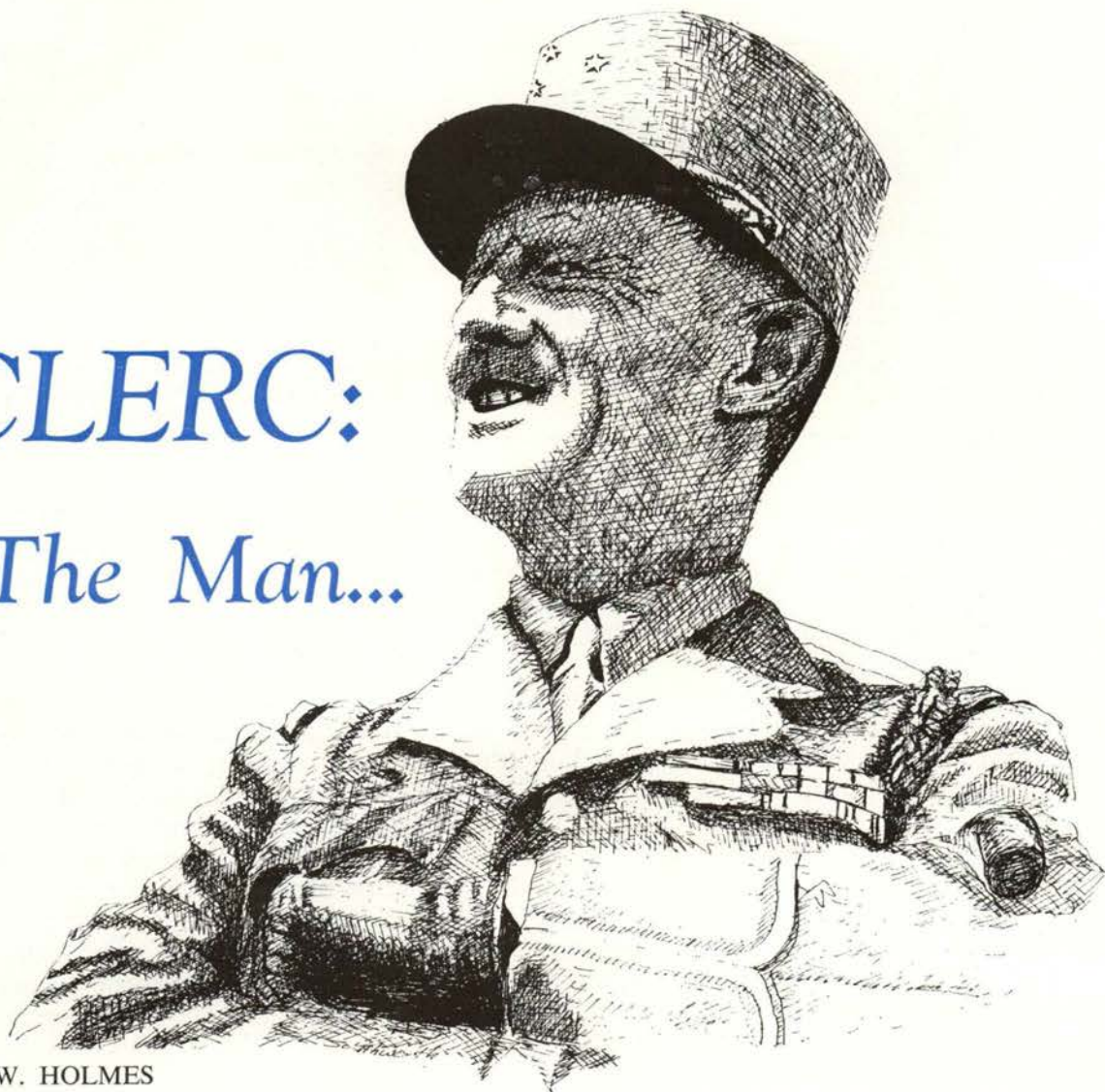


Figure 6. Bolt Assembly. The semi-rigid bolt is composed of two major parts: The bolt head, containing two locking rollers, and the locking piece, containing the firing pin. A—Bolt Head, B—Locking Rollers, C—Barrel Extension, D—Locking Piece, E—Firing Pin, F—Bolt Head Carrier.

LECLERC:

The Man...



SP4 HOWARD W. HOLMES

PHILLIPE, Vicomte de Hautecloque, a captain in the French Army, was wounded and captured by a German detachment in 1940. However, he managed to escape to Spain where he joined the Free French Movement under De Gaulle. He assumed the name LeClerc to avoid reprisals against his family, still in France. It was under this assumed name that he will live forever in the minds of Frenchmen as the man who liberated French Equatorial Africa, who marched into Paris and liberated his nation's capital from the German-controlled Vichy regime, who marched into Strasbourg, and who marched with

the Allies into Hitler's Berchtesgarden retreat, where the war soon ended.

A captain at the onset of the war, he was to rise to the rank of General of the Army, and was posthumously elevated to the rank of Marshal of France, the highest military rank of France—posthumously, because LeClerc died in an airplane crash over Algeria in 1947.

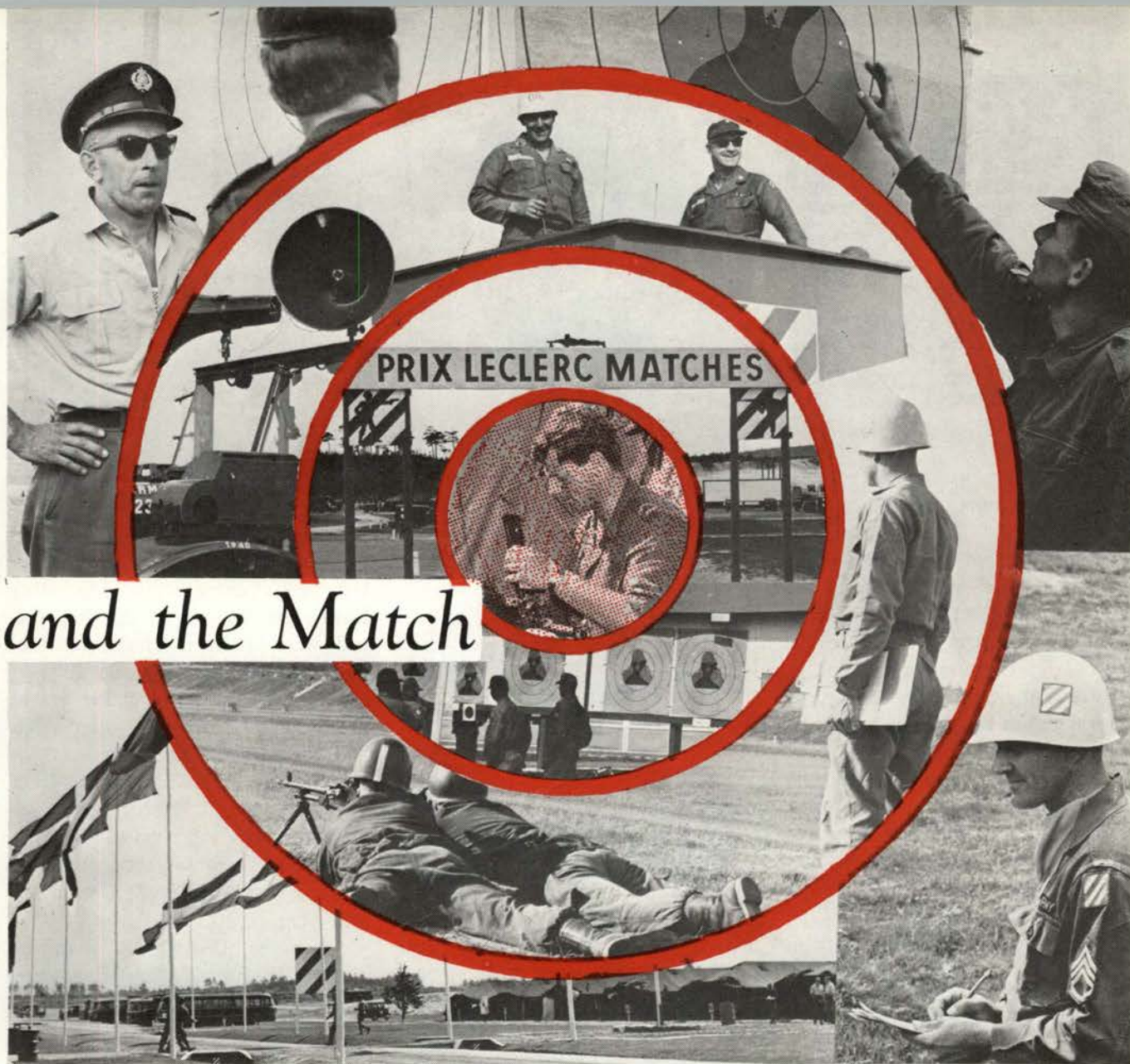
The memory of the general, however, did not die. His legend lived on in the history books, the minds of the French, and particularly that of Sir Eugen Millington-Drake, KCMG (Knight Commander of St. Michael and St. George), a former minister

in the British Foreign Service.

Sir Eugen thought it was not enough that the Marshal of France should be noted only in history books. He therefore set in motion a cloud of ideas that eventually solidified in the Prix LeClerc Marksmanship Matches, a competition which was to be held annually between the nations of the Allied Land Forces, Central Europe to foster a high standard of small arms training.

For the competition, he donated a two-foot bronze bust of LeClerc, a traveling trophy which would remain with the winning team each year.

In making this presentation in 1951, Sir Eugen was developing



and the Match

an idea which had originated in 1907, when his father, Henry Millington-Drake, then president of the British Chamber of Commerce in Paris, presented to the French Army a challenge cup for the shooting competition between regimental teams. A successful athlete and keen shot, he knew that military marksmanship is of little value unless it follows considerable physical and athletic effort, which almost invariably precedes firing in actual war. Sir Eugen's father, therefore, stipulated that this competition be under conditions approximating, as near as possible, those of war.

The trophy competition was held

from 1907 to 1914 and between the world wars. The valuable silver trophy was lost during World War II and Sir Eugen replaced it for the first post-war competition held in 1948 for the entire French Army. After 1949, however, the competition was limited to French regiments stationed in Germany, for reasons of economy.

This event gave Sir Eugen and General Chevillon, the French general presiding at the 1948 competition, the idea of a wider competition between teams from regiments of the Allied Armies in Germany. When they met again in 1950 in London, where General Chevillon was the

French Army's representative to the Supreme Headquarters of the Allied Powers in Europe, he recommended the acceptance of Sir Eugen's offer for such a competition.

Sir Eugen had expressed the wish that this competition should be called the "Marshal LeClerc Prize" and proposed that it should take the form of a bronze bust of General LeClerc. Madame LeClerc, the general's widow, agreed to this and recommended that it should be done by the sculptors Joel and Jean Martel, twin brothers who had executed a monument to the general in Africa. The bronze facsimile was completed without a French military hat, for



A Belgian firer checks his weapon.

General LeClerc was more than the Marshal of France, Sir Eugen said. He was a great, natural leader.

Regulations for the matches were drawn up by a special committee and provided that the team representing each Army should be the best one representing a single unit of about 1,000 men in that Army, so as to minimize the advantages accruing to the larger Armies.

Even so, it appeared almost from the first that the nations with the larger armies would dominate the LeClerc trophy. The United States held the trophy for seven years—from 1953 to 1955 and from 1958 to 1961. France won the trophy in 1956 and 1957. The United Kingdom won it the first year, in 1951, and Canada in 1962.

The only departure from this pattern was in 1952, when the Netherlands team, under the excellent guidance of a major, won the trophy. The major soon rotated to another unit, however, and left the Prix LeClerc competition open to the United States and France.

The year 1963 was again a departure from the norm, and has since become known, in Sir Eugen's words, as the "Year of the Small Army," for the Netherlands had again returned to the forefront to take first place for the first time in ten years.

The Netherlands did it, of course, with the return of their 1952 coach. After discouraging years of placing no better than third in the matches, the coach was returned to his team,



THE PRIX LECLERC TROPHY

with the confident prediction that he would have his team in first place by 1964. His team didn't wait that long and won the trophy in 1963—and just to see that the prediction was also fulfilled, fired their way to first place in 1964.

Before the 1965 NATO Prix LeClerc could be held July 16, each participating nation—Belgium, Canada, France, Germany, the Netherlands, the United Kingdom, and the United States—had to hold its own match to determine the best rifle, machine gun, and pistol teams from a single unit of about 1,000 men to represent it in the competition.

The United States held its USAREUR Prix LeClerc matches May 26 at the Grafenwoehr ranges which would later be the scene of the NATO Prix LeClerc. Each of the United States units in Europe competed for the honor of representing the United States in the international matches, and 29-man teams from each division in Europe began arriving early in May.

The 24th Infantry Division's team



Canadians compare hits.

was seeking its eighth straight USAREUR Prix LeClerc title this year and had a good chance of winning the Sir Eugen Millington-Drake trophy with the return of a few of last year's competitors. The other teams, undismayed by this fine record, were just as determined to represent the United States in July.

When the firing had ended, it was not the 24th Infantry Division which had won, but a team from the 8th Infantry Division. The team, from the 1st Battalion, 509th Infantry, returned home to practice for the NATO match in July; the others to practice for the USAREUR match next year.

After the USAREUR matches, Range 3B, for rifle and light machine gun, and Range 7, for pistol firing, were left for the range "housekeepers" to clean up and prepare for the international performance. The 1st Brigade, 3d Infantry Division, under the direction of Deputy Match Director Colonel George H. Young, Jr., brigade commander, began to patch and repair the ranges.

Over 800 men from the 1st Brigade and other elements of the 3d Infantry Division had arrived at least a month prior to the USAREUR Prix LeClerc to completely renovate the old ranges—sowing grass, laying and smoothing gravel walks, pitching tents which would house a snack bar, VIPs, visitors, lane officers, competing teams, the trophies, and range operations.

The stage was now ready for the curtain to rise on a performance with

an international cast. Thousands would arrive to give their best performance during the week of July 16, and after a week of dress rehearsals on the Grafenwoehr ranges, they were ready.

The curtain rose on a sunny day July 16, the day of the 1965 Prix LeClerc Matches in Grafenwoehr. The 15 flags of the North Atlantic Treaty Organization were fluttering in the wind, and indeed, aside from the passing of a few dark clouds, it looked like a good day for firing.

The opening ceremony began on time, with the appearance of the Knights of the Marne, a precision drill team from the 3d Infantry Division and one each from the French and German armies. Finally, the firers from the seven represented countries marched onto the field in platoon formation.

And then each man, or a team captain—depending on the custom of his country—raised his hand as one of the three bands played the national anthem of the seven nations represented. A flag from each country was raised on each side of the range, in alphabetical order—Belgium; Canada, whose new maple

Scorers mark the targets.



leaf flag had arrived late, but in time for the matches; France; Germany; the Netherlands; the United Kingdom; and finally, the Stars and Stripes of the United States.

As the last notes of the Star Spangled Banner faded, Lieutenant General William W. Quinn, commanding general of the Seventh Army, walked to the firing line, shouldered a rifle, and aimed at a solo target down range. A single shot rang out and the target dropped. All the targets then slid into view to read "WELCOME TO THE 1965 PRIX LECLERC."



Lt Gen Quinn opens the match.

The match had begun.

First to fire were the rifle teams on Range 3B and the pistol teams on Range 7. The light machine-gun teams fired on Range 3B in the afternoon, after the rifle teams had finished.

After drawing for a sequence number, the pistol teams, two competitors from each nation, fired four practices of six rounds each, including deliberate fire (three minutes at 30 yards) and rapid fire (20 seconds at 20 yards; 10 seconds at 10

The score is watched closely.



yards; and 6 seconds at 10 yards).

The pistol competition was soon over and the team standings were the first to be posted on the 20- by 57-foot scoreboard located behind the grandstand. The United States team had won its first trophy with a 238-point total—the General Chevillon Trophy for the best pistol team.

The rifle teams continued firing through the morning and the early afternoon. The firers were required to fire from the prone position at the 400-yard line and then run to the 300-, 200-, and 100-yard lines, stopping to fire at each. From the 200-yard line, they fired either from the kneeling or sitting position, and from 100 yards, from a standing position.

The United States team maintained at lead to the end in the rifle match, finally copping, with a total of 1,580 points, the second trophy for the United States—the General Eisenhower Trophy for the best rifle team.

The United States now had a combined total of 1,818 points from pistol and rifle firing. The closest score to that was the Netherlands, with 1,709 points. The United States had to maintain its margin in the light machine-gun firing to follow, to win

A pistol firer takes aim.



the Prix LeClerc trophy for the eighth time. But then the Netherlands team had won the trophy in 1963 and 1964, and the Dutchmen had gained their edge in practice firing earlier that week in the light machine-gun category.

It was now mid-afternoon and time for the final act. The two-man teams marched onto the range and after firing their "warmer" and "sighter" rounds, moved back to the 500-yard line. When the targets appeared, they advanced to the 400-yard line and fired 30 rounds each, moved on to the 300-yard line and fired 30 more rounds when the targets reappeared.

The scores began coming in. The Netherlands' score in the second round of machine-gun firing startled the crowd. The United States had lost its lead!

The United States team was now behind the Netherlands in total match points by 18 points. In the



Firers from the participating countries line up before the rifle firing.

next round, the United States reduced this margin to 5 points, and had only one round of firing to regain the lead.

The American team and the Netherlands team—now the only two really competing for the Prix LeClerc trophy—took their prone position on the range for the last

round, and began firing. In minutes, the 1965 match was over and the Netherlands team of Adjutant Armand Hercules and Private Harrie de Jong had added 303 points to their total. The United States team had added 214 points to their score and the margin had been widened to a total score of 3,102 for the Netherlands and 3,001 points for the United States.

The Netherlands had won for the third straight time.

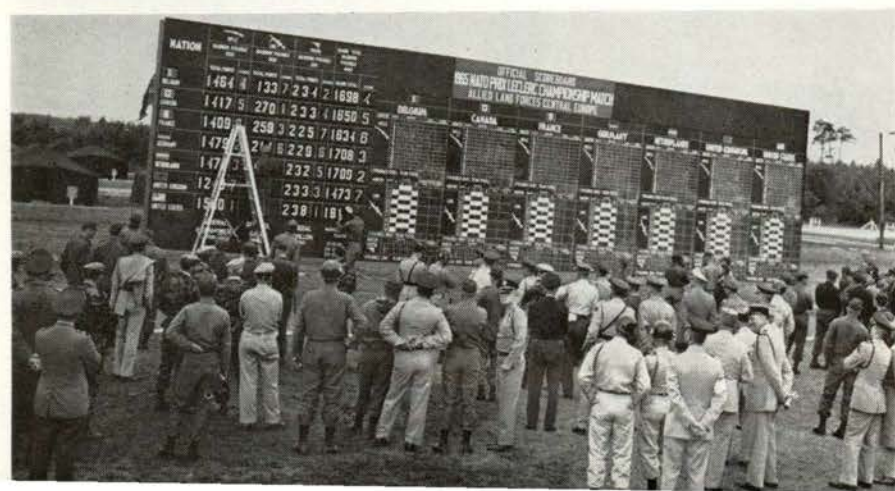
The Dutch firers cheered, raised these last two firers to their shoulders, and paraded around the tent area. They had not only won the General Gale Trophy for the best machine-gun teams, with a total of 1,393 points (as compared to 1,183 points for the United States) but the Prix LeClerc bronze bust.

The awards were presented that afternoon and the teams again lined up on Range 3B, as they had in the morning. The bands played the national anthem of each country as its men marched to the receiving stand to receive its awards.

First to march to the front was the Netherlands Army team. There, ready to present the Prix LeClerc Trophy, in memory of Phillippe de Hauteclocque, Marshal LeClerc of France, was Sir Eugen Millington-Drake, now 76 years old, with an Army blanket wrapped around his stooped shoulders to protect him from the drizzling rain which had begun to fall. ■



ABOVE: A United States machine-gun team takes off to the 400-yard line to begin firing. LEFT: Deputy match director Col George H. Young escorts several generals to a briefing tent. BELOW: All eyes are on the scoreboard as the Netherlands and the United States vie for first.





JUNGLE SEARCH IN NEW GUINEA

CAPT JOSEPH M. WHEELER, Inf

LET US go back to early March of 1961. A twin engine Piaggio aircraft is crossing the Owen Stanley Mountains of New Guinea flying south to Port Moresby. A relatively new pilot with some 20 hours of New Guinea flying time under his belt is behind the controls. Somehow the plane is lost and presumed to have crashed in the jungles.

An intense search followed. Aircraft from the three bush airlines scanned the unmapped mountains, valleys, and ridges for a possible trace of the Piaggio. The plane was never located, and its whereabouts remain a mystery to this day. During the search three aircraft wrecks were spotted in the interior. All were presumed to be World War II allied aircraft.

On 8 April 1961 a United States Army search team



consisting of one lieutenant and one sergeant departed Honolulu International Airport bound for New Guinea. The team was to locate the three World War II aircraft and possibly recover any remains of U.S. personnel.

The team stopped in Sydney, Australia, to enlighten the American Consulate on the expedition. The next stop was Canberra, Australia, where the team received special permits to enter the Territory of New Guinea, and a letter of introduction to the Director of Native Affairs in New Guinea. The U.S. Army Attaché was contacted and informed of the team's future operations. The final stop prior to entering New Guinea was in Townsville, Australia. The team linked up with an Australian officer who was to accompany the team for the first three months of their work. In Townsville, a Royal Australian Air Force C-47 aircraft was loaded with sacks of rice, bully beef, pots, jungle netting, medicine, 30-pound blocks of tobacco sticks, salt, sugar, radio equipment, and last but not least, one of the black and yellow jeeps used to escort the RAAF aircraft to their hangars. The jeep proved invaluable while in Port Moresby.

On 15 April at 0600 hours, the team departed Townsville for Port Moresby, New Guinea aboard the RAAF C-47. At 1000 hours the C-47 touched down at the Port Moresby airdrome. The weather was hot and humid. A group of natives with pierced earlobes, tattooed faces, arms, and chests, and hair styles that would put the Beatles to shame, wandered to the aircraft. The men wore loin cloths made of tree bark, or coarse material, and the women wore grass skirts. All were chewing betel nut, lime, and a few strands of grass for consistency. The result was stained black teeth and bright orange lips and tongues. Some were smoking rolled newspaper which turned out to be native tobacco rolled in the weekly European newspaper. Incidentally, the U.S. team found the tobacco and newspaper quite a satisfying smoke when cigarettes were not available. (I must admit I was partial to the sports page, whereas my sergeant preferred to cradle his tobacco in the cartoon section.)

After a number of aerial reconnaissance trips over the interior of New Guinea, the initial three aircraft wreckages were sighted. An additional 12 presumed World War II aircraft were sighted. Unfortunately, most

of these wreckages were 75 to 100 miles from the coast and at elevations up to 15,000 feet.

In order to realize the problems inherent in any kind of extended search-type operations in New Guinea, one must be at least passing familiar with the climate, geography, and people of this second largest island in the world.

New Guinea's 300,000 square miles is dominated by dense jungle and mountains. Lush tropical foliage thrives at elevations as high as 5,000 feet above sea level. At elevations above 5,000 feet, jungles, moss forests, and tundra cling to the steep slopes. The main mountain range is the Owen Stanley Range which rises as high as 15,000 feet above sea level. Intermittent mountain streams are numerous. Much of the island is still unmapped and remains one of the last strongholds of primitive man.

Heavy rainfall prevails in all of New Guinea. Annual average rainfall is from 100 to 200 inches below 5,000 feet. Above 5,000 feet, wet and dry seasons are unknown as rain occurs throughout the year.

Average temperature along coastal areas is from 85 to 90 degrees Fahrenheit. There is no recognizable winter and summer. The greatest extremes in temperature occur in areas above 5,000 feet. Day temperatures range from 75 degrees to 85 degrees, but night temperatures are relatively low and often below freezing temperature at high elevations. Little data is available on the sparsely populated interior.

Caucasian, Asian, and native people populate the coastal towns while only natives inhabit the interior of New Guinea. The natives range through a wide variety of types known as the Papua-Melanesian racial group. They are mostly likeable folk, developing a remarkable degree of intelligence when given a reasonable opportunity. A happy relationship can be established between visitors and the natives if a sincere effort is made in that direction.

There are two basic languages in New Guinea; Melanesian Pidgin, and Motu. The Melanesian Pidgin is spoken predominantly north of the Owen Stanley Mountain Range and the Motu language is spoken in the southern part of the island. The Motu language has 250 dialects. To overcome this language barrier, a Police Motu language has been incorporated which covers many of the Motu dialects.

Most native families' food consists of taro,* pumpkin, potatoes, yams, bananas, and meat of hunted animals or domestically raised pigs. Water in which vegetables have been cooked is used as a beverage. The chewing of betel nut and lime is common.

There are approximately 1,500 miles of vehicular roads in New Guinea. Away from cities they are narrow, unsurfaced, and streams are crossed by fording.

* Taro—Any one of several tropical plants (genus *Colocasia*) of the arum family, grown for their edible, cormlike rootstocks; especially, the ornamental elephant-ear (*C. esculenta*).

Among the more incredible problems encountered was the native superstition. It is good for a visitor to have knowledge of these influences when dealing with the natives to better understand their actions. The most outstanding superstitions and beliefs are as follows:

The Soul—In sleep the spirit leaves the body and gains knowledge through wanderings and encounters made with other spirits. A native will never waken a sleeper abruptly, lest the spirit not have sufficient time to return to the body.

Death—In death the spirit leaves the body permanently and wanders or inhabits a particular area, such as a swamp or mountain. At times the spirit is heard after death to make low whistles or howls in the darkness. This is generally the case if a member of the deceased's family is guilty of some wrong or has broken a religious law (tambu).

Sorcery—A man or woman who is the victim of sorcery (papait) firmly believes that he or she is powerless against its influence. It is useless to endeavor to demonstrate to a native the falseness and foolishness of sorcery. Ineffectiveness is no evidence against sorcery because it can always be explained by presuming a fault in procedure, violations of a tambu by the sorcerer, or by the presence of stronger, protective magic. Although some of the natives in coastal areas are Christian, they still believe in sorcery.

Spirit World—A "tambaran" is a spirit or ghost which inhabits a specific area. The spirit may be good or bad, depending on the disposition of the natives. Often this spirit brings good crops, wards off sickness, and punishes evil-doers. A "masalai" is a demon or evil spirit and inhabits a specific place, such as a mountain or swamp. This spirit is evil toward all who enter his domain. There is no "Chief" in the spirit world.

The natives seldom venture into the mountains above 5,000 feet. The mountain areas and some valleys are considered spirit land, and are not to be visited by natives. Another reason is that native fruit and vegetables grow poorly above 5,000 feet. Very unpredictable weather conditions prevail at higher elevations. No doubt the spirits had something to do with that!

After three months of search and recovery work, the U. S. team was on its own. The Australian officer, who was of immeasurable help, returned to his base in Townsville. Our interpreter, a Cadet Patrol Officer, who had been the communication link between the team and the 60 or 70 native carriers, suffered a severe back injury while on patrol, and was taken to the Port Moresby hospital. In the three months following, the team often envied that young Patrol Officer, resting between clean hospital sheets and not bothered by the innumerable variety of insects and reptiles that were always present on patrols.

By this time, the U. S. team had acquired a speaking knowledge of the two primary native languages and had become somewhat acclimated to the various weather

conditions encountered. After consulting with Mr. McCarthy, the Director of Native Affairs in Port Moresby, the team was permitted to enter the interior without the assistance of a Patrol Officer.

The most interesting patrol, and the longest in duration, was the Mount Obree patrol. The team spent over 30 days in the jungle and located three U. S. aircraft.

The two men of the U. S. team parted company prior to the Mount Obree patrol. The sergeant returned to Port Moresby with a patrol and was to keep in touch with the Mount Obree patrol and make final arrangements for the remaining search and recovery cases. It was understood that he would also be on call to resupply the Mount Obree patrol.

The following procedures were followed on all patrols made by the U. S. team:

Radio Communication—at predetermined times, each day the team contacted the Port Moresby Emergency Station (5855 KC) at 0700 hours and again at 1730 hours to report progress and needs. Atmospheric conditions and battery strength determined, to a great extent, the team's use of radio communication.

Morning Departures—Departure from camp was usually made after 0700 hours mainly due to native fear of darkness, predetermined radio schedules, and the possibility of accidents from damp mountain terrain and frost.

Sick Call—It is expected by the natives that each patrol entering the interior be equipped to medically treat the natives in contact with the patrol. Each evening the U. S. team conducted sick call for the natives. Tropical ulcers (infection), malaria, lacerations, sprains, muscle soreness, diarrhea, burns, and altitude sickness were among the principal causes for treatment.

Probably the best method of describing the patrol would be to introduce you to comments taken from the team's daily log.

Excerpts from the Daily Log:

Tuesday 8 August—Elevation 200 feet. Departed Rigo at 1000 hours with 60 carriers. Crossed the Kemp Welch River a number of times. Have four "boys" up ahead cutting trail. Weather hot and sticky. Arrived Gawnuma village 1415. Paid carriers with salt and tobacco. A few wanted coins—guess they are saving for a Cadillac! Will recruit mountain boys soon—much stronger than the river people. Native singing echoed throughout the jungle. Could hear drums beating—no doubt telling of our coming—"Bush telegraph!"

Wednesday 9 August—Departed 0700. Pushed through a few small villages. Leeches and insects quite bad today. Plenty of crocs in the rivers. Stopped under a waterfall for a quick shower. Doesn't help much though. The 200-ft. trees towering over the 30- or 40-ft. jungles keep us in semi-darkness most of the day. Jungle is always damp. Arrived Disenam village 1800 hours. Elevation 800 feet. The chief and witch doctor offered me coconuts, oranges, and vegetables. Will try to live off village food in the lowlands and save rice and meat for the mountains. Unable to contact Port Moresby by radio—will wait until I get to a higher elevation. Will keep these carriers one more day. Have two village chiefs in my hut. Both have human bones in their ears and noses. Drinking sweet tea, smoking "Luckies," and listening to their stories. Well worth the day's walk.

10 August—Departed 0700 hours. Crossed Kemp Welch River in two dugout canoes. Natives screamed with laughter as a huge croc slid into the water. Guess we disturbed his sun



The "Flying Dutchman's" diary.

bathing. My tropical ulcers are starting to give me a little trouble. Trail quite steep today. Rained all afternoon. Arrived Barataka village 1600 hours. Elevation 2,300 feet. Slept in very fashionable hut. Natives brought me bananas, lemons, taro, and potatoes. I sent natives carrying Kai (food) to next village. Their loads are somewhat heavier and slow down our movement. All new carriers tomorrow. Passed quite a few beautiful waterfalls today. We followed a stream for three or four hours today. We were in the stream most of the time. Colorful rocks and overhanging trees. A few snakes as thick as stove pipes bid us "good day" today.

11 August—Departed 0700. Stopped walking at 1530 hours. We are sleeping in the bush tonight. Natives are cutting branches for shelter. Elevation 3,400 feet. Crossed quite a few streams. "Boys" speared a few fish this afternoon. Had sick call 1700 hrs. Leeches and insects had a party with us today.

12 August—Departed 0730. Rough day. Climbed straight up all day. Afternoon rain didn't help make trail any better. Leeches and mosquitoes bad today. Bagged four pigeons today. Boys speared two "Kus Kus" (similar to a raccoon). A boy from Barataka village tells me he knows the whereabouts of a "barlos" (airplane). He is afraid to tell the others as he found it while hunting in the spirit land. Elevation 6,050 feet. Very cold night. Spoke with Port Moresby tonight. Sergeant isn't back from his patrol. Bandaged my left ankle. Now 2400 hrs. natives are singing. Happy people.

14 August—Departed 0730. Roughest day yet. We hit the secondary bamboo and moss forests. All scratched up. Natives mumbling about spirit land and don't care to stay here. Very cold. Called Moresby 2100 hours. Spoke with sergeant. He will depart with extra supplies within a day. Should catch up before we run out of supplies. Headset is out. I can transmit, but must receive on commercial short wave radio. 2300, listening to music. Eight of my carriers have never seen a European before. The radio has them stymied. They think there are little men in the radio. Elevation 10,000 feet on the button. Cold, cold, cold.

15 August—Departed 0600. Native tells me plane crash is eight hours walk. That could mean anywhere from one hour to ten hours depending on his humor at the moment. They have no concept of time. I sent him ahead to bring back a piece of metal from the "barlos" (airplane). Must move north from here, not east. Stopped 1200 hours. Rain, rain, rain. Elevation 9,000 feet. Natives afraid to sing. Want to turn back. I showed them card tricks and made coins disappear. That should hold them till tomorrow. My boots rotted off today. Can see Mount Obree from here. Right wrist infected. 1530 hours—carriers returned with an 8' by 10' piece of metal. Had a bullet hole in it. Departed camp at 1530. Located crash at 1800 hrs. Will investigate tomorrow.

16-17 August—Investigated crash—B26 Marauder. Called Port Moresby and had them send message to Hawaii. Sgt. is on the trail somewhere behind me.

18, 19, 20 August—Cut our way all three days. Used ropes on many sheer cliffs. Natives want to turn back. Believe me, they aren't the only ones!! Weather is very cold. We had frost this AM. Fires going all night.

21 August—Departed 0745. Elevation is 12,500 feet. Rain and ice. Natives are afraid. Crossed a ridge line relatively level. Crossed our first open tundra. Very difficult to breathe up here.

Too cold to sleep. Bitter cold! Spoke with the natives most of the night. Listened to quite a few of their stories. Another week and I'll be believing them! Natives sang songs—gave radio a bit of competition. Anything I can do to keep their minds off returning to the lowlands. Made a mistake on the coin trick tonight—they caught it and laughed for 15 minutes. Have been passing out my cigarettes. Almost out. Tomorrow I switch to native tobacco and newspaper.

22 August—Departed 0730. Rained all night and all day. Still raining. Made little progress. Natives complaining about weather and spirits. Spirits are angry, and therefore much wind, rain, and cold. It hasn't quite dawned on them that they are at 12,000 feet. Infection in arm bad—applied hot towels. Tropical ulcers—leg bad. Camped at 1400 hours. Natives are huddled around fires. Sick call tonight took three hours. Have passed out most of my fatigues, wool shirts and trousers. I count six lieutenants in the hut—all have the same name—hmmm! Probably the first set of clothes for most of them.

23, 24, 25, 26, 27 August—Cut our way around east side of Mount Obree. Elevation from 9,000 to 13,000 feet. Terrain familiar now—close to aircraft. Low on food.

28 August—Departed 0730. Rained all morning. Followed stream all day. Low on food. Camped 1500 hrs—natives tired—me too! Clean, dry clothes would be welcome.

29 August—Departed 0700. Warm sunny day. Camped at 1600 hours. Gave the natives a 30-minute sermon on why they should continue. Did some good. Elevation 10,000 feet.

30 August—Departed 0700. Windy. Have set up permanent camp 1130 hours. Elevation 10,500 feet. Will search from here. Can hear Sergeant's patrol. Have sent six carriers down trail to assist Sergeant's carriers. Remainder are looking for airplane. Had first cigarette in a week and hot tea. First conversation in English in over two weeks. I catch myself thinking in native terms. Often speaking half my sentence in "native talk."

1 September—Searched all day. Half of the natives won't leave the tent. Altitude sickness and spirit problems got the best of them the past few days. Won't be able to hold them much longer. Surprised they lasted this long.

2 September—Located and investigated C-47—"The Flying Dutchman." Radioed message to Port Moresby. A diary on the latrine door of the "Flying Dutchman" written in graphite pencil reads as follows:

Crashed 130	Tues — 10 Nov — 42
Tues — 10	17 men alive
Wed — 11	16 men alive
Thur — 12	4 men started for help
Fri — 13	
Sat — 14	Tried to put up baloon
Sun — 15	Cracker cheeze
Mon — 16	4 men started for help risk south leaves
	8 men left
Tues — 17	small piece cheeze
Wed — 18	chocolate bar
Thur — 19	Found chocolate bar
Fri — 20	1/3 can tomato juice
Sat — 21	1/3 can tomato juice
Sun — 22	Drank last 1/3 can juice
Mon — 23	Last cigarett
Tues — 24	First day no rain
Wed — 25	Second day no rain
Thur — 26	Thanksgiving Rain today—also clear in morn
Fri — 27	Bud found . . . water this morn—still got our chin up
Sat — 28	Clear day we have . . .
Sun — 29	Nice clear day Boy we're getting weak still have our hope
Mon — 30	Still going strong on imaginary meals
Dec Tues — 1	My my summer is here—went to spring today

Wed — 2 Just slid by but boy it rained
 Thur — 3 Kinda cold & cloudy today—still plenty hungry—Boy a cig would do good
 Fri — 4 Same old thing—clear this morning
 Sat — 5 Boy nothing happened—just waiting
 Sun — 6 Had . . . service today—still lots of hope
 Mon — 7 Yr ago today war started—Boy we didn't think of this then
 Tues — 8 Nice day Still living on . . . wishes.
 Wed — 9 God is looking out for our water supply.
 Thur — 10 Just 30 days ago. We can take it but nice if someone came
 Fri — 11 Cold rainy day—we would like to start out before Christmas.
 Sat — 12 Fairly nice day—still plenty of water
 Sun — 13 Beautiful morning everyone has high hopes.
 Mon — 14 Waiting
 Tue — 15 Waiting
 Wed — 16 New water place today
 Thur — 17 Running out of imaginary meal. Boys shouldn't be long now 6 more days shopping
 Fri — 18 Nice and warm in morning rain in afternoon
 Sat — 19 Plenty cold last night cold this morning too. Water pretty low 5 more days till xmas.
 Sun — 20
 Mon — 21 Plenty of water
 Tue — 22 Rained all three days
 Wed — 23 Thinking about home and still hoping
 Thur — 24 Tonight is Christmas eve God make them happy at home.
 Fri — 25 Christmas day

Sat — 26
 Sun — 27
 Mon — 28 Rain every day
 Tue — 29
 Wed — 30 Johnny died today
 Thur — 31
 Fri — 1 New Years Day

3 September—Weather giving us a break. Gave boys extra rations. Sent a few sick boys back with message to nearest village to send us fruit and vegetables. Things are looking better! 1400 hours, bush pilot circled over camp. We shot flares signifying all ok.

4 September—Located B-17-E and investigated aircraft. Radioed message to Port Moresby to inform Hawaii of our progress.

5 September—Finalized investigation. Sick call three hours tonight. Sergeant and I each had a go at one another with penicillin injection. Weather cold—tomorrow we start down. So far no serious accidents. Let's hope we get back in one piece.

6, 7, 8, 9, 10 September—Walking back much easier. The track has been relatively dry. Second pair of boots rotted off. Am now wearing 21-year old boots found in the "Flying Dutchman." Tennis shoes next.

11 September—Reached village line today. We all need medical attention. Had a radio skit with Port Moresby. Informed them of our progress. Have decided to go home the easy way. I sent runners to next village to have villagers build rafts to take us and equipment down Kemp Welch River.

11 September—Departed Efaika village by raft down Kemp Welch River. Relaxed and cooked a hot meal on the raft. Picked up fresh fruit along the way. River is loaded with crocs—all along the bank. The natives scream at them and sure enough, into the water they slide. Must speak to them about that! Camped at 1800 hrs near a village. Natives speared two wild boar—fresh meat!

12-13 September—Patrolling the easy way by raft. Scenery beautiful—breath-taking—when you have the opportunity to enjoy it.

14 September—Civilization . . .



DOUGHBOY'S SWAP SHOP

ITEM 7

Write Infantry
 Box 2005
 Fort Benning, Georgia
 31905

The Problem: To conduct a training exercise without troops (tewts).

An Idea: The company commander takes his platoon leaders and his platoon sergeants on a tactical ride or walk into the training area. Upon arrival at a selected terrain feature, he verbally describes a tactical situation, assigns sectors of responsibility, and requires the platoon leaders to organize their defense. The platoon leaders make a reconnaissance of the terrain, plot the positions of their crew-served weapons, and return to the company commander to report their plans for defense. The company commander, having previously visualized the defense in detail, then critiques the platoon leaders' solutions on the ground. This type training lends itself to all types of tactical situations.

A Challenge: How have you solved this problem? Share your solution with other Doughboys. Write INFANTRY.



1. The correct way of transmitting the date-time group 141440R is TIME.
 - A. WUN FO-WER WUN FO-WER FORTY ROMEO.
 - B. FOURTEEN FOURTEEN FORTY ROMEO.
 - C. WUN FO-WER FOURTEEN FORTY ROMEO
 - D. WUN FO-WER WUN FO-WER FO-WER ZERO ROMEO.
2. A multiple call is answered

- A. in numerical order according to units.
 - B. in the order called.
 - C. according to local instructions.
 - D. in alphabetical order.
3. To request repetition of a transmission or portion of a transmission, the receiving station(s) would use the pro-word
 - A. SEND MESSAGE.
 - B. REPEAT.
 - C. SAY AGAIN.
 - D. SAY AGAIN LAST TRANSMISSION.
 4. Precedence is assigned to a radio message by the
 - A. message center chief.
 - B. commanding officer.
 - C. writer.
 - D. radio operator.
 5. The precedences that may be assigned to a message are
 - A. FLASH, EMERGENCY, OPERATIONAL IMMEDIATE, PRIORITY, ROUTINE, and DEFERRED.
 - B. FLASH, EMERGENCY, PRIORITY, ROUTINE, and DEFERRED.
 - C. FLASH, IMMEDIATE, PRIORITY, and ROUTINE.
 6. Station authentication is accomplished by using a challenge with _____ test element(s) selected at random.
 - A. one
 - B. two
 - C. three
 - D. four
 7. Responsibility for transmission security rests with the
 - A. communication officer.
 - B. S2.
 - C. S3.
 - D. operator.
 8. The most difficult jamming signal to recognize is
 - A. spark.
 - B. random keying.
 - C. sweepthrough.
 - D. noise.
 9. The primary means of communication during counter guerrilla operations is
 - A. wire.
 - B. messenger.
 - C. radio.
 - D. sound.
 10. Receiver R-110 is a component of radio sets
 - A. AN/GRC-7 and AN/VRQ-3.
 - B. AN/GRC-7 and AN/VRC-18.
 - C. AN/VRC-18 and AN/GRC-8.
 - D. AN/GRC-8 and AN/GRC-7.
 11. Calibration of a radio set is the
 - A. electrical and mechanical correction of the dial.
 - B. obtaining of proper light intensity in the dial window.
 - C. elimination of the rushing noise in the radio receiver.
 - D. adjustment of the power supply to the desired voltage.
 12. The primary advantage of AM radio sets over the FM sets is
 - A. that they are not limited to line-of-sight communication.
 - B. lighter weight equipment.
 - C. that they are less susceptible to static.
 - D. the type mount used.

Answers to quiz.

- | | | | |
|------|-------|-------|-------|
| 1. D | 2. B | 3. C | 4. C |
| 5. C | 6. B | 7. D | 8. D |
| 9. C | 10. B | 11. A | 12. A |



DOUGHBOY'S SWAP SHOP

ITEM 8

Write Infantry
Box 2005
Fort Benning, Georgia
31905

The Problem: To conduct realistic land navigation training.

An Idea: A squad is told that they are to be transported (preferably by helicopter) from point A to point B, the forward assembly area where a specific mission will be assigned. They must get there on time. Enroute, the pilot of the helicopter (or a person designated to accompany the vehicle) declares an emergency and requires the squad to unload and proceed on foot. In the meantime, the vehicle or helicopter has purposely gone off course, and the squad leader is required to determine his location with map and compass and then to navigate on foot to point B. Arrival at point B within the allotted time constitutes successful completion of the problem.

A Challenge: How have you solved this problem? Share your solution with other Doughboys. Write INFANTRY. ■

STABILITY OPERATIONS IN SANTO DOMINGO

MAJ WILLIAM E. KLEIN, Inf

ON 30 APRIL 1965 the first Airborne units of the 82d Airborne Division were deployed to the strife-torn Dominican Republic. Already Marines of the Atlantic Fleet Ready Force had landed on 28 April with the mission of protecting American lives and property and evacuating Americans, as well as other foreign nationals.

The outbreak was primarily confined to the city of Santo Domingo, where the rebels, influenced by a strong Communist element, had issued guns and ammunition to civil-

ians. This resulted in indiscriminate shooting which felled innocent people throughout this capital city. Most of the Americans and foreign nationals fled to the Ambassador Hotel, located on the western edge of the city. It was this hotel which was the original objective of the Marines who poured ashore on Red Beach, near Jaina Port, approximately 20 kilometers west of the city. Shortly after the Marines had moved to the hotel, early elements (two Airborne Infantry Battalions) of the 82d Airborne Division landed at San Isidro air-



A trooper of the 82d Airborne Division patrols a street in Santo Domingo.

field, some 12 kilometers east of the city. The first mission of the Airborne troopers, after securing the airhead, was to seize the Durate Bridge across the Ozama River to insure access to the city. Once these airborne units and the Marines had accomplished their original limited missions, the situation developed a macabre look from a military standpoint. The U.S. forces were split, with the Marines located on the west of the city, and the 82d Airborne building up on the east.

Lieutenant General Bruce Palmer Jr., sent in to assume command of the U.S. Forces in the Dominican Republic, recognized the urgency of solving this dilemma and recommended the rapid establishment of a line of communications between the two units. This LOC would allow a steady flow of logistical support between the two forces. It also would have had the effect of sealing the ma-



jority of the rebels in one square mile of the city bounded by the U.S. Forces to the north and west, the Ozama River to the east, and the Caribbean Sea to the south (see map).

The plan was approved by higher headquarters on 2 May. General Palmer issued the order and, in a surprise midnight move, the 82d Airborne Division, commanded by Major General Robert H. York, stretched five battalions through the city to link up with the 4th Marine Expeditionary Brigade. Only a few minor casualties were sustained in the execution of this daring and highly successful plan which caught the rebels completely off guard.

From the first day of the establishment of the LOC, Santo Domingo began its struggle to return to normalcy under the watchful eyes of the U.S. Forces.

During the early days of May, firing was commonplace from the rebel zone, from both single-shot and automatic weapons. The troopers and Marines began to improve their defensive positions on a continuing basis and controlled the flow of traffic in and out of the rebel zone by sealing off all roads and alleyways, except for seven check points. There was no restriction as to entering or leaving the zone except that weapons and ammunition could not be carried

in or out. The rebels tried many tricks at first, such as attempting to run the checkpoints in ambulances without being searched, and later they attempted to hide the weapons underneath wounded they were evacuating. Gradually their undercover methods were discovered and the arms exodus was reduced substantially.

One of the most important missions during these early days was civil affairs. It was crucial to get the starving populace fed, the streets cleaned, water and electrical services restored, medical aid supplied to the needy, and to find adequate solutions to myriad other problems. It was one



thing to accomplish these tasks in a peaceful environment and quite another to work at them under the constant harassment of sniper fire.

The situation improved gradually throughout the month of May, and in June the President announced the withdrawal of all the Marines. The 82d Airborne Division then occupied the entire perimeter of the LOC and held it until the Latin America contingent began to assume some of the security and peace-keeping missions.

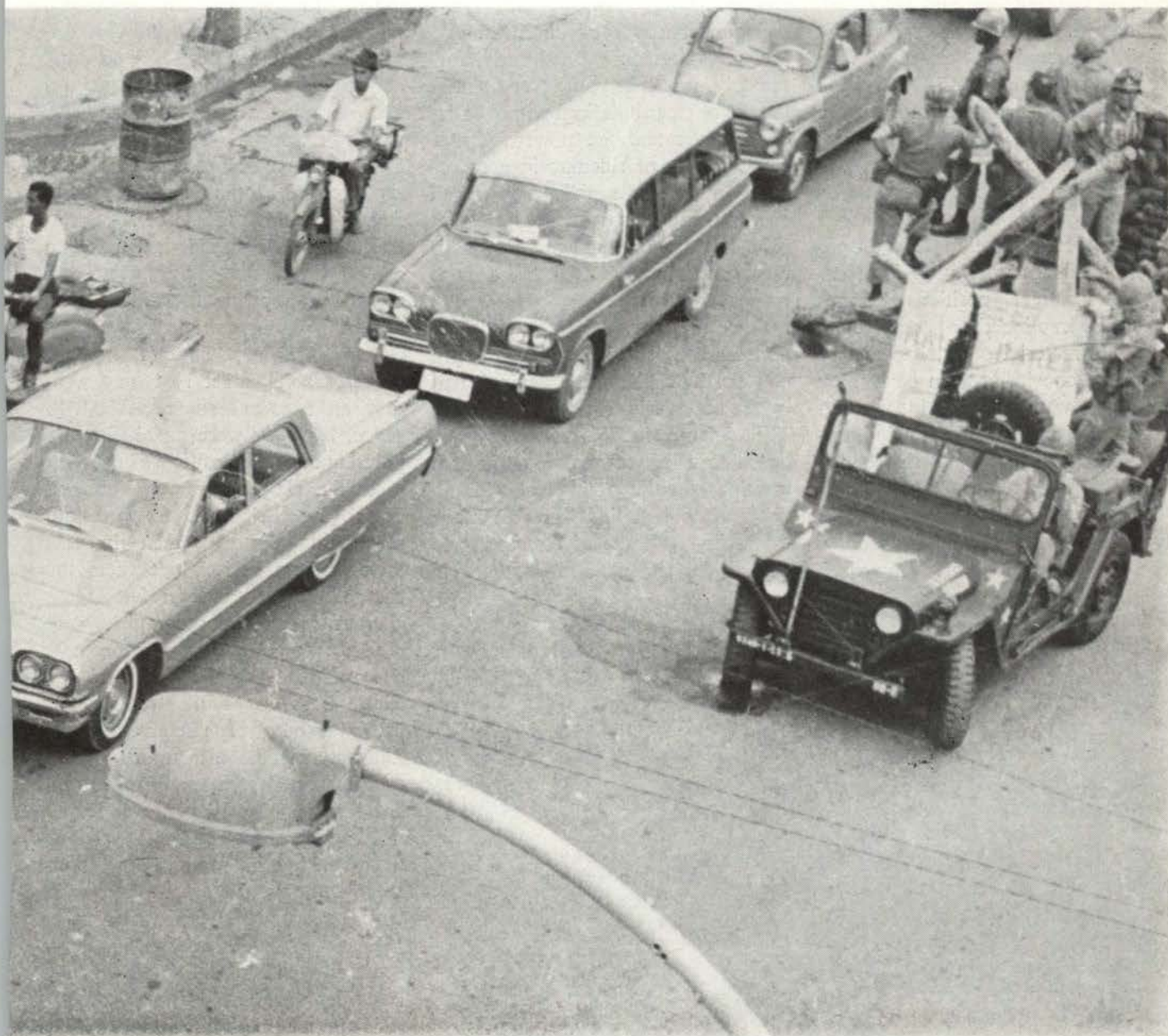
The establishment of the Inter-American Peace Force in late May is a study in itself, and it is not my intention to discuss it in this article. It should be noted, however, that the

IAPF was formed with military units from six different countries of the Organization of American States, representing an important first for that organization of our hemisphere.

The 15th of June was essentially a turning point and began as any other day in the corridor: food issue, manning checkpoints, and even a command management maintenance inspection. However, a group of undisciplined rebels attacked a portion of the U.S. line during the morning and before the day had ended, the 82d Airborne Division had seized 30 additional city blocks. This show of force undoubtedly had great influence in the remainder of the negotia-

tions which came to a successful conclusion on 3 September 1965.

The lesson of this action for the Infantryman, after understanding the overall operation and missions, is a new look at city fighting. Not since World War II had the U.S. Army been as involved in combat in cities and never before had such combat been so restrictive. Because of these imposed restrictions, the largest caliber weapon used was the 106mm recoilless rifle (no mortar or artillery support could be employed) and a fire discipline was required that tested the individual soldier as he has rarely been tried in our Army's history. These weapons restrictions, of



course, eliminated coping with rubble and other obstacles associated with fighting in a built-up area, but presented the soldier with problems of much greater magnitude.

The sniper was the number one enemy. Hidden in the shadows of buildings or concealed positions, often firing out of a window from well within a room with automatic weapons, pistols, and other small arms, his fire took a deadly toll of 24 airborne troopers and Marines and wounded 154 U.S. servicemen.

Tactical principles of course, were not changed, but this type combat requires a rapid mental adjustment from "high ground and critical terrain" to key buildings and objectives. Boundaries were of necessity more implicit because of "clearing" missions. In establishing an LOC through a city, the soldier moved rapidly from cover to cover. Wooden buildings gave no protection, concrete block was only a small improvement. Sandbags and solid concrete buildings were the best protection. Once in position, sandbags were used for rooftop and street positions (troops should be cautioned not to fill them with any material other than dirt or sand). In one instance in early May a trooper was wounded by a small caliber projectile striking an improperly filled sandbag and ricocheting into his position.

When attacking, the soldiers avoided the streets like the plague. The middle-of-the-block approach

was the answer with the troops advancing over and through buildings. Engineers were used to blow holes through walls of the buildings, or if the Engineers were unavailable, holes were made with a 3.5" rocket launcher, a LAW, or a 106mm recoilless rifle.

Clearing was best from the roof down, but many of the rooftops were open and vulnerable to fire from rebel-held buildings. So, in practice, many of the buildings were cleared from the bottom up. The majority of the casualties suffered by the 82d Airborne Division on the 15 June attack were on exposed rooftops. Once the buildings were secured, rooftop positions were prepared with sandbags under cover of darkness.

One big lesson learned early, fortunately, was that you never attempt to take or clear buildings without adequate cover and fire power. A machine gunner or rifleman in a covering position can rapidly pick up an enemy firing at a maneuver element if he has a good vantage point. This was a much more difficult task for the maneuver element.

Once the corridor was established, a defense was initiated both south and north of the LOC as indicated by the boundaries shown on the map. The defense in this situation was keyed to a line of rooftop and street positions on the perimeters with no depth. One battalion-size unit made the serious mistake of attempting to defend in depth. This resulted in

having its own troops shooting at each other. To accomplish a depth aspect, reaction forces were designated at company, battalion, and brigade level. These forces were ready to be used if there was a break in the lines and were also employed for riot control or other emergencies within the corridor.

In the defensive posture, U.S. positions sustained many hundreds of firing attacks from rebel forces. It is a tribute to these well-disciplined soldiers and their leaders that these attacks were met with such great courage and restraint. In consonance with this idea, never has "keeping the troops informed" been so important. On 2 May, we had an operational mission oriented toward the Communist-infiltrated rebels. Later in May our orders were to act as a neutral peace-keeping force. Originally we would "return fire when fired upon." Later, it changed to "take cover and not fire unless the position was in danger of being overrun or American lives were in extreme danger." One can readily see the importance of every man's knowing the score.

Aerial photographs from Army as well as Air Force sources, were of immeasurable value. Not only were they an excellent source of intelligence, but they were an aid in pinpointing our own positions. In several cases the U.S. Forces were accused of moving their lines forward into rebel-held territory when in fact there was no basis whatever to the charge. In order to refute these charges, aerial photographs were used to plot our lines with outposts and positions actually shown on the exact buildings and streets. This proved to be a very effective method. Later during the dismantling of the positions in September, "before and after" aerial photographs were useful in showing the progress the rebels were making in demilitarizing their area, *i.e.*, removal of the sandbags, tank traps, and barbed wire.

During the early days in May, command posts and 106mm recoilless rifles were primary rebel targets. Using a terrorist-type attack, rebels



Sniper fire in downtown Santo Domingo keeps nerves on edge.

would sneak across roof tops at night within the zone and lob grenades at the CPs and recoilless rifles. In order to combat this, tight security measures were instituted by units and in many cases unoccupied rooftops within range of these locations were booby-trapped with flares.

The M79 grenade launcher proved its worth a hundred fold. It was devastating when fired through an open window. If the window were paned or shuttered it was best to fire two rounds in rapid succession. The first would destroy the window dressing, losing most of its effect outside the building, while the second would explode inside the room delivering its full lethal effect.

While discussing weaponry, the counter-mortar radar section cannot be overlooked. In late August, during the critical days preceding the signing of the National Act of Reconciliation, mortar rounds were fired into the rebel-held area of the city. The IAPF, and in particular, the U.S. Forces were accused of the firing. However, our alert counter-mortar radar section picked up the firing locations in the National Reconstruction Government (NRR) controlled northern section of the city. When confronted with the precise plots furnished by the radar section, the NRR Army Chief admitted the firings and promised to stop these violations. This valuable piece of equipment literally "saved the day" and kept the negotiations from becoming disrupted.

Airmobility played a major role in our operations. The OH13 helicopters flew reconnaissance missions from dawn to dusk on a daily basis. The UH1B and UH1D helicopters were the reliable workhorses used for troop lift, evacuation of wounded, reconnaissance, and many other missions limited only by the initiative of the troops and the pilots. While under rebel fire, a UH1B was used to place a 106mm recoilless rifle on the roof of an eight-story flour mill on the east bank of the Ozama River. From this vantage point, fire could be directed at most of the rebel-held



A U. S. paratrooper aids a Dominican civilian passing through the barbed wire of the "line of communication" which divides Santo Domingo.

city. The Huey was also used to deliver sandbags to the roof tops of several buildings that were inaccessible except by difficult routes. The mere threat of the use of helicopters in an airmobile operation caused the rebels to arrange their defenses in a 360-degree perimeter, and should the order have come for a solution by force, there were adequate plans to make that threat a reality.

As some helpful hints, the following techniques from DomRep might be emphasized for small unit tactics in "City Fighting:"

1. Do not defend in depth, but establish a modified perimeter defense with reaction forces.
2. Choose key buildings for objectives the same way you would choose key terrain. Observation and fields of fire are critical.
3. Avoid streets when possible;



A machine gunner scans the rooftops.

they are killing zones for the enemy's automatic weapons.

4. Use adequate cover such as sandbags. Remember that wooden buildings and concrete block will not stop lead.

5. When clearing or attacking, insure that you are being covered. Never attempt to rescue an exposed wounded man without first placing fire on suspected enemy positions.

6. Beware of doors, windows, and holes in buildings made by the enemy. Make your own entranceways with Engineer assistance or your own Infantry weapons.

7. Be aggressive, but do not rush into a trap. The enemy often employs one automatic weapon covered by another.

8. Plan your method of clearing a building, if possible, from the roof down, but do not expose yourself on an open rooftop.

9. Be certain you have adequate security for command posts and 106mm recoilless rifles. Choose the best possible locations for these positions.

10. When clearing a suspected enemy position, never use a man when you can use a weapon.

11. Remember that there is no substitute for an aggressive, well-disciplined soldier who knows what you want him to do.

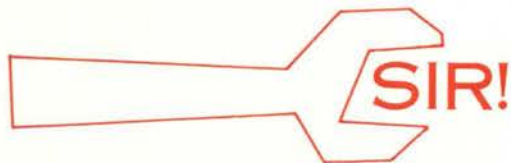
There are many lessons and techniques which were learned during the Dominican crisis. The few discussed in this article are intended only to provoke thought on the old and often neglected art, "City Fighting." ■

**special
section**

**MATERIEL
MAINTENANCE
AND UNIT
READINESS**

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READY FOR INSPECTION,



MAJ CHARLES D. BUSSEY, Inf

TOO OFTEN we order platoon leaders to inspect their platoons and readily assume that the inspections will be detailed and thorough. We gullibly accept their reports that the platoons are "ready."

The inspector general's arrival triggers the tragedy. Belatedly, his findings convince us that many platoon leaders don't know how to inspect.

Five minutes after reporting, "Second platoon ready for inspection, sir," Lieutenant Alfa hears the seasoned inspector bark a series of deficiencies.

"Hole in sock."

"Helmet liner improperly assembled."

"Missing glove insert."

"Overshoes dirty."

"Khaki shirt unbuttoned."

Lieutenant Delta fares no better when his platoon is shredded by the CMMI inspector several weeks later. He, too, had reported his platoon ready. He had checked and rechecked. All packs were uniformly blocked, bunks were perfectly aligned and all men had the same type razor, toothpaste, and soap.

Therein lies the problem. Most young officers apparently are so impressed with alignment and uniformity, they neglect the essentials.

Is the item clean?

Is it serviceable?

Is it complete?

Agreed, uniformity fosters discipline and breeds sharp appearance, but it is not the wonder solution that makes all things right. Nor should it command the major emphasis it frequently receives. Let us place uniformity in proper perspective by teaching that its existence must not strangle or retard the essentials.

What can we do to make the young officer a thorough, effective inspector?

I think that we first must divide an inspection into three distinct phases—preparation, conduct of the inspection, and follow-up. An understanding of and an appreciation for these phases are essential to our development as effective inspectors.

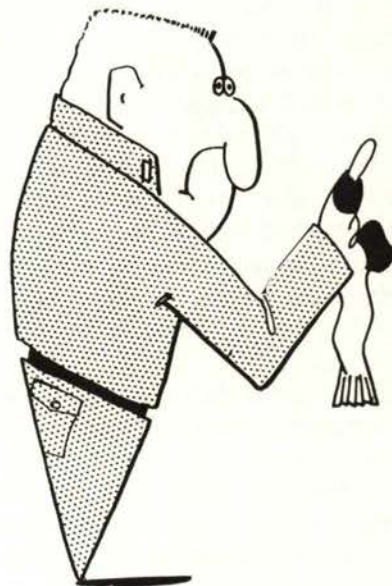
Preparation is perhaps the most important phase. During this step we learn inspection standards and requirements. We develop our plan, study techniques, and practice as necessary. Common deficiencies and specific

indicators are mentally catalogued. Here, too, we decide to concentrate on details. For example, we resolve to reach into neatly arranged clothing lockers in search of defective clothing, to seek out dirty and frayed articles, to explore the contents of bulging laundry bags.

But let us pause a moment to discuss the standards we shall follow. Battalion and unit SOPs will provide most of the needed guidance. Still more may come from the commander's verbal instructions.

Regardless of the source, the primary requirement is that the standards be appropriate and realistic. Their attainment must be within the unit's capability. Adherence to this principle will help prevent recurrence of a tragedy I observed several years ago.

Fresh from OCS and Airborne training, Lieutenant Bravo assumed command of a rifle platoon heavily populated with fillers who had only recently arrived from a replacement center. His immediate and continuing demands for the same high standards he had known in OCS and Airborne School created friction and confusion. His platoon performed miserably. Other platoon leaders began with less stringent requirements, but steadily hardened their demands. The performances of their platoons improved accordingly.



"Hole in sock"

We should reserve application of rigid honor guard standards until we have trained out unit to accept the challenge.

And what about inspection requirements? Here we must consider the purpose of the inspection and specific items to be checked. But, more important, we must qualify ourselves to evaluate accurately the requirements imposed by the commander. Do we know enough about the machine gun, for instance, to determine if it has been cleaned properly? Fortunately, source materials to assist in our qualification are available in the unit. Field manuals, display diagrams, and clothing forms are but

the mystery of materiel readiness

MAJ CHARLES V. FOLLETT, GS



LIEUTENANT, you are a platoon leader of a 4.2-inch mortar platoon—captain, you are a company commander—sergeant, you are a squad leader—all the normal assignments. But this is 1965; you're in a mechanized Infantry division. Your new company or battalion commander has a few choice words about not being happy with the materiel readiness in your new outfit; the battalion XO tells you the deadline rate is too high in your unit; the motor officer says your ESC is poor. He doubts it's accurate. When you report to the unit, the XO or platoon sergeant

tells you we pull maintenance every day. You check the equipment. It looks good—vehicles shine, rifle stocks look like custom hand-rubbed jobs. Brother, you have a problem! Had your new CO told you that military courtesy was poor in your outfit or that your unit left something to be desired on its last tactical night exercise, you could confidently look the situation over, and using your background and training, whip it into shape. But here you are faced with a mystery that you have no real experience with. You can't put your finger on anything specific to start correcting,

just some generalities: poor materiel readiness, unrealistic ESC. Don't feel alone, many of your fellow Infantrymen have gone through this same experience in the last few years.

What is the line of departure? You are a typical officer or NCO. You have spent your time up to now perfecting yourself in troop-leading procedures, mastery of weapons, leadership—the tools of your trade. What is the best approach? Which one of the hundreds of regulations, TMs, and FMs should you study? Strange as it seems, if you study, really dig into just one—



AR 220-1 and the report it sets up, the Unit Readiness Report—it will point you in the right direction just as a good estimate of the situation helps solve your tactical problems.



What is the Unit Readiness Report? It's a measure of your unit's capability to do its assigned job. No doubt your unit has an assigned emergency mission, or perhaps several. It is stated in familiar terms. Move to line X-Y, occupy delay position and delay in zone to line A-B, or the like. But can you move there? Are your vehicles reliable enough to be depended on to get your unit there? Do you have the tools and parts on hand to keep your equipment in fighting shape?

These and many more questions are answered in the Unit Readiness Report.

Here on one sheet of paper is a measurement of all tangibles that make up a unit compared with the requirements of the mission assigned to the unit. Even at your level, you can see at a glance the condition the major Army commander says you should be in, compared with what you measure and find your unit to be. But squads, platoons, and companies of a battalion don't submit this report. True, however, your materiel is part of the basis of the battalion's report and it can be measured and rated. Just exactly what are we talking about? The Unit Readiness Report is based on three factors:

1. The required condition of your unit to perform its assigned mission, its readiness requirement or REDCAT.

2. What the major Army commander says he can expect the condition of your unit to be, based on the resources available to him—

in other words your readiness capability or REDCAPE.

3. The condition of your unit based on your measurement of actual status against a yardstick, that is, your actual readiness condition or REDCON.

For reasons of simplicity, these three factors are expressed in numbers from 1 to 4. Just like golf, the lower number wins the hole in each case. Because it is related to overall DA requirements, the REDCAT is classified. REDCAPEs aren't assigned lower than battalion or separate company level. If you are part of the battalion, you use the REDCAPE assigned to the battalion. *It is your goal!* You either have to measure up or prove that there is a breakdown somewhere outside your sphere of influence. So let's take a look at the logistics section of the report—what are we measuring and how can it point you, a commander, in the right direction?

It's really very simple—do you have your TOE equipment? Is it serviceable? Do you have your basic load of rations, POL, and ammo? Battalion renders reports on availability of repair parts; you don't have that job. Each item is reported in a separate block of the report as a REDCON. In Block 40, Equipment on Hand, you're reporting on how much of your TOE equipment you have. It doesn't take a Rhodes Scholar to count the number of M14 rifles authorized on the TOE and compare it to the number in the arms room. A point to remember: *Take a good look at everything you're supposed to have.* No company commander worth his salt would hesitate to raise the roof if he had only enough rifles to arm half his riflemen, but how about a shortage of one radiac meter? The commander who knows what his outfit is authorized and aggressively follows up his shortages with his supplier is the catalyst that insures a functioning supply system. Look at the yardstick the AR gives

		SECTION C-LOGISTICS							
		40	41	42	43	44	45	46	47
EQUIPMENT ON HAND									
WEAP. LOADS	48	49	50	51	52				
COMMAND	53								
REPAIRS									
MANAGEMENT									
INVENTORY									

DA FORM 1 APR 64 2715

UNIT READINESS REPORT (AR 170-1)		AS OF (End of reporting period) 31 March 1966	REPORTS CONTROL SYMBOL CDS/204-0871
TO:	THRU:	FROM: Commanding Officer 24 Bn (MECH), 70th Inf 504 Mech Inf Div APO OGG, US Forces	
MAJOR COMMAND CODE 1	UNIT IDENTIFICATION CODE W A D S A A	TYPE UNIT CODE N	ACCURATE FULL TOE TO STRENGTH 0 0 9 1 3
REDCAT 1	REDCAPE 1	DEFERATION UNIT INDICATED 0	EVALUATION UNIT PERCENTAGE 90%
SECTION A - PERSONNEL			
STRENGTH	41	OFF	37 33
	1	WO	2 1
		PM	87% 88%
SECTION B - TRAINING			
TRAINED TESTS	44	7-11 Jul 1965, Combat Ready	41
	1	TECHNICAL PROFICIENCY INSPECTION	1
			10 Feb 1965, Satisfactory
MAJOR EXERCISE	46	PTX "Gallant Fox" 7-13 Dec 1965	47
	1	SPECIALIZED TRAINING	N
SECTION C - LOGISTICS			
EQUIPMENT ON HAND	49	104/54/40/5	48
	2	UNIT EQUIPMENT SERVICEABILITY	1
			7 3 2 0 0 7
UNIT EQUIPMENT DEPLOYABILITY	54		51
	2	UNIT LOADS	1 1 3 N 1
COMMAND MANAGEMENT INSPECTION	48	Bq & Bq Co - Satisfactory, 12 Jan 66 Co A - Satisfactory, 29 Nov 65 Co B - Satisfactory, 28 Nov 65 Co C - Satisfactory, 30 Nov 65	
	1		

DA FORM 2715
1 AUG 65

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

SECTION B - UNIT COMMANDER'S EVALUATION AND COMMENTS THE OPERATIONAL READINESS CONDITION (REDCON) OF MY UNIT IS	
	3
COMMENTS ON CRITICAL PROBLEMS INDICATED IN SECTIONS A, B, AND C Specific problems affecting unit REDCON are to be entered as a minimum These must include: Critical MGS shortages Obstacles to training Critical equipment and repair parts shortages Maintenance problems Number of personnel in AIT	
DATE 3 April 1966	SIGNATURE OF UNIT COMMANDER <i>John Q. Doe, Lt. Col., Inf. Commanding</i>
SECTION C - HIGHER COMMANDER EVALUATION AND COMMENTS	
THIS UNIT HAS THE FOLLOWING REDCON RATINGS	
PERSONNEL	TRAINING
1	1
COMMENTS	
DATE	
SIGNATURE	
SECTION F - ARMY COMMANDER EVALUATION AND COMMENTS	
THIS UNIT HAS THE FOLLOWING REDCON RATINGS	
PERSONNEL	TRAINING
1	1
COMMENTS	
DATE	
SIGNATURE	

However, the latter includes emphasis on the management of the resources available, plus the evaluation of the readiness condition (REDCON) of the unit and a reflection of the REDCON in the Unit Readiness Report. It is significant to note that Unit Readiness instruction at USAIS highlights the managerial aspects of our resources—in this respect, the report itself is but a management tool.

Other definitions that place the Readiness Program into perspective are REDCAT, REDCAPE, and REDCON. These are important because a general lack of understanding of their meaning often casts an air of mysticism about the entire program.

REDCAT: Readiness Requirement—the level of readiness assigned in peacetime to each unit of a command as required by that command to accomplish the command's assigned mission in relation to the deployment schedule of the unit. In other words, the REDCAT normally matches the reaction time required of the unit in contingency plans. Specifically, this means: REDCAT 1=24 hours, REDCAT 2=15 days and REDCAT 3=30

days in reaction time. REDCAT is associated with Headquarters, Department of the Army level since DA is aware of the worldwide requirements and assigns requirements accordingly.

REDCAPE: Readiness Capability—the level of readiness assigned each unit which is within the capability of the major Army command, both CONUS and overseas, to support with programmed and/or allocated resources.

REDCON: Readiness Condition—the actual level of readiness of a unit. This is the business at hand for commanders and staff officers and operators at all echelons.

Why do we have REDCAT, REDCAPE, and REDCON? They are directly related to the resources of money, personnel, equipment, and facilities, or a shortage of these in the Army. Since unlimited resources are not available, the Army Readiness Program established priorities and places our resources where they are needed. As a practical matter there is no need, nor can we afford, to maintain units at full TOE in equipment and personnel if their reaction time in contingency plans does not call for immediate deploy-

ment. Let us now discuss the specific factors of these definitions.

Readiness requirements for individual units, as well as requirements for units by type and number, are derived from general war and contingency plans from the deployment schedules associated with the plans, and the vulnerability of units to attack by potential enemies. The requirements for units and unit readiness generally exceed the capabilities of the Army to support within programmed and budgeted resources. In order to retain the true requirement as an objective (100 percent full TOE at time of deployment or employment) while at the same time conducting the day-to-day business of the Army on the basis of capabilities, the following distinction is established. Requirements are designated as REDCAT and capabilities as REDCAPE. REDCAT represents hard operational requirements which will provide the Department of the Army the basis for realigning or reallocating resources available to the Army and for seeking changes to the Five-Year Force Structure and Financial Program. REDCAPE serves two purposes: It constitutes

the goal for the unit commander, and it establishes the priorities for the programed allocation of resources to the unit. When REDCAPE falls short of REDCAT, the Department of the Army may need to request additional resources from the Department of Defense or modify plans.

The unit commander determines the REDCON based on his knowledge of conditions within the unit at any given time. So that REDCON can be measured objectively and uniformly, common factors in the areas of personnel, training, and logistics have been selected as readiness indicators.

The Unit Readiness Report required by the regulation provides a means for commanders to identify problem areas in personnel, training, and logistics where command emphasis and/or corrective action may be required. It shows how effectively major Army commanders and unit commanders are utilizing allocated resources by comparing REDCON with REDCAPE. Further, needs for additional resources to meet mission requirements can be determined by Department of the Army by comparing REDCAPE with REDCAT.

Personnel and equipment, along with deployment time, have been selected as the category criteria indicators for REDCAT and REDCAPE. To insure uniform reporting, full TOE strengths, as defined above, are used as the basic standard of measurement for TOE units and authorized strengths for reporting TD units. Major Army commanders will recommend a REDCAT and a REDCAPE for all numbered TOE units (less subordinate units of divisions and armored cavalry regiments) and designated reportable TD units. This will include individual REDCAT and REDCAPE for subordinate units of separate brigades with no requirement for an overall brigade REDCAT or REDCAPE. Each Special Forces unit will be recom-

mended by individual lettered company. Major Army commanders will report REDCON to the Department of the Army for separate company-size and larger numbered TOE units and selected TD units. Special Forces units will report REDCON by lettered company.

REDCAT will be predicated on the required unit deployment or employment times under approved plans and the personnel strength and equipment required for the unit to accomplish currently assigned missions (appendix I). Major Army commanders will forward recommended REDCAT to the Department of the Army for approval. The assigned REDCAT will be used by the Department of the Army and major Army commanders to determine total peacetime requirements and express resource "short falls." REDCAT will be classified CONFIDENTIAL and will not be disseminated below major Army commands.

REDCAPE will be the highest level of readiness for individual units within the capability of the major Army command to support with resources programmed for and/or allocated to the command. Unit REDCAPE will be dependent entirely on personnel and materiel resource availability. Major Army commanders will recommend REDCAPE for each TOE unit and reporting TD unit, insuring that the aggregate of resources necessary to support REDCAPE (and nonreporting TD units) equals the aggregate of resources programmed for the command, and forward to Department of the Army for approval. The readiness objective for the unit is the assigned REDCAPE. REDCAPE for individual units are UNCLASSIFIED but a list of command-wide REDCAPE will be classified CONFIDENTIAL.

Of primary concern to all of us is the term REDCON. Although AR 220-1 speaks of the quarterly application of the report, in units with a good program there is a

daily evaluation of the readiness condition of the unit. However, of equal importance is the associated corrective action resulting from the evaluation. In other words, the REDCON evaluation is not an exercise conducted once each quarter, but by necessity one that must be performed daily for the readiness program to function as visualized.

The REDCON of a unit will generally indicate how effectively the resources allocated the unit are being managed. When the measured REDCON balances the assigned REDCAPE, the unit is considered to be in a readiness condition which is commensurate with current allocated resources. Consistent discrepancies between the REDCAPE and the REDCON of a unit will initially call for re-examination of the allocation of resources within the command and possibly redesignation of REDCAPE. Continued discrepancies may call for a re-examination of the allocation of resources to the command by the Department of the Army.

RECON is described in one of four levels:

REDCON C1: A unit fully prepared for and capable of undertaking combat operations on the outbreak of hostilities. It can perform its TOE mission (cold war mission for Special Forces units and current mission for TD units) without assignment of additional personnel and equipment and without additional training.

REDCON C2: A unit which, though short some personnel or equipment, is capable of initiating combat operations on the outbreak of hostilities but which requires fill of shortages to perform its TOE mission (cold war mission for Special Forces units). The unit can attain status of REDCON C1 within 15 days.

REDCON C3: A unit which has shortages of sufficient magnitude that it has limited capability to perform its TOE mission (cold war mission for Special Forces units)

and it can do so only for a very limited period. The unit can attain status of REDCON C1 within 30 days.

REDCON C4: A unit which has shortages of such magnitude that it requires more than 30 days to attain REDCON C1 status.

The criteria for determining the unit REDCON are as listed in Appendix II to AR 220-1. We will look at a consolidation of the indices applicable to Readiness Conditions C1 thru C3. C4 will not be discussed since it is merely a carry on and exceeds REDCON C3 in all cases.

REDCON C1

ASSIGNED—97% FULL TOE W/ 90% MOS POSITIONED QUALIFIED. ATT/TPI/MAJ EXER/SP TNG—SATISFACTORY W/13 MONTHS. EQUIPMENT—90% AT 90% FILL. SERVICEABILITY AND DEPLOYABILITY—

(GREEN)	(AMBER)	(RED)
70	20	10

CLASS I, III AND V—95% AT 90% FILL.

CLASS II AND IV:

- PLL (0-10% AUTH LINE ITEMS AT ZERO BALANCE)
- ASL—15 DAYS SUPPLY OR MORE ON HAND

CMMI—SATISFACTORY RATING W/13 MONTHS/90% SUBORDINATE UNITS BATTALION OR LARGER.

REDCON C2

ASSIGNED—87% FULL TOE W/ 85% MOS POSITIONED QUALIFIED. ATT/TPI/MAJ EXER/SP TNG—IN OPINION OF NEXT HIGHER CO CAN COMPLETE SUCCESSFULLY W/O ADDITIONAL TRAINING. EQUIPMENT—90% AT 80% FILL. SERVICEABILITY AND DEPLOYABILITY—

(GREEN)	(AMBER)	(RED)
55	30	15

CLASS I, III AND V—90% AT 90% FILL.

CLASS II AND IV:

- PLL (11-15% AUTH LINE ITEMS AT ZERO BALANCE)
- ASL—7-14 DAYS SUPPLY ON HAND.

CMMI—SATISFACTORY RATING W/13 MONTHS/90% SUBORDINATE UNITS BATTALION OR LARGER.

REDCON C3

ASSIGNED—77% FULL TOE W/

80% POSITIONED QUALIFIED. ATT/TPI/MAJ EXER/SP TNG—IN OPINION OF NEXT HIGHER CO WITH ADDITIONAL TRAINING CAN SUCCESSFULLY COMPLETE WITHIN 30 DAYS.

EQUIPMENT—85% AT 70% FILL. SERVICEABILITY AND DEPLOYABILITY—

(GREEN)	(AMBER)	(RED)
40	40	20

CLASS I, III AND V—85% AT 90% FILL.

CLASS II AND IV:

- PLL (16-20% AUTH LINE ITEMS AT ZERO BALANCE).
- ASL—3-6 DAYS SUPPLY ON HAND.

CMMI—SATISFACTORY RATING W/13 MONTHS/90% SUBORDINATE UNITS BATTALION OR LARGER.

A discussion of the REDCON indicators logically brings us to the Unit Readiness Report. At the risk of redundancy, it is worthwhile to emphasize that although the report is rendered on a quarterly basis, to assist you in managing your resources a daily evaluation is made and necessary corrective action is accomplished. In fact, most major commanders require the submission of pertinent information at anytime the REDCON of a unit falls below its assigned REDCAPE. Now for a brief discussion of the report, DA Form 2715:

This form will be prepared by unit commanders as of 31 March, 30 June, 30 September, and 31 December. Reports will be classified CONFIDENTIAL as a minimum. Headquarters, Department of the Army requirements for submitting reports include all numbered TOE units, of company size or larger, and designated combat support TD units. Organic subordinate units of a division or armored cavalry regiment are not required to report individually as only the consolidated division/regiment report is required. Numbered TOE subordinate units of separate brigades, groups, or battalions will report individually. Special Forces units will report by company. Units organized without a parent battalion (example: A Co, 40th Armor) will also report by

lettered company. All other letter-designated companies, troops, or batteries are not required to report individually. Units whose subordinate units report individually will not submit a consolidated report. Subject to requirements of the command reports control system, intermediate commands may add summaries, consolidated reports, or require reports from units other than those just mentioned. Increased reporting frequency or additional data may be prescribed as required to meet the needs of individual commands.

DA FORM 2715

Heading: There is little difference between this and other reports. It includes such information as the end of the reporting period, to, through, from, and certain specific identification information. As previously mentioned, REDCAT is not used at lower echelons, therefore it must be added by the major Army commander. However, REDCAPE prescribed for the reporting unit will be indicated. The aggregate TOE/TD strength is also included.

Sections A, B, & C reflect the readiness condition of personnel, training, and logistics. This is done by entering a single digit (1-4) in the blocks provided to indicate the actual REDCON as determined from the criteria previously mentioned. With regard to personnel, it is significant to note that total strength figures will not tell the story. In order that a true picture may be presented, the report also requires the percent of personnel who are qualified to perform the duties to which assigned. The section on training must also give a complete picture of the training activities during the period, generally descriptive information such as date and rating of the last Army Training Tests, and time of execution of specialized training if the unit has an assigned contingency mission.

Concerning the logistics situation in the unit, current directives require the REDCON for both equipment on hand (serviceability) and that authorized by TOE (deployability). This information gives a better idea of what needs to be done if the unit were to be alerted for deployment.

Since automation is becoming a way of life in the Army, the DA Form 2715 is also adaptable to punch cards—thus the numbering of each block.

Section D. The Commandant, USAIS, considers the Commander's Paragraph to be the most important part of the Readiness Report. By this means the commander has a command channel paralleling the administrative chain to present an accurate word picture of the REDCON of the unit. In this section the overall readiness condition must be entered. This digit is

the lowest rating recorded for personnel (blocks 42-49), training (56), and logistics (blocks 63-68). Of significance is that the commander has an opportunity to tell *why* his REDCON does not meet the assigned REDCAPE, or an explanation of unusual problems indicated in Sections A, B, and C. Comments should include the following as appropriate:

- Critical personnel shortages by MOS.
- Number of assigned personnel undergoing AIT with the unit.
- Training ammunition shortages.
- Lack of training facilities.
- Critical equipment and repair parts shortages by line item and by requisition number.
- Maintenance problems attributed to repair parts shortages; lack of trained logistics personnel, facilities, and tools; average equipment; issue of new, standard "C," or limited standard items of equipment.
- Number of KATUSA personnel authorized and assigned (Eighth US Army units only).
- Other readiness problems which require assistance from higher levels.

From the above list, it is readily apparent that the commander must manage his resources to the best of his ability. Accuracy is the key to the reporting system. The temptations are often great to reflect a REDCON higher than actually exists, but the true facts must be shown. In this manner the next higher commander is informed of the true readiness condition and the actions taken by the commander to meet the assigned REDCAPE.

Section E of the report causes the next higher commander to indicate the action taken to influence the REDCON of the unit. Those measures beyond the control of the next higher commander are noted and acted upon by the Major Army commander in **Section F** of the report.

Reports will be forwarded through channels as directed by major Army commanders. Special Warfare augmentation units of the Special Action Force should report individually through the unit, command, or agency to which attached at the time of the report. Major Army commanders will establish procedures for forwarding reports to servicing data processing units for preparation of required punched cards.

As an additional requirement, information copies of the Unit Readiness Reports (DA Form 2715) for the following TOE combat units under operational command of unified commands (exceptions noted below) will be forwarded direct to the

Army, ATTN: ODCSOPS OD RE, so as to arrive not later than 10 days after the end of the reporting quarter:

- (1) Divisions (consolidated division report and a copy of the report from the attached military intelligence detachment.)
- (2) Armored cavalry regiments (copy required from 11th ACR.)
- (3) Separate nondivisional battalions.
 - (a) Infantry (copies required from Berlin battalions).
 - (b) Artillery (less air defense).
 - (c) Engineer (combat only).
 - (d) Armor.
 - (e) Mechanized Infantry.
 - (f) Airborne Infantry.

(4) Aviation companies (including Transportation Corps helicopter companies) not organic to divisions.

The purpose of these information copies is to give Headquarters DA an early indication of the readiness condition of the combat units of the Army. Since this is raw data that has not been acted upon by the established chain of command, action is not generally taken at DA Headquarters. However, if there are indications that something requires attention, corrective action may be initiated from the highest level.

WHAT A UNIT COMMANDER SHOULD ASK HIMSELF ABOUT UNIT READINESS

a. GENERAL:

- (1) What is the REDCAPE of my unit?
- (2) What mission requires I be assigned this REDCAPE?
- (3) Am I familiar with AR 220-1 and related publications?

b. PERSONNEL:

- (1) Does my personnel strength, to include personnel with proper MOSs, meet the standards required for a unit with my assigned category?
- (2) What can I do in the way of retraining of individuals to improve my posture?
- (3) Do my superiors know my true personnel posture?
- (4) Does the personnel officer know what my personnel posture is?
- (5) Is the personnel officer fully aware of the priority I should have for replacements?
- (6) What personnel have personal problems which would create hardship or

preclude them from staying with the unit?

c. TRAINING:

- (1) Has my unit completed that training necessary to meet the readiness category assigned?
- (2) Will the projected training program allow my unit to maintain a readiness condition which is at least equal to my assigned readiness category?
- (3) What are my major problems in maintaining operational readiness?
- (4) Have I kept my superiors informed of problems which I cannot solve?
- (5) Is my training program and maintenance program in balance?
- (6) Has time been allotted for POR Qualification?
- (7) What should I do to insure that my unit is trained to meet the assigned readiness category?

d. LOGISTICS:

- (1) Do I know what equipment I am authorized?
- (2) Have I personally seen and inspected every piece of equipment I have on hand and do I know what I am short and have the shortages been requisitioned?
- (3) Do I know what criteria is used for determining the serviceability of my equipment?
- (4) Do my unit SOPs and procedures insure that proper serviceability is maintained?
- (5) Do my personnel know what serviceability criteria they should be following?
- (6) Do I have all the documents such as technical bulletins, etc., for each piece of equipment?
- (7) Do I know what documents I need?
- (8) Do I and my personnel understand the equipment serviceability profile as listed in AR 750-10?
- (9) Does my equipment meet the requirements as specified for the readiness category assigned?
- (10) What should I do to improve my maintenance procedures?
- (11) Do I know my authorized load of Class I, III, and V supplies and do I have the items on hand?
- (12) Do my superiors know my status of supplies?
- (13) Do I know what Class II and IV equipment and/or spare parts I am authorized?
- (14) Do I know what procedures are used to insure these items are documented on my prescribed load lists and are these lists kept up-to-date?
- (15) Is my unit fully prepared to undergo a CMMI at all times?

FINAL QUESTION: DO I HAVE A PERSONAL KNOWLEDGE OR ANSWERS TO ALL OF THESE QUESTIONS OR HAVE I RELIED ON SOMEONE TO TELL ME?

FINAL ANSWER: IF I DO NOT HAVE FIRSTHAND KNOWLEDGE AND ANSWERS TO THESE AND RELATED QUESTIONS, I HAD BETTER GET WITH THE PROGRAM. ■

work as possible. Commanders are reluctant to sacrifice this valuable training time for detailed instruction in the preparation of ESC evaluations.

Armored and mechanized units devote considerable time and effort to maintenance of equipment, and additional time spent in this area curtails other necessary training. Added time must be spent because the ESC evaluations are not required often enough for personnel to become completely familiar with them. Moreover, when ESCs are required, added time must be allocated so the ESCs can be accomplished completely and correctly. He concluded that this type training was significant enough to warrant the time allotted. He felt this subject could be integrated well into normally scheduled maintenance periods, with a few exceptions. He determined that several hours should be spent in instruction covering the objectives of ESC, the correct technical manuals, and the format to be used. Good classroom instruction in the basic phase would build a solid foundation for the practical work. At that time he also decided to schedule refresher training once each quarter so as to indoctrinate replacement personnel and re-instruct others who had demonstrated a weakness in this area. He also decided to conduct all practical instruction in a suitable area near the location where the equipment was normally stored. By conducting practical work in this manner he hoped to dispel the idea that ESCs are relevant only to vehicles and emphasize that equipment requiring evaluation is kept in places other than the motor pool. This phase of training would consist of several crews with their equipment and supervisors performing an ESC step by step. This would be done on a rotating basis until all crews had completed the phase.

Going hand-in-hand with allocation of training time is the problem

of presenting instruction at the unit level. Training considerations here are the scope of instruction, determination of personnel to attend instruction, and selection of technically qualified instructor personnel. Captain Ball felt the scope should include reasons for and objectives of ESC, preparation of the evaluation format, and an actual ESC performed for each type equipment with the respective crews participating. The personnel to be trained should include all operators, crews, maintenance and communications repairmen, and all supervisors.

The ESC is designed to be performed by the crew, assisted by organizational maintenance personnel as required. If the evaluations are to be supervised effectively, junior officers and noncommissioned officers must be present for instruction concerning all types of equipment they control. The supervisors closest to the equipment must understand thoroughly the standards and the rating and evaluating system used in conjunction with the equipment. Captain Ball found within his company the necessary technically qualified personnel to carry out this training mission. The classroom instruction, which is of a nontechnical nature, would be the responsibility of the unit executive officer and taught by the platoon leaders. The executive officer reviews all ESC evaluations and is held responsible for their accuracy. The executive officer deals with the platoon leaders and in turn holds each of them responsible for the accuracy of evaluations performed upon platoon equipment.

Captain Ball felt by utilizing his junior officers in this way he could insure that all officers understood the system, and that he could emphasize to each officer his responsibility in the evaluation of the equipment within the platoon. He found that both unit maintenance and communications sergeants were well qualified to instruct in the requirements involved in the auto-

motive, fire control, armament, and communications phases of the evaluation. He felt that his senior non-commissioned officers, especially platoon sergeants, should be equally capable of instructing adequately in both the armament and fire control phases.

His last consideration was to check the number of ESC publications and other related technical manuals on hand for all equipment. He wanted enough ESC publications on hand to supply one for each piece of equipment. He wanted other technical manuals available to assist in some steps in the evaluation. Captain Ball realized the need for the ESC publication, for it establishes the Army-wide standards for rating and evaluating individual types of equipment. To maintain accuracy and integrity in equipment evaluations his troops must follow exactly the standards established in the ESC technical manuals.

Captain Ball now let himself relax. He had isolated his problem, analyzed all aspects relating to a good solution, and had planned a training program designed to correct the deficient area. Given the time to develop his program and complete the training of equipment operators and supervisors, he felt his ESCs would accurately reflect the serviceability potential of his equipment. The next time the two civilians come to inspect equipment and ask questions of the crews,



Company A will be ready. ■



CAREER NOTES



Errors in Personnel Records and Reports

Department of the Army is placing emphasis on the proper classification and assignment of soldiers and eliminating administrative errors that occur in induction, enlistment, reception, and subsequent processing. However, Office of Personnel Operations records indicate that the volume of errors has not appreciably diminished.

All soldiers handling records and responsible for personnel management activities are urged to be thoroughly familiar with regulations governing their functions, and to insure the accuracy of verbal and written data for which they are responsible.

Errors common to enlistment, reception, training, and garrison agencies normally involve incorrect reports rendered on replacement stream and permanent party personnel. These reports, coupled with records on file at Department of the Army, are the only true "picture" of the enlisted man or woman and are used in connection with all training assignment operations.

Some examples of the types of inaccuracies on personnel reports forwarded to Department of the Army and which can be directly attributed to the reporting agencies are:

- Enlistment commitments improperly coded or not coded.
- Physical profile discrepancies.
- Eligibility for security clearances not noted.
- Erroneous aptitude area score listings.
- Language aptitude qualifications not noted.
- Civilian schooling subjects and level attained incorrect.
- Police records of civil offenses not noted.
- POR qualification erroneously coded.
- Last oversea tour area incorrectly listed or not listed.
- Eligibility for PCS indicated when a PCS is not authorized at the time.

Errors such as those listed above result in an expenditure of funds without a direct benefit to the Army, and oftentimes costly hardships and justifiable grievances involving affected individuals and their dependents.

The initial impression a soldier receives of the Army during entrance processing is often his most lasting impression. Administrative errors have a direct relationship to the retention or loss of first termers. The elimination of errors in personnel records management is an important step toward higher retention rates and improved soldier morale.

CONARC Extension Course Program

There is no waiting list in the Extension Course Program offered by U.S. Continental Army Command schools. Wherever you are, you can begin right now. You are as close to the school as your mail box.

The program is designed to provide a means for the individual unable to attend a service school to improve his ability to meet job requirements, acquire increased skills, and achieve promotion. For the Army it provides a greater unit effectiveness through more efficient individual performance.

Courses by mail are offered to members of all components of the Army—active Army as well as active members of the U.S. Army Reserve and the U.S. Army National Guard. This instruction also is available to active members of other U.S. military services, eligible employees of the Federal government, and to allied military personnel, whose official duties require knowledge available through Army Extension Course study.

To furnish instruction comparable to that offered in resident courses, CONARC schools offer extension courses to officers and noncommissioned officers for career development. In addition, courses are offered to all personnel for MOS-type and specialized training. Some of these courses are in such fields as automatic data processing, safety management, nuclear weapons employment, and military pay and allowances.

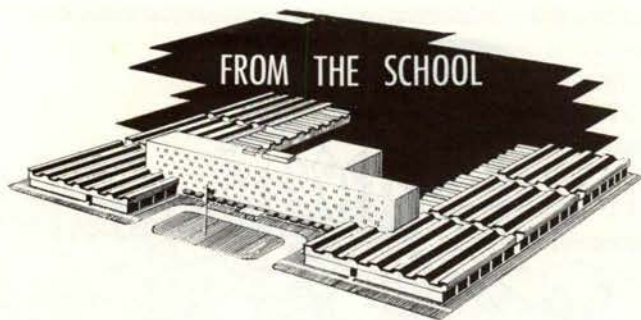
An extension course consists of a number of subcourses organized to furnish special instruction in a specific subject area. Successful completion of an extension course depends upon passing each of its subcourses.

There are approximately 1,250 individual subcourses prepared by 21 CONARC service schools. Subcourses may be selected on an individual basis to acquire knowledge in a particular area such as maintenance, map and aerial photograph reading, methods of instruction, etc.

A subcourse is basic material that covers a single phase of instruction and may contain one or more lessons and an examination. It consists of instructional material in the form of a compact lesson text, and a sufficient number of practical exercises to teach the subject.

Individuals may either enroll in an extension course and receive a diploma, or enroll in a subcourse and receive a certificate of completion.

Eligibility and enrollment requirements are published in DA Pamphlet 350-60, which also lists the extension courses and subcourses available at each CONARC service school. Enrollment is voluntary and no fee is charged for materials or instruction. ■



A New Sight for the 81mm Mortar

Some units are being issued the M53 sight as a maintenance replacement item for the M34 sight. The M53 sight is now the standard sight unit for the 81mm Mortar M29 and will be issued with new mortars. Rebuilt mortars will continue to be issued with the M34 sight. The operation of this sight is currently being written into FM 23-90. This information will be published in FY 67. For information on the operation and maintenance of the M53 sight unit, personnel should refer to TM 9-2340-287-34 and TM 9-2300-224-10/3/3.

Expended M-72 Launchers

USAIS currently has available expended M72 (LAW) launchers that may be used for training purposes. Organizations desiring this item should indicate quantity required, and address request to:

Chairman

**Antitank/Missile Committee
Weapons Department, USAIS
Fort Benning, Georgia 31905**

In the request, list number desired and allow approximately three weeks for shipment. As a guide, the U.S. Army Infantry School can furnish approximately ten launchers per battalion-sized unit.

Reducing Equipment Losses

During the conduct of an extended patrol or field exercise, soldiers may become tired and misplace or lose equipment which may affect the accomplishment of the mission. The Benning Ranger Committee, Ranger Department, USAIS, has practically eliminated this problem.

The loss of battery case runners (legs) on the AN/PRC-10 radio may be avoided by placing the extra battery and then the radio in a sandbag before securing them to a packboard. This also eliminates the glare or shine on the case from the sun or moonlight.

A bootlace may be used to secure the antenna and antenna base to a permanent portion of the radio.

Other items, such as radio handsets, wire cutters,

AN/PRC-6 radios and antennas, metasopes, binoculars and compasses, may be secured by using a short piece of string or bootlace to secure them to a portion of the soldier's webbing.

Proposed Change to FM 23-82

Pending the publication of a change to FM 23-82, *106mm Recoilless Rifle, M40A1*, the following procedures should be used for crew drill with the M151A1C as the carrier for the 106mm RR:

DISMOUNTING THE 106MM RIFLE:

- a. The gunner stands and applies pressure downward on the tube.
- b. The loader and driver disengage the tripod from the vehicle by cupping their elbows under the carrying handles and lifting upward. After disengaging the tripod, they move directly to the rear with the weapon and lower the weapon to the ground.
- c. The loader and driver depress their respective carrying handles.
- d. The gunner dismounts from the vehicle and assumes the gunner position.

PREPARING TO MOUNT THE 106MM RIFLE:

- a. The gunner clears the spotting gun and calls all clear to indicate that both the 106mm rifle and spotting gun are clear.
- b. He next elevates the tube and moves to the on-carry position. This allows the gunner to lift the tube of the 106mm recoilless rifle.
- c. The driver, after hearing all clear, positions the vehicle so the tube extends into the body of the vehicle. He halts, brakes the vehicle, dismounts, and moves to the left rear of the carrier to a position by the mount.

MOUNTING THE 106MM RECOILLESS RIFLE:

- a. The loader and driver move beside the rear legs, facing toward the muzzle end of the weapon. They cradle the carrying handles in the crooks of the elbows, lift and roll the weapon onto the vehicle.
- b. The gunner lifts the tube until the wheel is on the vehicle. He pushes down on the tube and guides it into place. The squad leader assists in lifting the weapon onto the vehicle by lifting on the breech carrying handles.
- c. The loader and driver roll the weapon into position and engage the two carrying handle clamps to the vehicle.
- d. The driver assists the loader in loading and securing ammunition and cleaning material.
- e. The gunner manipulates the rifle to the travel lock position.
- f. The squad leader locks the travel lock.



Infantry
THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN

AUTHORS

Capt James A. Booker, Infantry, is an instructor in the Instructor Training Section of the Office of the Director of Instruction, USAIS. A frequent contributor to service publications, he has served with the 24th Infantry Division and the 10th Special Forces Group (Abn) in various staff and command positions. He is a 1960 graduate of the U. S. Military Academy.

Maj Charles D. Bussey, Infantry, has served in Korea and with the 3d and 10th Infantry Divisions in Europe. He was commissioned through ROTC at the Agricultural and Technical College of North Carolina in 1955, attended Airborne School, and is an honor graduate of the Information School and career course. He is stationed in Indianapolis, Ind., as a professor of military science.

Lt William C. Carlock, Transportation Corps, was commissioner through ROTC at Colorado State University in 1962, and attended Transportation Officer Orientation Course. Lt Carlock was the leader of the patrol mentioned in this article. He is presently assigned

as Operations Officer, OCS Company, Troop Command, Fort Eustis, Va.

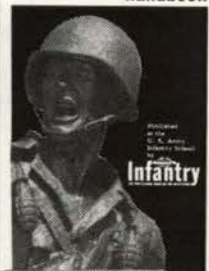
Lt Col Willard E. Chambers, Infantry (Ret) is the Chief of the Doctrine Branch, Doctrine and Organization Division through OCS in 1942, and has served as Infantry Platoon Leader, Company Commander, and Regimental Staff Officer in WWII, as Regimental Staff Officer in the Korean War, as Test Project Officer, Airborne & Electronics Board, Fort Bragg, and as Army Liaison Officer, 32nd Air Division in France prior to his present duties.

Col Arthur J. DeLuca, USA (Ret) works for the Human Research Unit (Infantry HumRRO) at Fort Benning. He was commissioned a 2nd lieutenant of Infantry in 1939 through ROTC at Ohio University. Col DeLuca did graduate work at the University of Toledo and is a graduate of CGSC. While on active duty he served as PMS at the University of Toledo, and as instructor at CGSC and at the Infantry School.

Lt Col Edwin W. Emerson, Infantry, is the Deputy Director, Brigade and Battalion Operations Department, USAIS. He was commissioned in 1943 through OCS. Col Emerson has attended Infantry Officer Advanced Course, the Command and General Staff College, the Army War College, and holds his MA from George Washington University.

Maj Charles V. Follett, Infantry, received his commission through OCS in 1947 and has attended the Infantry Officer Career Course and Cornell University. Maj Follett is presently enroute to an assignment at Fort Polk, La., from a tour as G4 XO with the 24th Infantry Division in Germany.

Infantry leader's handbook



Field expedient handbook



TO: THE BOOK DEPT., USAIS, FT. BENNING, GEORGIA 31905

SEND ME _____ COPIES OF THE **INFANTRY LEADER'S HANDBOOK.**

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Lt Col Carl M. Guelzo, Transportation Corps, was commissioned through ROTC at the University of Pennsylvania in 1949. He is presently assigned as G4, Korean Military Assistance Group. Col Guelzo has attended the University of Tennessee (for his MS in Transportation), US Army Language School, and the Command and General Staff College. He is a frequent contributor to military journals.

Capt Arthur M. Harris, Infantry, now on orders to Vietnam, was an instructor in the Tactics Group, Brigade and Battalion Operations Department. He is a 1956 graduate of USMA and served with the 3d Infantry Division (Mech) from 1959-1962.

Sp4 Howard W. Holmes is the Information Specialist for the 3d Infantry Division, the hosting unit for the 1965 LeClerc matches. He enlisted in the Army in 1963 after graduation from Michigan State University with a BA in journalism.

Capt Thomas M. Johnson, Infantry, an instructor of the Weapons Department's Rifle Marksmanship Team, has served as platoon leader, XO and CO of a rifle company in the 24th Infantry Division. He received an ROTC commission at the University of Tennessee.

Maj William E. Klein, Infantry, is the aide-de-camp to the commanding general of Fort Bragg, N. C., and the XVIII Airborne Corps. He is a 1954 graduate of the U. S. Military Academy and has attended the University of Alabama. Maj Klein graduated from the Infantry Officer Career Course in 1961 and won his Ranger tab and Airborne wings in 1955. He holds the Bronze Star for merit (w/OLC) and the CIB.

Capt Edward D. Line, Armor, is presently attending the Infantry Officer Career Course and is an ROTC graduate of Washington and Lee University, Lexington, Va. He has completed the Armor Officer Basic Course and the Motor Officer course.

Col Robert B. Rigg, Armor, is presently assigned to the Strategic Studies Group, USACDC Institute of Advanced Studies, Carlisle Barracks, Pa. He is a graduate of the Command and General Staff College and the War College, and is a frequent contributor to military and civilian publications. Col Rigg has written several books including *Red China's Fighting Hordes* and *How to Stay Alive in Vietnam*.

Dr. A. Porter S. Sweet, Cmdr, DC USNR was commissioned as Lt Commander in 1942. He was the Officer-in-Charge of the School for Dental Technicians, USNTC, Samson, N. Y. from 1943 to 1945. Since his retirement as editor of *Dental Radiography and Photography* he has authored over 60 nonfiction articles.

Col Harry D. Temple, Adjutant General Corps, was commissioned in 1934 through ROTC from Virginia Polytechnic Institute. He is also a graduate of the Command and General Staff College. Col. Emerson is now commanding the U.S. Army Institute of Heraldry.

Capt Joseph W. Wheeler, Infantry, is presently the S4 of the 2nd Student Battalion, The School Brigade, USAIS. He is a 1959 graduate of the U. S. Military Academy and a 1965 graduate of the Infantry Officer Career Course. Capt Wheeler has served two TDY tours in New Guinea—a six-month tour in 1962 and a two-month tour in 1964. He has lectured to various clubs, including the Explorers Club and the Adventure Club of Hawaii.

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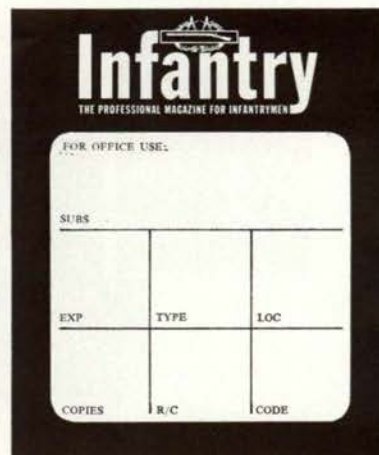
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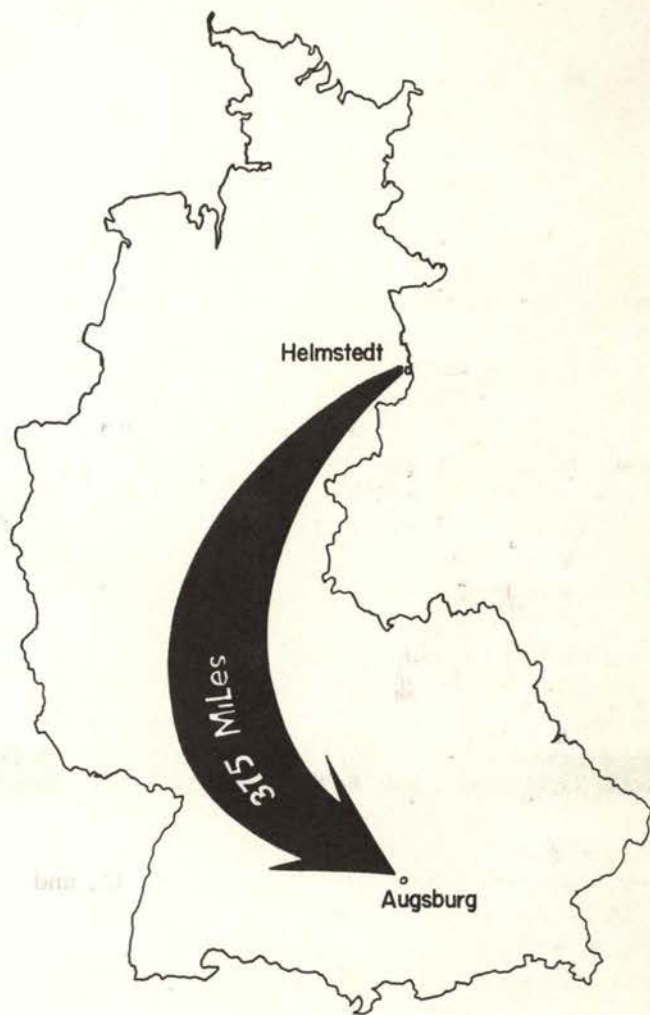


375 MILES IN 11½ DAYS

FOOTSORE, weary, and pounds lighter, a quartet of 24th Infantry Division noncommissioned officers arrived in Augsburg, Germany, 7 October 1965, after a 375-mile hike from Helmstedt, Germany, in a successful bid to reach their home *kaserne* at the same time their battalion, the 2nd of the 34th Infantry, arrived there from Berlin.

The four, SSgt James D. Young, SSgt George O. Smith, Sgt Robert F. Ferree, and Sgt Dieter F. Wendelken, made the arduous trek in 11½ days, beginning on 25 September at Helmstedt near the East-West German border.

Their commanding general, Maj Gen E. L. Rowny, their families, and a bright red carpet awaited them

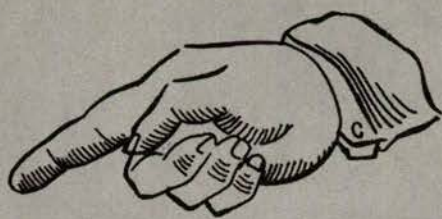


at the *kaserne* entrance at 1500 hrs, 7 October, just as the lead motorized elements of the "Always Forward" battalion arrived. The battalion, commanded by Lt Col Glenn C. Wilhide, Jr., had just completed a 600-mile trip from Berlin, where it had served a three-month tour of augmentation duties with the Berlin Brigade.

Led by Young, the four subsisted on a diet of C-rations supplemented by fresh fruits and vegetables gathered along the route. They marched from 12 to 15 hours a day carrying full field packs.

Smith performed medic duties, which were light considering that the only treatment necessary was for blisters. Ferree served as the guide for the march, which went overland and along roads. Wendelken was the interpreter. ■

ENTER



Infantry's 5th ANNUAL

SHORT STORY

CONTEST

1st Prize: \$100 U.S. Savings Bond!

2nd Prize: \$75 U.S. Savings Bond!

Any reader of **INFANTRY** is eligible. Stories should be fiction, not more than 3,000 words, relevant to the Infantry, and in good taste.

Manuscripts must be typed or printed in ink, double-spaced, using only one side of the paper. As the magazine has no translators, foreign contestants are requested to write in English.

A stamped, self-addressed return envelope and a short biographical sketch must accompany the manuscript. In the interest of impartiality, the author's name and address should appear on only the title page of the manuscript, and not on any of the inside pages.

Manuscripts other than contest winners may be

published at a later date. In this case, the manuscript would be purchased at then current rates.

Judges will be the staff of **INFANTRY** and selected personnel of the U. S. Army Infantry School.

Manuscripts must be postmarked on or before August 19, 1966. The announcement of winners and the first prize article will appear in the November - December 1966 issue. The second prize article will be published in the January - February 1967 issue.

All entries will be acknowledged upon receipt, and prizes will be presented at time of publication.

Address entries to: Short Story Contest, **INFANTRY** Magazine, Box 2005, Fort Benning, Georgia 31905. ■



Infantry

THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN

July-August 1966 75 cents

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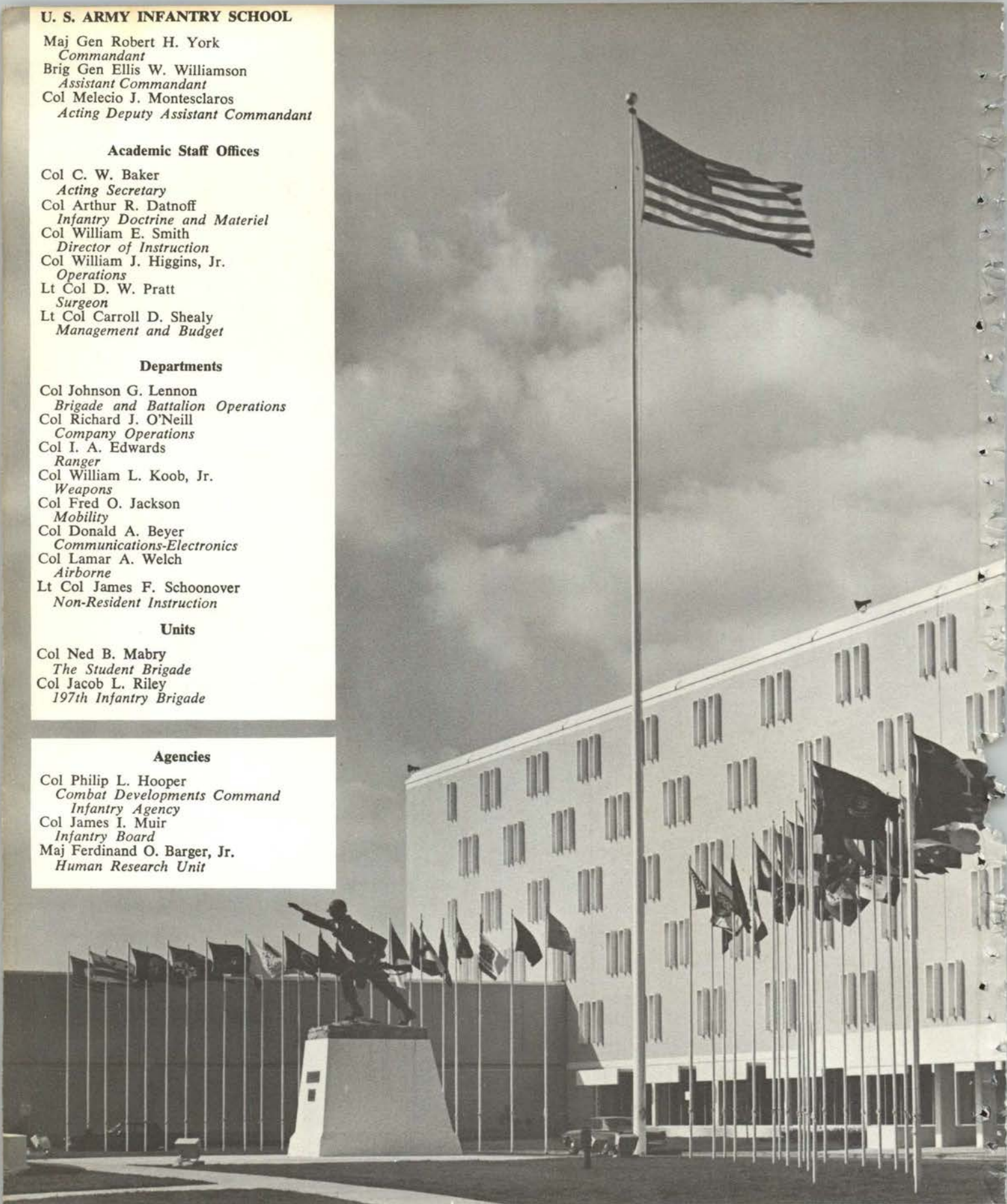
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The Fourth—This issue's cover highlights Independence Day and the fighting words of Thomas Paine (back cover). Such words do not ring hollow today.

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Infantry

THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN

Vol. 56

JULY-AUGUST

No. 4

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INFANTRY, published bimonthly at the U. S. Army Infantry School, is supported solely by subscription. It provides current doctrinal information in Infantry organization, weapons, equipment, tactics, and techniques. It serves also as a forum for progressive military thinking through thought-provoking articles. Unless otherwise stated, material does not represent official thinking or endorsement by any agency of the U. S. Army.

Subscription Rates: 1 year, \$4; 2 years, \$7; 3 years, \$10. For bulk orders of ten or more, deduct 10 percent from normal rate. On such bulk orders, remittance must accompany the order. Foreign (non-APO) subscribers add \$.85 per year postage.

Expiration of subscription is shown by the first four-digit number on address label. First two digits show month; last digits show year. Example: 0769 indicates 7th month of 1969 as terminal issue.

Correspondence: Address all correspondence to Editor, INFANTRY Magazine, Box 2005, Fort Benning, Ga., 31905. Please use full address. Renewal, changes of address, or any correspondence concerning your subscription should be accompanied by an address label or by the number that appears on the label's first line.

Manuscripts: Payment on publication at minimum rate of \$.01 per word. Acknowledged within 30 days. Manuscripts will not be acknowledged or returned unless accompanied by self-addressed, stamped envelope. Queries answered promptly.

Postmaster: Entered as second-class matter 11 June 1948 at Columbus, Georgia.



5/9th CAV MUSTER

• In late July the "Buffalo Soldiers" of the 5th Squadron, 9th Cavalry will mark the 100th anniversary of the formation of the Regiment in 1866. The exact date of the celebration has not been set and will depend on mission requirements placed on the Squadron in July. Plans call for a review, military competitions, and a picnic, followed in the evening by Squadron Balls hosted by the officers and the noncommissioned officers.

We wish to extend an invitation to any former members of any element of the 9th Cavalry to be with us on this occasion. Persons who may be able to attend should write the Adjutant, 5th Squadron, 9th Cavalry, Fort Ord, California 93941, for further information.

The Squadron would also be happy to receive any historical material, photographs, accoutrements, or other items pertaining to the Regiment for either temporary or permanent display.

Lt Col Van Court Wilkins, Armor
HQ, 5th Squadron 9th Cavalry
Fort Ord, California 93941

EQUAL TIME

• The enclosed letter to the editor is my third cut at trying to be restrained in responding to Mr. Strickland's cavalier treatment of Admiral Eccles' *Military Concepts and Philosophy* in your November-December 1965 issue.

Prior to your publication of Mr. Strickland's strictures, there were at least three favorable (and fairly comprehensive) reviews in print (*Chicago Tribune*, *Army Magazine*, and the *Marine Corps Gazette*). You are certainly not constrained by other reviews but you might have been suspicious of Mr. Strickland's shallow, superficial statements and arrogant judgment.

There are only a very few military theorists who are military men. Most of the scholars on military subjects are civilians. Admiral Eccles performs a needed service for all military men by quietly but effectively winning the respect of military scholars at home and abroad. The utility of his contribution is apparent when we realize that he is arguing our case (*i.e.* unique aspects of command and the value of the military in society) and helping to paint a more attractive picture of the so-called military mind.

I personally think it is a hell of a situation when the distillation of any author's

lifetime of thinking and writing can be falsely interpreted, judged, and sentenced. I admit to a special sense of outrage in this case because Admiral Eccles is a friend of mine and a credit to uniformed military scholarship. However, if you feel my response is too extreme, I would ask that you read the book then re-read the review—then do what you feel is just and fair.

Col William F. Long, Jr., Inf
Naval War College
Newport, Rhode Island 02844

Colonel Long was invited to write his evaluation of Admiral Eccles' book. This appears in the Book Reviews on page 68. We feel that publication of the contrasting views will give our readers an opportunity to judge for themselves which stand to take. —Ed.

"THUMBS UP" FOR INFANTRY

• Enclosed is my renewal.

I don't think I can afford to be without INFANTRY Magazine in my current assignment as a commander in a selected reserve force.

I have also interested other officers of the "Thumbs Up" 2nd Bn, 279th Inf, 45th Div in your fine publication and you should be receiving 8-10 more subscriptions soon.

Capt Charles R. Huddleston, Inf
1330 S. Okfuske
Wewoka, Oklahoma 74884

• Enclosed please find a check for \$4 for my subscription to INFANTRY Magazine.

I want to take this opportunity to tell you that I have been subscribing to your fine magazine for more than five years and that I enjoy it very much.

Although I am a Reserve Engineer Officer and not a professional Infantryman I find your magazine extremely interesting, especially now that I am enrolled as a student in the CGS College at the local reserve school. I often use INFANTRY Magazine as a very valuable supplement to the material taught at the school.

I think that your essays on small unit actions, guerrilla warfare and airmobile operations are particularly interesting

Capt Oleh R. Cieply, CE
20137 Yonka
Detroit, Mich. 48234

HUMOR AGAIN

• In reference to Lt Col Burr's letter in your March-April magazine, I can only say that such an opinion reflects only the narrow-mindedness of some individuals. Your humor is refreshing and contributes highly to your outstanding publication.

Lt Evan E. Francis, Jr., Inf
5453-C Chaffee Avenue
Fort Knox, Ky. 40122

• As a former subscriber and long time Infantry officer I was thoroughly appalled at the bad taste and poor sense of humor displayed in the publication of one of your cartoons in the otherwise splendid issue of INFANTRY highlighting lessons learned in Vietnam.

Even in *Playboy*, *Dude*, or *Esquire* there would be nothing funny about a drunken General, particularly one ordering the seizure of an objective "despite the casualties." But for such a "cartoon" to be presented in our professional journal should be a source of embarrassment to every Infantry officer.

I'm sure the look of disbelief and amazement on the faces of the "General's" staff comes not from his order alone, but from amazement over the fact that this travesty is taking place in our magazine at all.

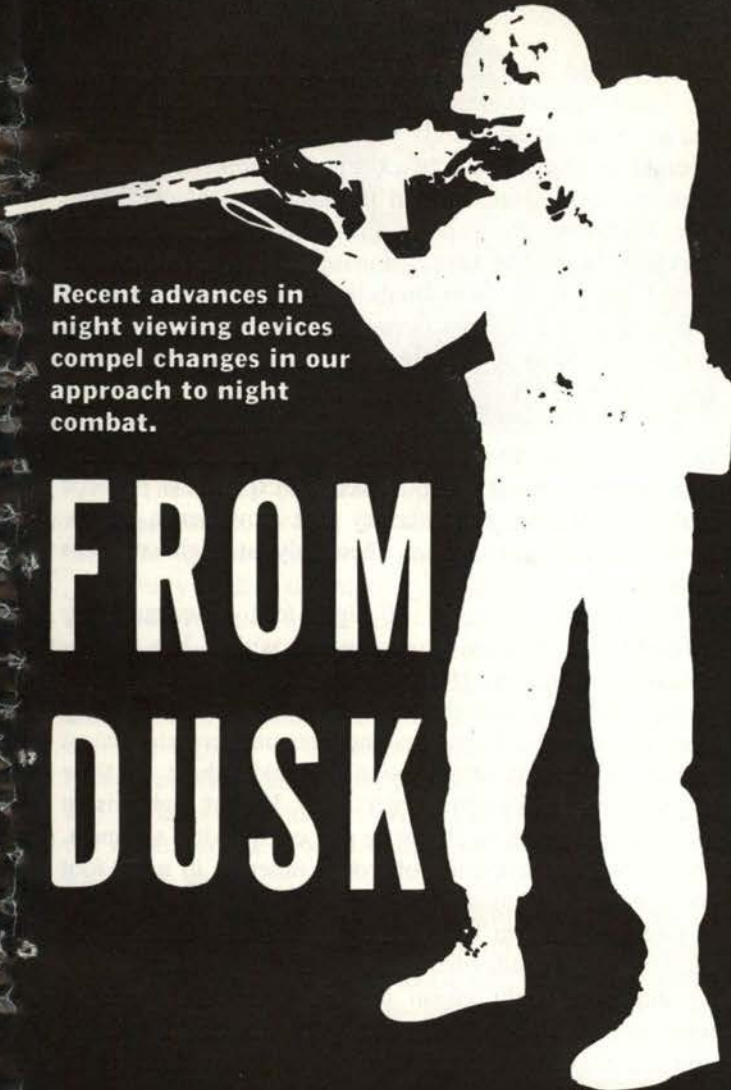
Maj Ralph R. Drake, Inf
HQ, Det C-101 A (Provisional)
1st Special Forces Group (Abn), 1st
Special Forces
APO San Francisco, Calif 96303

Upon reexamination of this cartoon, we find that it is possible that we may have offended some people by publishing it. If so, our apologies are extended. However, it must be kept in mind that by publishing cartoons, we do not endorse the actions of the characters that appear therein. These are most certainly not editorial cartoons, and we accuse no general of the conduct of our inebriated warrior.

In researching your allegation that "even in Playboy, Dude, or Esquire there would be nothing funny about a drunken General . . ." we cannot help but wonder about your opinion of the homosexual astronauts on page 126 of the March 1966 Playboy, the warmongering General on page 143 of the March 1965 Playboy, and the Army family life depicted on page 183 of the February 1966 Playboy.

We take note of the implication in your letter that you have allowed your subscription to lapse because of the commission of the "travesty" and we sincerely hope that this is not the case. You have exercised your responsibility and used the most effective method of effecting what you feel are necessary changes in the magazine by writing a letter to the editor, but have you not largely abrogated your responsibility by dropping your subscription and giving us up as a lost cause? We do not feel that dropping your subscription will bring about any noticeable improvement in your magazine.

—Ed.



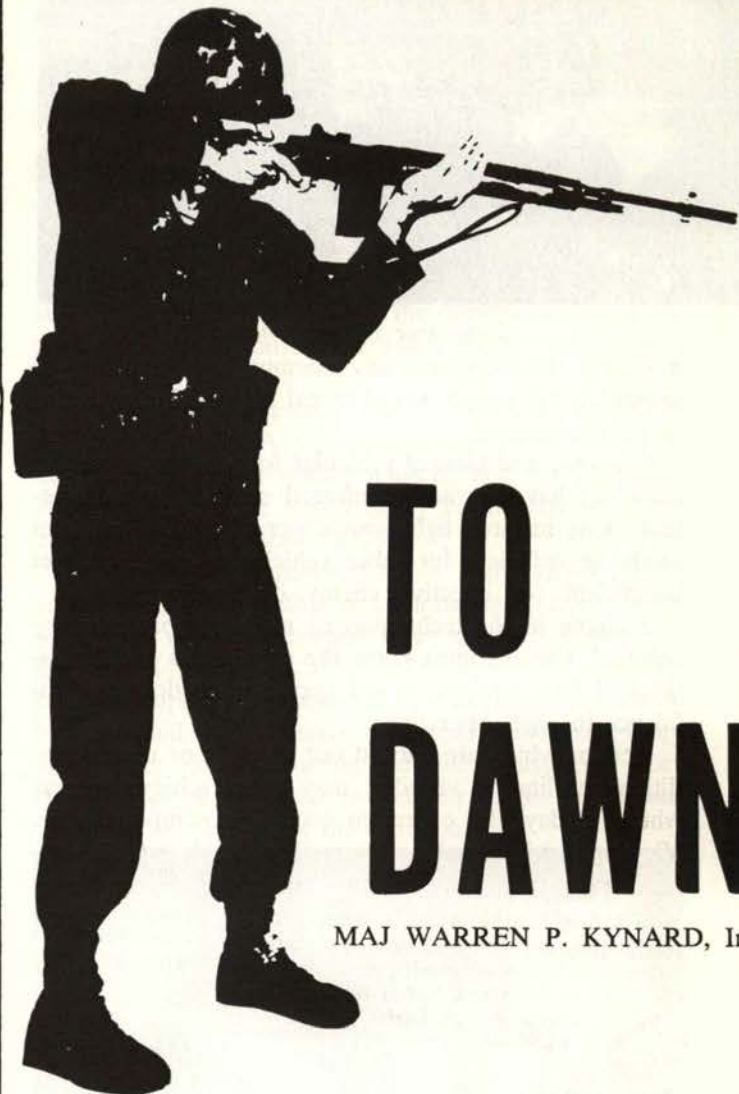
Recent advances in night viewing devices compel changes in our approach to night combat.

FROM DUSK

JOSHUA's legendary solution to the problem of night operations was to avoid night combat altogether. "Then spoke Joshua to the Lord in the day when the Lord delivered up the Amorites before the children of Israel. . . . Sun, stand thou still upon Gibeon; and thou, Moon, in the valley. . . . And the sun stood still, and the moon stayed, until the people had avenged themselves upon their enemies. . . . So the sun stood still in the midst of heaven, and hasted not to go down about a whole day. And there was no day like that before it or after it, that the Lord hearkened unto the voice of a man. . . ." (Joshua 10:9-14)

That solution to darkness occurred over 3,600 years ago. Since such a solution is unlikely to recur, an accelerated research and development program was belatedly initiated in A.D. 1963 to develop materiel and doctrine for night operations.

The Soviet Union and its satellites appear to be far more cognizant of the importance of night operations than most modern armies. While several items of U.S. hardware are in the first and second generation of de-



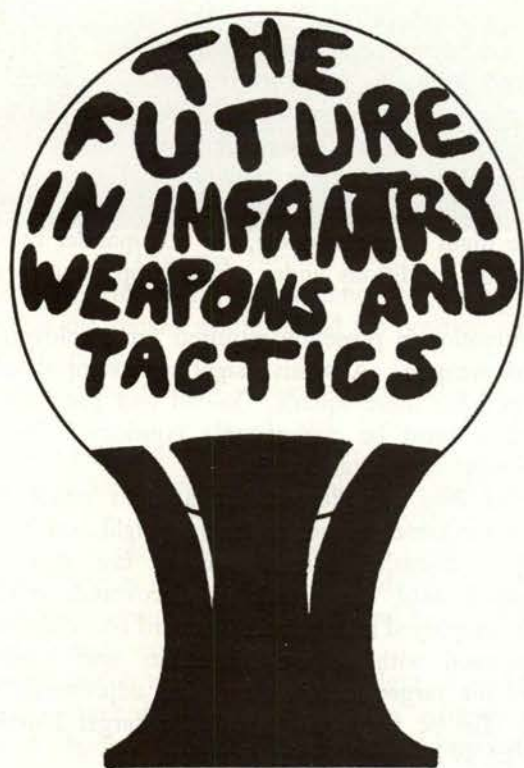
TO DAWN

MAJ WARREN P. KYNARD, Inf

velopment, they have a low priority in procurement and development.

The Combat Developments Command is currently developing the conceptual framework for employing these developmental items. This will be a major step in orienting the Army toward the vast potentialities of night vision devices.

Apprehension has been voiced over using infrared as a means of enhancing night movement and surveillance. Although it is true that infrared is easily detected, the increased mobility for vehicles and individuals will certainly make a target less vulnerable than if it were moving at blackout speeds. Furthermore, infrared is available and may be used until a truly passive night vision capability is developed. Infrared can be employed to reduce the vulnerability to countermeasures. There is no reason to view the target from the same position as the light source. Battery-powered infrared floodlights can be set up to cover likely avenues of approach or at critical water crossings and at bridge sites. The viewer (metascope) can be placed far enough away from the light source to avoid effective counter-



THE FUTURE IN INFANTRY WEAPONS AND TACTICS

JAC WELLER

This article is an adaptation with some updating of the last chapter of a book by this author, *Weapons and Tactics, Hastings to Berlin*, which is currently being published in both New York and London. (See book review, page 68.)

SOLDIERS are well-versed in their own weapons and tactics and know a lot about those of possible enemies. But what about the future in those two closely related fields? Never in the history of war has this question been so hard to answer. The major problem is, of course, nuclear weapons. These are not presently likely to be used, if used at all, at battalion level, but their employment anywhere will surely change war. Missile-delivered nuclear warheads of the largest sizes could so devastate the cities and towns of major belligerents that logistic support for field armies as it has existed in the Twentieth Century would be impossible. The armies themselves might sustain so many casualties that they could operate only in relatively small units. Complicated weapons requiring special fuel, a lot of ammo, and maintenance may disappear at all levels.

On the other hand, complete destruction of one or both sides appears unlikely now or for several years to come. Even total use of these new weapons probably won't lead to an immediate decision. Both sides would undoubtedly suffer terribly, but neither might be able to wage a high-level type of war appreciably better than the other. Even after hydrogen bombs, however, small-scale Infantry fighting over wide areas could occur, perhaps waged with savage intensity.

Another possibility is, of course, limited war in which homelands are not attacked with nuclear weapons. Smaller warheads might or might not be used tactically; the rest of the fighting might resemble World War II. Almost surely, however, the fighting forces engaged would be more spread out by the use of atomic weapons, or by threat of their use. Regiments, brigades, divisions, and larger units could cease to exist in their World War II concentrations. There could be more man-to-man fighting with battalions, companies, and platoons the only operational units. Quick concentration, speedy action, and almost immediate redeployment could be the aims of offensive commanders.

Best of all, nuclear war could be such a deterrent in itself that major nations may maintain the present precarious peace for years. But small wars waged in primitive nations appear to be inevitable. Even though one or both fighting forces may receive logistical support from nations with sophisticated weapons capability, arms used may be comparatively simple. Combat in Vietnam before March 1965 could be typical; the allies of the U.S. were receiving American logistical support, being transported in American helicopters, and getting some tactical support fire from U.S. aircraft and naval units. But the actual fighting bore some resemblance to USMC wars fought earlier in the century in the banana republics. Even the 1966 fighting in Vietnam is not modern in regard to arms and the way they are used.

Major total war, major limited war, and most backward country armed conflicts will probably place a premium on Infantry-type units. In the immediate future, weapons and tactics at battalion level and below will surely continue to be important. But there will be changes in these, perhaps of unprecedented magnitude. War in the year 2000 is in the province of forecasters using crystal balls, but we can make predictions about 1970-1975 with some accuracy. At battalion level, it will undoubtedly be influenced by projects and developments presently in various stages of maturity. We can evaluate these in some detail.

The problem of how best to protect Infantry against nuclear casualties is being studied intensively. Major armies will have a fair ability to defend themselves against radioactive fallout and some other harmful features of these weapons. Most of this is classified and extremely tentative, but the officers responsible believe that they are making progress. Protective clothing, dispersion, bunkers, and air-conditioned vehicles all have good potentialities.

Strategic and tactical transportation will undoubtedly change even for the Infantry in the immediate future. British and U.S. bases throughout the world will probably continue to shrink. British combined forces with carrier-based Royal Marine Commandos capable of going into action anywhere on short notice have decreased the need for local garrisons. U.S. Marine battalion landing teams which are in part air-transportable

can accomplish similar tasks. The 1958 USMC descent on Lebanon was accomplished in part with Marines from thousands of miles away. The 1961 British landing at Kuwait started with 600 Royal Marine Commandos being flown ashore from H.M.S. Bulwark and backed up by other air- and sea-transported units from as far away as the United Kingdom. Within a week, 7,000 men arrived and prevented serious trouble. British action in Borneo began in December 1962 with a similar concentration from distant bases. Early shows of force such as these have prevented the beginning of fighting which might later have developed into real war.

The U.S. Army also has similar capabilities. The 1st Cavalry Division (Airmobile) has astonishing potentialities. The concept of placing and maintaining heavy equipment, for instance in Thailand, so only personnel need be flown in if an emergency should occur, has obvious advantages. Under ideal circumstances, a full Infantry division could be operational from thousands of miles away in about 100 hours.

This and other needs for sudden redeployment have led to an accelerated development of massive air transport. The U.S. has on order transport aircraft capable of handling 500 to 700 battle-equipped soldiers. These planes are not complicated save for their size, and won't need enormous runways. They will be able to carry divisions anywhere on short notice, but not heavy weapons and support inventories found above battalion level. Indefinite logistical support entirely by air for large forces, however, is still in the fairly distant future. A modern division in combat requires hundreds of tons of supplies each day.

New small aircraft are appearing throughout the world with astonishing rapidity. Helicopters will undoubtedly improve in speed and load capacity; but in the immediate future, they cannot rival fixed-wing, level-flight planes in ruggedness and efficiency. Compromise designs already show promise for troop transport and combat. One-man flying machines are in operation. Tactical air support is of extreme future importance especially in anti-guerrilla wars, but high-speed jet aircraft have several disadvantages in this connection. We have seen a partial return to propeller-driven planes operating at speeds common in World War II, but these have not proven as effective as some expected. They can bomb and strafe more precisely and remain in target areas for longer periods with the same amount of fuel but they are easier for the enemy to bring down.

Land transport for rifle squads is presently a reality; all modern armies have APCs available for at least part of their Infantry. However, there is presently an unsolved problem in relation to terrain and efficiency. Almost any type of terrain can be mastered by an appropriate vehicle, but no one has yet invented anything that is efficient for transport over all types of combat territory. Wheels, tracks, and even air cushions have

advantages and disadvantages. Wheeled vehicles are in general the most efficient, reliable, easily maintained, and fastest. Full tracks are best where roads are scarce, but have many disadvantages. Snow, swamp, and water require specialized capabilities not yet compatible with strength, low cost, and ruggedness.

A second problem in regard to tactical transport for Infantry is whether soldiers shall have full fighting capability while in their vehicle. The Germans presently desire this and have APCs in which the entire squad can fire from the vehicle even while moving. Only actual combat can prove whether Infantry fighting inside a "buttoned up" APC can be efficient. The odds appear to be against it; fire while in motion won't be accurate and visibility will be comparatively poor. But in nuclear war it may be necessary. APCs give their crews almost as much radiation protection as heavy tanks, so long as both are properly air conditioned.

The future of Armor (tanks, APCs, assault guns, and the like) does not vitally concern us, but the amount of Infantry-Armor cooperation does. The tank in some form appears to be necessary for proper support of some Infantry operations, but the increasing power of antitank weapons of types not readily spotted and destroyed by the tanks themselves means that tanks must be protected by Infantry. APC-mounted riflemen probably cannot give this protection, but they can as soon as they get out of their vehicles and accompany the tanks. Sharp and unimpeded vision is vital in spotting and destroying hostile antitank weapons.

The trend towards heavier organic Infantry support weapons at low level may continue. Recoilless rifles and similar devices may be added to rifle squads. More effective and lighter mortars will undoubtedly be evolved and placed as far down as rifle companies. Infantrymen will have a greater missile capacity than ever before. The new U.S. heat-seeking anti-aircraft rocket, the Redeye, can be launched by a single Infantryman and knock out any low-flying enemy aircraft in the immediate vicinity. Various wire-directed antitank missiles, such as the British Vigilant, SS-10, and SS-11, are common at battalion level; they will undoubtedly improve. At present, their greatest handicaps are that they normally have a minimum range of about 350 meters and are limited in regard to maximum range by both visibility and wire-carrying capacity. A similar U.S. device known as the Shillelagh can launch a beam-guided missile from a large-bore light howitzer mounted usually in a Sheridan tank so that it has no minimum range. It may be directed by an observer in a helicopter so as to achieve an astonishing maximum range in theory at least.

If Infantry is able to fight efficiently from vehicles, weapons weight ceases to be so important. Fifty-caliber, 20mm, and even larger heavy machine guns may become common. This would accelerate the decline of the



NIGHT FIGHTING IN THE FUTURE WILL PROBABLY BE AT LEAST AS IMPORTANT AS THAT IN DAYLIGHT.

old medium machine gun (too heavy in weight for man-portability, but of rifle caliber). Mechanical improvements have increased the efficiency of light machine guns and automatic rifles; the need for long-range and indirect fire from medium machine guns seems to have disappeared. Mortars and rockets can do these jobs better because they are more powerful and require less training to be used efficiently and safely over friendly troops.

New heavy Infantry support weapons could be of extreme value if major armies fight each other in normal terrain. If other factors are equal, the units with the greatest direct firepower and the greatest high explosive capability will win. If dispersion is required—and it surely will be—maximum firepower and high explosive capability must be well distributed in lower-level Infantry organizations to be available when needed. Infantry support weapons of even more power and complexity seem to be indicated, but those which reduce mobility will not be helpful in poor terrain and in many backward countries.

Guerrilla fighting which will undoubtedly continue in the years ahead may tend to simplify organic arms at battalion level and below. Antitank missiles with a range of thousands of yards are obviously useless where the enemy has no tanks and combat conditions are usually such that even if he had them, they couldn't be seen at a range beyond that of the usual man-portable rocket launcher. For guerrilla conflict at least, even government Infantry units must remain light. The M113 APCs have been used in Vietnam operations but have not always been successful. Tanks have been a handicap, save in special situations, such as USMC operations in and close to their enclaves in the I Corps area. Light mortars and machine guns have been more useful than recoilless rifles.

Night fighting in the future will probably be at least as important as that in daylight. The Dutch have evolved a light infra-red system for a rifle-equipped Infantryman so he can hit an enemy at 150 yards in total darkness. The West Germans and others have tank-mounted white and infra-red searchlights of great power and penetration. U.S. Special Forces do about 50 percent of their training maneuvers in darkness. The U.S. Army and Marine Corps are trying to develop confidence and efficiency in night operation, but have not always been successful. In plain language, the West, and particularly the U.S., is handicapped by too much civilization; only a very few of our weapons work well at night. Artificial lighting appears not to be a complete answer.

The personal arms of the individual Infantryman of



THE U. S. DISCONTINUED PRODUCTION OF M14 RIFLES AND AUTOMATIC RIFLES PRESUMABLY BECAUSE OF THE SPIW.

the future are probably going to be changed radically. A new U.S. weapon known as the SPIW (Special Purpose Infantry Weapon), which has the capabilities of a rifle, a controlled-pattern shotgun, and a light mortar, has been under development for some time. It is said to resemble an over-and-under shotgun and fires a single medium-sized dart, a cluster of small ones, or a high explosive bomb. There have been delays in this development and no combat issue through March 1966. The U.S. discontinued production of M14 rifles and automatic rifles presumably because of the SPIW, but now may adopt something else for the time being at least. Those who defend this condition—the wealthiest nation the world has ever known having a bare minimum of even obsolescent rifles with which to defend itself—imply that the SPIW is close to perfection. Others say it is still years away.

The Army and Air Force have bought more than 100,000 AR15s, now known as M16s. This is a light, burst-firing assault rifle chambered for the 5.56mm cartridge. This weapon has some advantages over all military shoulder arms presently issued, particularly in regard to weight and lethal wounds under some conditions. Its principal disadvantages are its power, its length—it cannot be folded—and its lack of tactical automatic-rifle or light-machine-gun capability. But the M16 has proved itself in Vietnam. General Westmoreland wanted more of them early in 1966 so an additional order for 100,000 was placed with Colt. This means over 200,000 in the hands of troops in 1966, an enormous head start.

Because of the delay in adopting something radically new, the USMC conducted a long series of tests to evaluate an entire system of small arms built around the 5.56mm cartridge evolved in 1963 by the brilliant Gene Stoner. His system includes a carbine or SMG, a standard rifle, an automatic rifle, a light machine gun, and a medium machine gun. All are essentially the same; any weapon can be changed into any other by substituting components. This arrangement has great advantages in manufacture, training, and supply of spare parts.

The USMC tests which were competitive in each class indicate that the Stoner rifle can be fired more accurately with less training than the M14 or M1 on known distance ranges and much more effectively than either on combat-type pop-up targets. The Stoner automatic rifle (BREN magazine configuration) and light machine gun (belt-fed) outshot the M14 Modified by a wide margin and were substantially ahead of the BAR and the M60 with bipod only. These new weapons were



... DIRECT-FIRE FIGHTING BY INFANTRY WILL EXTEND NO FURTHER THAN A BELT ABOUT 500 YARDS WIDE IN FRONT OF THE APPROXIMATE FIRING LINE.

not only better in all tests, but are approximately 50 percent lighter.

The big question in the minds of Marine experts is the future of the Stoner tripod-mounted medium machine gun which fires, of course, the same 5.56mm ammo. This cartridge has about the power of the new Russian intermediate round, but the Russians found they still needed a full rifle-power medium machine gun. Some USMC thinking, only partially confirmed at present by actual field tests, indicates that direct-fire fighting by Infantry will extend no further than a belt about 500 yards wide in front of the approximate firing line. Diagonal fire from medium machine guns would need, however, to reach effectively the back of this area at normal enfilade angles, say a maximum range of 1,100 meters. The 5.56mm bullets will not penetrate a steel helmet at this range, but will go through any modern body armor. NATO round bullets from M60s won't penetrate the helmet either, but they do have more energy remaining.

Grazing fire from Stoner medium machine guns will certainly be efficient for most requirements out to 800 yards and perhaps beyond. These weapons are more accurate and stable, and have the priceless advantage that there are two rounds rather than one for the same weight. At greater ranges, medium machine guns of any type are probably less effective than mortars and other support weapons organic to USMC rifle battalions. But we should not ignore the Russian experience; an efficient heavy .30-cal. medium machine gun may still be needed.

The Marine Corps and the Army did not see eye-to-eye in connection with the Stoner and the 5.56mm ammo. A SAWS (Small Arms Weapons Systems) evaluation project has been set up at Fort Ord in California to test everything available including present issue weapons, the AR15 with some variations, the Stoner 63, and the arms of both China and Russia. Final results are not due until June 1966, but a preliminary report is said to be embarrassing. The arms of our enemies, even some of those of the Viet Cong, have scored well in carefully controlled tests.

Another small arms development already well started is in connection with close-range multiple-projectile discharges. This is of particular importance to armies operating against guerrillas. A maximum of close-in firepower is sometimes required quickly. Two bullets from each rifle cartridge are already being provided for special use, but each has only about half the power of a normal bullet.

We of the Free World should not be led to believe



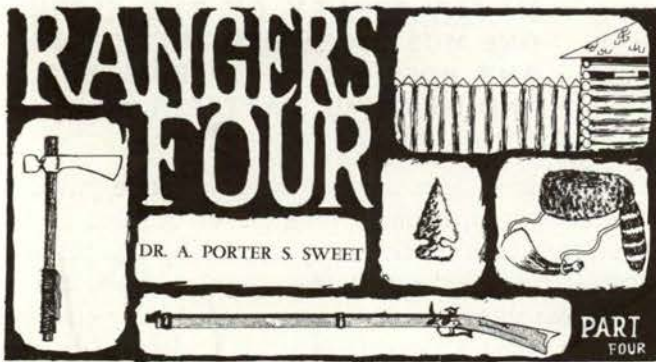
IN ANY SURVEY OF THE FUTURE ONE MUST CONSIDER THE UNPLEASANT POSSIBILITY OF POISON GAS AND HARMFUL BACTERIA.

that new small arms are our exclusive future privilege. The shotgun-type ammo principle to be used in the SPIW has been developed by us and by our potential enemies for other arms. Little groups of arrows can be fired from shotguns and from the main battery of tanks. Similar ammo for recoilless rifles is close to combat issue. Little clusters of arrows traveling at high speed may be used in the near future in anything from the U.S. M79 grenade launcher up.

Our potential enemies may also have .22-cal. arms. They are known to have rebarreled some of their new intermediate power family of small arms to take the same cartridge necked down for 5.56mm bullets. These weapons may not yet be standard issue, but have appeared on the black market in West Berlin.

In any survey of the future, one must consider the unpleasant possibility of poison gas and harmful bacteria. The gasses of World War I were uncertain and often did damage to those who set them free. Improvements have undoubtedly been made and new substances added. There is supposed to be a volatile liquid which will temporarily reduce a strong man to a gibbering idiot, and a nerve gas which induces paralysis. Germs are even worse. There is no way to guard against all these at the same time and fight too. Modern armies have gas masks, but keep them mostly in storage. The effective types do not last long after issue. Some training is given in gas and germ defense in connection with radiation training, but total protection even from the presently known chemical agents is not possible. Protective clothing and other equipment necessary to defend individuals against them, even if available, would greatly reduce combat efficiency and morale. The future here is confused; perhaps if the world must fight at all, public opinion and fear of retaliation will prevent the introduction of these weapons into war at all levels.

What will happen to the Infantry soldier and small rifle units because of all these changes? Can equipment and materiel replace men? For thousands of years, men have dominated war. Wars have always been won by men with weapons in their hands. The nations which have survived in the past have done so because of the courage, skill, and weapons efficiency of their fighting men. If modern science is unleashed in all its frightfulness in a future war, the odds still seem to favor the nations which have better fighters individually and in small units. Weapons have changed over the centuries, but the basic principles of firepower and shock have not. Leadership, organization, discipline, and the ability to fight, move, and communicate will remain paramount. ■



THIS IS THE CONCLUSION of the four-part series on the Colonial Rifle Rangers: Dr. Knight, Timothy Murphy, Horatio Jones, and now Moses Van Campen.

Van Campen's story is that of a man who fought like an Indian, thought like a patriot, and typified the courage, brutality, and determination associated with the Colonial combatants.

MOSES VAN CAMPEN

Moses Van Campen's first military duty was in Dr. William Plunket's Pennamite Army that marched against the Connecticut Yankees at Wyoming Valley. When they met the intrenched Yankees, they turned around and marched right home again. As soon as news of Lexington and Concord reached Fishing Creek, Pennsylvania, the local lads formed a military company. Since Moses was the only one with any military experience, he was elected captain. Moses had learned much about Indian warfare by hearsay during hunting trips with his friend Tom Shenap. Tom was the local Iroquois chief. Moses therefore drilled his company in both Indian and European types of warfare.

When his company was not called to duty as soon as he had hoped, Moses enlisted and served as sergeant on an uneventful tour of duty at Fort Reed. He was next commissioned an ensign in the ranging company of Captain Thomas Gaskins. After that he was an ensign, later lieutenant, in Captain Thomas Robinson's Rifle Rangers. He fought with them until the end of the war.

The young lieutenant at all times showed a steadfastness much appreciated by his superiors. Yet, at times, he displayed a foolhardy bravery that would have made them wince had they been there. His first independent duty was to take a squad and arrest three Tories hiding in a log cabin. As soon as his men had battered down the door, he dashed straight into the muzzle of a musket. It discharged as he brushed it aside, tattooing his temple with powder marks he wore to his grave. Again, during his second period of captivity, he knocked down an Indian about to tomahawk one of his wounded men who could not keep up. He expected death, but the Indians so admired his bravery they let both men live.

Early in his service he was sent home to Fishing

Creek with 20 men to build stockaded forts for the protection of his neighbors. These forts were carefully built and withstood all enemy attacks. He and his men successfully defended one fort before it was completed.

Moses served on the Sullivan Expedition in a dual capacity. He had charge of the boats and boatmen until they were unloaded at Tioga Point. Then he became a scout and served General Sullivan well. When Sullivan wished to know the size of the Indian army at Chemung, Moses painted and dressed himself like an Indian and crawled at night into the enemy's camp. Creeping among the sleeping Indians until he had counted all their campfires, he averaged the number of Indians around the fires, multiplied the result by the number of fires and reported there were 700 Indians.

At Newtown he was in the advance party of riflemen who discovered the ambush the Indians had prepared. The keen eyes of the woodsmen spotted the dying leaves in the camouflage that masked their earthworks. Regular troops might well have walked into the trap.

Sick with camp fever, Moses spent the winter at Fishing Creek convalescing. In the spring, he and a young cousin, together with Peter Pence, Abram Pike, and a boy named Jonah Rogers were captured by Indians. As they were marched northward toward the Indian villages, Moses tried to get the two men to join in an escape attempt. They refused at first fearing that three men could not possibly overcome ten Indians. He changed their minds by reminding them they were sure to be the first prisoners brought in since Sullivan had ravished the Iroquois' country. As such, the boys might be adopted, but the men were sure to be tortured in revenge.

Moses' plan was to tomahawk all ten Indians as they slept. The others wanted to use the guns, which were always stacked together. Since they were all civilians at the time, Moses was outvoted and had to modify his plans. Pike was to tomahawk two Indians; Van Campen, three; and Pence, a rifleman, was to use the guns.

During the day Moses managed to secure a knife and at midnight cut them all loose. The two boys crept into the forest to be out of the way. Pence went quietly to the guns and Van Campen and Pike secured tomahawks. One of Pike's intended victims began to awaken and the frightened white man lay down again. Moses quickly killed Pike's two Indians and tomahawked his own three, as Pence began shooting. They killed four more. John Mohawk, the remaining Indian, charged Pence. Moses grappled with and wounded him, the blood from Mohawk's neck wound blinding Moses as they wrestled. Pulling his feet up between them, the white man kicked violently, tearing them apart. Before he could find his tomahawk, the Indian ran into the forest. The victors gathered guns and blankets, built a raft and reached Wyoming (Pa.). They had been given up as lost.

Moses often assumed Indian paint and dress to spy on the enemy. Many Americans believed the inhabitants

of Catawissa were in league with the British, but proof was lacking. Captain Robinson was sent with his company to investigate. Being fair-minded, he had no desire to arrest the villagers on suspicion. Van Campen and Joseph Salmon, a close friend, dressed like Indians and, while the company waited, walked to a cabin at the outskirts of the settlement.

They burst in upon the occupant, threatening to tomahawk him. By fast talking he convinced the make-believe Indians he was their friend and loyal to the kind. In broken English they told him they were from a large war party nearby and asked him to take them to the village to get food and ammunition. He readily agreed. This placed them in double jeopardy. If the villagers were loyal Americans, they would be considered hostile Indians and killed. If the villagers were loyal to the king and discovered they were white men, they would be killed.

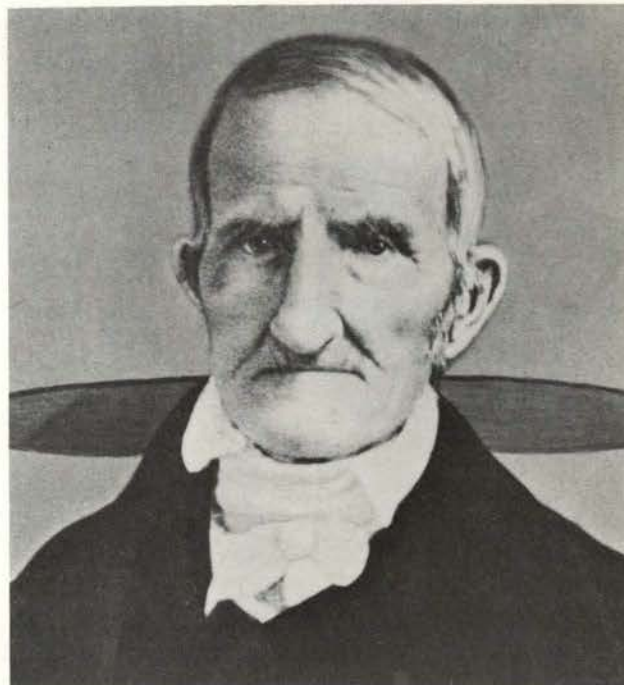
Their companion took them from house to house. At every stop they were welcomed and given food and ammunition, until the three could carry no more. Then they left the village and walked into the arms of the waiting rangers. The villagers were arrested and marched off to jail at Northumberland.

In 1781, Moses and four other men were sent to investigate rumors that a large body of Indians was gathering on the Sinnemahoning. They intended to split into small war parties and attack the settlements. Dressed as Indians, Moses' party scouted the area and found no signs until they started home. Seeing smoke, they discovered a war party. After the Indians were all asleep, they crept into their camp and, on signal, went to work with their tomahawks. Suddenly, Indians rose like clouds around them showing they were outnumbered at least five for one. Firing their rifles, they war-whooped for all they were worth. The element of surprise was so great the Indians scattered into the woods. After gathering the guns and scalping the dead, they returned to Northumberland.

Outside of town they hid in the bushes and "captured" the first citizen to appear. They revealed their identity to him so he could precede them into the village. Then, with the scalps on a pole Indian-fashion, they entered town to the applause of the townsfolk.

In 1782, Moses and half a ranger company were sent to guard a small party going to Bald Eagle Creek. There they were ambushed. Many of the company were killed, a few escaped; Moses and the rest were captured. The prisoners were conducted up Pine Creek to its headwaters, then over the mountains to the Genesee River. When they reached Caneadea, Moses was saved from discovery by Horatio Jones as related in Part III of this series.

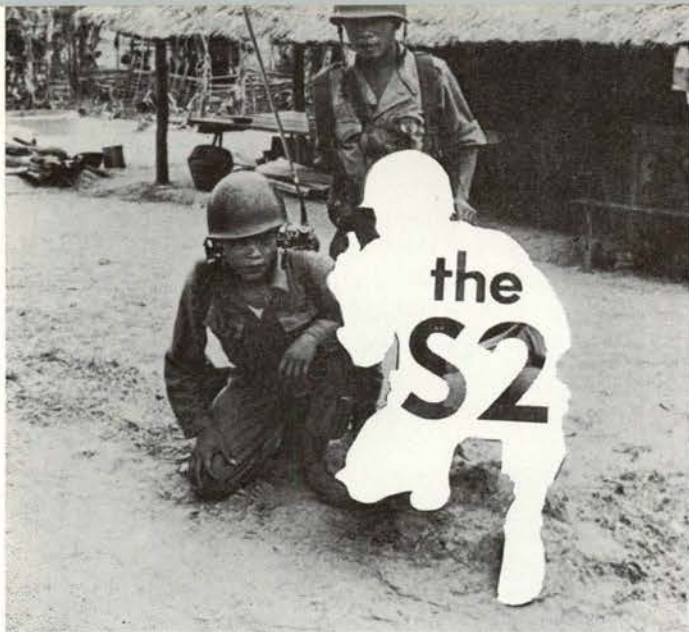
All the prisoners had to run the gauntlet. Moses, as their commanding officer, led them. As he neared the council-house, two Indian maidens armed with sticks,



planted themselves before the door, obviously to prevent him from reaching sanctuary. Just before he got to them, he leaped into the air and kicked both in the chest. Down they went in a tangle of arms and legs, the yellow underskirts of the girls making quite a display. The spectacle so amused the Indians, they roared with laughter, forgetting the other runners, who arrived at the council-house home free.

The day after Moses reached Fort Niagara, John Mohawk arrived. The Senecas immediately clamored to have their hated enemy delivered to them, offering 14 prisoners in exchange. Colonel Butler refused, but first tried to proselyte by telling Moses the only way he could save himself from torture was to accept a commission in the British army. Moses' reply was as brave and sincere as Nathan Hale's, "No! Sir, No! Give me the stake, the tomahawk, or the scalping knife, sooner than a British commission." In order to ensure Van Campen's safety, the colonel sent him to Montreal. After some months in prison, he was paroled, then exchanged, and rejoined his company. Robinson's Rangers were garrisoning a fort at Wilkes-Barre when the war ended.

After the war Moses moved to Allegany County, New York, where he surveyed Philip Church's 100,000 acres and many of the important roads of the county. He bought a farm on the outskirts of Angelica, the shire town, and did much to help develop the county. For many years he served as Judge and County Treasurer. He and his old enemy, John Mohawk, became friends and he and other Indians often came to Moses for help and advice, which they always received. The old ranger lived to be past 90 and died, revered, honored, and loved by the inhabitants of southwestern New York State. ■



IN COUNTER GUERRILLA OPERATIONS



MAJ BILL BRICKER, Inf

ANY CAMPAIGN against guerrilla forces must take into consideration the entire operational environment; specifically, it must consider the cause for which the guerrillas claim to be fighting, the reasons why they are receiving support, and the basic conditions which justify or seem to justify the rebellion. These considerations often outweigh the classical considerations of weather, terrain, and enemy capabilities, for they determine the real capabilities of the enemy.

By now you have either agreed or disagreed with this thesis and most probably have made a mental estimate that this is nothing new, so why take the time to go any farther. If you agree, we have little more to offer than the value of review; however, if you disagree, ask yourself the following questions. Your honest answers will surely make it worth your time to finish the article.

- How do intelligence requirements in counter-guerrilla operations differ from those in conventional operations?
- What are the differences between the considerations involved in analysis of the area of operation in counter-guerrilla operations and conventional operations?
- How do the considerations on which the determination of enemy disposition, computation of strength, and capabilities of the enemy are predicted differ from those of conventional operations?
- What different sources of information and agencies will be available to the brigade and/or battalion intelligence officer(s) during the planning and conduct of counter-guerrilla operations?

INTELLIGENCE REQUIREMENTS

In conventional operations the commander's essential elements of information (EEI) frequently may deal with broad enemy capabilities and general enemy courses of action, or with the overall effects of the

weather and terrain on both friendly and enemy capabilities. In counter-guerrilla operations, on the other hand, EEI will often be more numerous, individually more restrictive in scope, and concern specific details of the area of operations or of the enemy. Commanders will require weather and terrain intelligence of larger areas than the usual brigade or battalion area of interest but in detail comparable to that normally required by small-unit commanders in conventional operations. This places a much greater requirement upon the S2 for the production of weather and terrain intelligence than is normally required at this level. Because counter-guerrilla warfare is frequently conducted in relatively underdeveloped areas of the world, source information of the weather and terrain may initially be either limited or difficult to acquire. The importance placed on the political, economic, sociological and psychological considerations (seldom encountered at this level in conventional operations) vastly increases the need for "other" information of the area of interest. Any of the considerations used effectively will require volumes of information not normally associated with this level of command. Requirements for intelligence of the enemy include those normally required in conventional operations; however, the time validity is shorter than normal. It is therefore imperative that, when establishing intelligence requirements, a priority and specified time be announced. A common characteristic of the collection efforts employed during the campaigns against the Huk guerrillas, the terrorists in Malaya, and the communist Viet Cong in Vietnam was, and is, the tremendous emphasis placed upon obtaining information of the identity and location of the guerrilla leaders.

AREA OF OPERATION

As mentioned previously, the requirement for "other" information of the area of operation will be quite large when compared with the needs in conventional opera-

tions. These requirements will normally include detailed intelligence of the nature of the civilian populace and of the natural, agricultural, and industrial resources available within this area.

The area in which the unit may be required to operate will vary from the extremes of congested villages of North Africa to the mountains and delta in Vietnam and to the rice paddies and rubber plantations of the Malay Peninsula. It is a serious mistake and one often made by the inexperienced to consider the area of operation as being a vast jungle.

Mobility is essential to the offensive operations of both guerrilla and counter guerrilla forces. Therefore, knowledge of the effects of the weather on trafficability will have great bearing on the timing and nature of operations. Normally, guerrillas will rely primarily on foot movement and animal transport; therefore, the effects of the weather on wheel, track, aerial, and amphibious mobility are usually of more significance to the counter guerrilla force. Although the weather may seriously restrict the counter guerrilla force, it may also restrict foot movement of the guerrillas and be very helpful in fixing them in a position where a superior air mobility or amphibious mobility of the counter guerrilla force may be employed. The following is an example of how the weather's adverse effect on trafficability was capitalized on by the counter guerrilla force:

During early 1962 the Vietnamese Army, utilizing U.S. M113 APCs, attacked guerrilla bases in the vicinity of Cambodia's border during heavy seasonal rains which had caused the Mekong Delta River to rise far out of its banks. The carriers and troops were transported up the river in LSUs and brought ashore in a location which allowed the mechanized force to be employed along the border, thus cutting the VC escape routes into Cambodia. The depth of the water (4 to 7 feet) made it impossible to move without the aid of the track or sampan. The VC unit was actually living in sampans within Vietnam and had carefully cut routes of withdrawal in the heavy foliage which was floating on top of the water. They had not anticipated an attack from the border direction and were, therefore, unable to move their large sampans through the dense floating vegetation; avenues of approach carefully selected to capitalize on the weather's adverse effects on the enemy's ability to withdraw were the deciding factors which contributed to the overall success of the operation.

In analyzing the area of operation in counter guerrilla operations, the time-tested military considerations of terrain are still the most logical method known in solving this problem. The primary difference is that the classic definition of "key terrain," "avenue of approach" take on new meaning and, therefore, should be explained. For example, if the guerrilla force is known to have a critical shortage of medical supplies (a normal

deficiency) and a civilian hospital is located within the area of responsibility of the brigade or battalion, the hospital may be "key terrain" to the command, because of the marked advantage its seizure and control would provide the guerrilla force. Another example, one so frequently found in Vietnam, is a town or village which has no tactical significance but has important psychological or political importance, as a provincial or district seat of government. Another example of key terrain which has little tactical significance but is extremely important in countries where grain is the primary staple food is the rice fields. These fields become key terrain primarily during the harvest season; however, without proper protection during the growing season the rice may never be reaped.

THE ENEMY

The guerrilla may not look like a soldier but he fights like one. The maxim: "Know your enemy like yourself" is applicable to counter guerrilla operations. This is very easy to say but extremely difficult to accomplish. Prior to entering the area of operations, the S2 must become thoroughly familiar with the concepts, tactics, and doctrine of the guerrilla. After obtaining knowledge of the enemy from source material he must continue to refine his study of the enemy by personal observation and experience. *Knowledge of the enemy obtained by personal experience is of the greatest use and significance only when it is based upon a solid understanding of the basic concepts and principles of guerrilla warfare.*

Because of the short time validity of information of the guerrilla's location and disposition, a current and detailed situation map is particularly important to the S2. Sighting and incidents are recorded on the situation map with unit symbols which may have to be improvised. As the situation is continued, overlays should be made from the situation map and retained for a period of time and then compared with each other to attempt to detect guerrilla patterns of movement.

Order of battle information will take on greater importance. The intelligence officer will find a real need to collect all available information concerning guerrilla leaders, civilian leaders, and other civilian agencies which normally would be investigated at division level.

The computation of guerrilla strength in terms of committed forces and reinforcements requires some departure from usual procedures. Probably the most efficient method is to account for their strength in total numbers since most persons will equate a guerrilla platoon to a U.S. TOE platoon of 40 men, which is far from the normal size of a guerrilla platoon. Care must be taken to prevent gross overestimates of enemy strength. A realistic computation must include time/distance calculation to insure that the whereabouts of one force is not confused with another and vice versa.

The S2's compilation of information of the enemy's

significant activities, peculiarities, and weaknesses is essentially the same as in conventional operations. A key factor in this determination is a thorough knowledge of the enemy's normal doctrine (should not be confused with conventional tactical doctrine).

In order to arrive at accurate conclusions as to the enemy's probable future actions, the S2 must develop his knowledge of *indications* applicable to the particular guerrilla enemy against which his brigade or battalion is engaged. In this light, the S2 must, to a greater degree than normal, rely upon his experience and that of adjacent intelligence officers, local police, host country paramilitary forces, and other civilian agencies which have had experience against the guerrilla force.

SOURCES OF INFORMATION

Most of the usual sources of information are available in counter guerrilla operations; however, in conventional operations the enemy is considered to be the most prolific source of information. Is this true in counter guerrilla warfare? No! The area of operations, to include the civilian populace, is considered to be the most prolific source. Effective exploitation of civilian sources requires more sophisticated procedures than normally used at brigade and battalion level. Seldom will the S2 in conventional operations have sufficient knowledge to determine the reliability of a source. Reliability of information is a "must" in counter guerrilla operations; therefore, a "source" information file must be established and maintained. Data cards in this file should include as a minimum:

- Name and physical description.
- Area in which the source is capable of obtaining information.
- Resume of factors contributing to source motivation to cooperate with friendly forces.
- Information collection capabilities of the source to include resume of anything received.
- Method or agency through which the source is contacted or exploited.
- Record of payment or other remuneration made.
- Record of productivity and reliability of the source.

When interrogating a civilian source, consideration must be given to the fact that a civilian's (1) attitude may be hostile, (2) knowledge of the area of operation and overall situation will normally be limited to his immediate environment, (3) ability as a military observer is inferior to that of an average soldier.

Keeping these factors in mind, a civilian might be able to provide:

- Terrain information and how the weather will affect it.
- Information of the ideological motivation and sympathies of local residents.
- Information of the logistical support available or potentially available to guerrillas operating in the resident area of the source.

- Potential guerrilla targets or objectives.
- Identification of covert or part-time members of the guerrilla force.
- Information of guerrilla sabotage, espionage, and terrorism techniques.
- Weaknesses and vulnerabilities of the guerrilla force.

The above list is pretty impressive and the potential is great, so how do we go about exploiting this important source?

A civilian can be exploited either overtly or covertly. In overt exploitation, a source is contacted openly by the intelligence officer or his agency and information is directly submitted. This method has the advantage of providing for immediate collection of information but frequently entails significant disadvantages. First, of course, it is rather apparent that any contact with such a source will make our intelligence requirements known to all as well as singling out the source to unknown enemies who, most likely, will take action against the source to insure he never talks again. Secondly, U.S. intelligence officers may not be the best qualified to directly exploit particular sources with the result that the information obtained may be incomplete or faulty. These disadvantages weigh heavily and, from a practical standpoint, justify the need for covert exploitation of sources. Here the source is contacted by an agency which is not recognizably associated with the friendly forces and may well be separated by one or more "cut outs." This technique allows information to be passed without the transmitting person or group even making physical contact with or learning the identity of the receiver. Of course the placing of additional agencies between the source and the intelligence officer will increase the probability of delay and misunderstanding in transmission of information. Very seldom will the S2 at this level be able to establish an original covert call or informant net, especially if the operation is a short-term one. Therefore, the S2 should support and utilize reliable informants or covert collection operations being conducted by other U.S. or friendly foreign agencies within the brigade or battalion area of interest.

There are many other sources available to the S2; but time and space limitations prevent a complete discussion of each. However, one source of information that is particularly important in this type operation must be mentioned here. The source is guerrilla communications. Communications provide the essential link between a guerrilla force and any outside regular force sponsoring or allied with it. Guerrilla units usually are so widely separated that control and coordination within the guerrilla command are dependent on communication. Guerrilla forces are particularly adept at the use of all types of communication, but radio is normally used to transmit timely intelligence and orders so necessary in the conduct of successful operations. Special consideration must be made of the probability

of using discovered stations for gathering information or for confusing the guerrilla rather than destroying the stations and jamming the channels. Resulting intelligence may be used by trained specialists to transmit messages to mislead the guerrilla force and contribute greatly to the overall destruction of the guerrilla effort.

AGENCIES

As with the sources of information, all types of military agencies normally available to the S2 will be utilized.

Patrols of all types are extensively employed in counter guerrilla operations. In addition to the short-range reconnaissance patrols, the brigade and battalion may conduct patrols of a special or police nature to insure that local residents comply with security regulations. Long-range reconnaissance patrols can be particularly useful in conventional operations. Every patrol dispatched from the brigade and battalion should have the capability, not only of collecting information by observation, but of interrogating local residents within the patrol area of operation; it therefore may be desirable to attach linguists and interrogators to selected patrols.

Interrogation teams normally will be attached to the brigade or battalion. These personnel, in order to produce intelligence of maximum value, must be qualified both linguistically and in interrogation techniques, but also must have an intimate knowledge of the area of operations. The use of qualified indigenous personnel or ex-guerrillas as interrogators or as an adjunct to U.S. personnel may assist in this respect. However, security restrictions may make it difficult to obtain the services of qualified personnel and sole reliance should not be placed upon the employment of indigenous interrogators.

Aerial surveillance, weather and terrain permitting, is normally used extensively in counter guerrilla operations. Aerial vehicles can penetrate deep into enemy territory and provide timely information of the enemy by visual reconnaissance. In Vietnam today and during the past years, the aerial vehicle has provided the transport for many commanders during the conduct of their search for suitable routes into a proposed objective area. A well-trained aerial observer can determine much about the soil trafficability, which is so vitally needed to conduct cross-country operations with track and wheel vehicles.

Cooperation with agencies other than those organic, attached, or in support of the brigade or battalion is required to a much greater extent than in conventional operations. The intelligence officer must maintain liaison and cooperate with the following agencies:

- Intelligence collection operation agencies and counterintelligence specialists.
- U.S. Civil Affairs teams and psychological operations units.

- Local police.
- Paramilitary units of the host country.
- Representative of non-military U.S. or allied agencies.
- Civilian agencies of the host country or allied countries.

SUMMARY

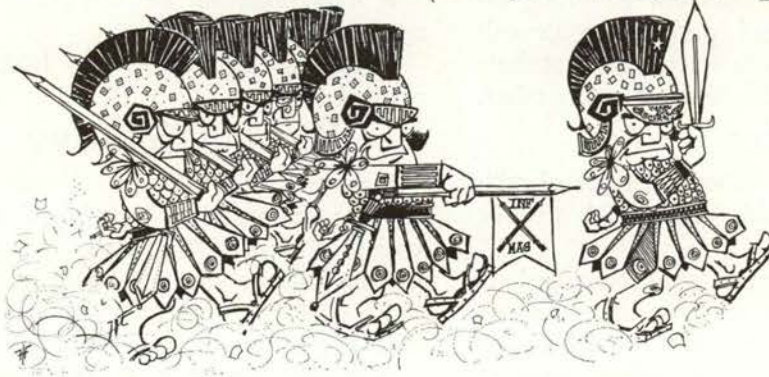
In order for the intelligence produced by the S2 to be of value, it must be disseminated rapidly to the very lowest echelon. All soldiers and civilians can be a valuable agency for the command provided they are aware of the intelligence requirements and understand their importance and the position they play in the overall collection effort. The S2 must evaluate both the reliability of his collection agencies and their sources. This can only be accomplished if accurate and complete records of past performance are maintained. In counter guerrilla operations the area of operations to include the populace is potentially the most prolific source of information. To properly exploit this valuable source, both overt and covert techniques must be applied. Care must be taken to protect the identity of the source.

Agencies employed in aerial surveillance vehicles have proven to be highly successful when employed to locate enemy forces and obtain information concerning the trafficability of the soil along likely routes of approach into the operational area. In addition to the current operational combat intelligence, each S2 must devote considerable attention to the post-operational analysis of intelligence produced during a particular operation. The produced intelligence, when compared to what is already known, must be widely disseminated not only in the brigade or battalion and to higher headquarters but to all other U.S. and allied elements engaged in the same counter guerrilla operation.

This expanded need for dissemination may require augmentation of the reproduction and radio communication facilities at the brigade and battalion. Finally, the counter guerrilla operation places a premium on security and the attainment of surprise; therefore, effective counterintelligence measures are critical to successful operations.

In combat the importance of the intelligence officer skyrockets; commanders who have given little attention to the training of their commands in intelligence and have given little supervision to the S2 find they are trying to accomplish in days what they have not been able to do in years. Additionally, the small-unit leader must understand and appreciate the need for accurate and timely reporting as well as the requirement for developing his own intelligence and reacting accordingly. The demand for trained intelligence officers and agencies such as the vital patrol exceeds our supply. More and more demand is being placed on the intelligence officer in Vietnam where intelligence is most vitally needed and difficult to obtain. ■

PASSING IN REVIEW



BY THE TIME this issue reaches you, I will be on my way to a new assignment with the Alaskan Command. I will be replaced by Lt Col Albert N. Garland who comes to INFANTRY from an assignment with I Corp (Group), Korea. Col Garland is a 1943 graduate of Louisiana State with a Master of Arts Degree from the same University. He is a former assistant editor of the *Military Review*, and is a long-time Infantryman. He brings to the job a wealth of knowledge of both publishing procedures and Infantry operations.

The past three years have been both interesting and pleasant. Fort Benning is always a good post, and the job as editor of INFANTRY offered an entirely new challenge with no dull moments. I have been aided by an outstanding staff and by the willing and complete cooperation of all the personnel of the Infantry School and the Infantry Center. Without their assistance this would be an impossible job.

The magazine is in good shape in that we have a good quantity of articles on hand. It has been gratifying to note that increasing numbers of Infantrymen are taking the time to sit down and write an article and so pass on their ideas to others. There is always a market for good, practical articles from the field and I hope that the flow of articles continues to grow. This is a healthy situation for a magazine.

Without the influx of articles from the field INFANTRY could not perform its complete function. Ideas need to be passed on to others if they are to be of value, and they need a sounding board if they are to be tested. Providing these services is one of the most important missions of the magazine. We have here at the School the fountainhead of doctrine and theory, but we need to be reminded occasionally that the proof of the theory is in its successful application. This sort of commentary can come only from the Infantryman in the field whether it be training or combat.

The financial condition of the magazine remains sound. We are not in business to make money, but being able to show a profit enables us to put more money into the makeup of the magazine and to pay our authors slightly higher rates. This latter point may have something to do with the increased number of articles coming in.



COL JOHNSON

Maintaining circulation is always a problem of major concern to the staff of INFANTRY. Because INFANTRY is a nonappropriated fund activity, it has no source of income other than subscription revenue. We must maintain a circulation of at least 10,000 in order to operate. Our level right now is slightly over that minimum so we are not in trouble, but we can always use more in order to continue to improve the product. We hesitate to initiate any sort of subscription drive because misunderstood or misplaced emphasis sometimes cause some resentment. We much prefer to have one satisfied subscriber who will renew than to have three required subscribers who conform but privately vow never to subscribe again. We prefer to let the magazine sell itself, but we need your help. Tell your friends about INFANTRY. Let them see your copy and determine just how much value the magazine can be to them. They don't even need a formal application to subscribe. Just have them drop us a card; we will do the rest.

The Leader's Handbook and the Field Expedient Handbook continue to be "best sellers." A second printing of the Leader's Handbook should be ready for sale soon.

Remember that INFANTRY is your professional journal. It will be as good as you make it. Let the staff hear from you and give them the benefit of your comments and criticism. No one knows better what you need and what you want than you.

Goodbye and thanks,

Lt Col R. L. Johnson



COMMANDANT'S NOTES



**General
York**

IN order for Infantry units to realize the full capabilities of mortar fires, a fire direction center to control these fires is essential. These "brains" of the indirect fire team can influence the outcome of the battle by massing mortar fires at a critical location, by furnishing prearranged fires during darkness or periods of reduced visibility, by shifting fires from one location to another, by lifting fires completely, and by furnishing fire support to any unit within range with the capability to communicate with the fire direction center. This fire direction center is certainly a must for the best in mortar fire; however, without it, our Infantry company mortars can still be effectively employed.

During World War II, mortars were employed using the direct lay method and the mortar-target line method. Each of these methods has a major disadvantage which limits their effectiveness and efficiency. The direct lay method requires that the mortar gunner see his target. This obviously means keeping the mortar crews well forward, exposing them to small arms fire and subjecting them to being overrun by hostile forces. The mortar-target line method requires that the forward observer know the location of the mortars at all times and that he remain relatively close to the mortar-target line. This method restricts the movement of the forward observer and requires frequent displacement of the mortars. Because of these disadvantages, the Army conducted intensive studies of World War II experiences searching for better methods. The studies resulted in the adoption of a method of fire control centered around the fire direction center, the present target grid method.

However, the direct lay and mortar-target line systems can still provide support when the more efficient FDC system is not feasible. These methods are presently being used in Vietnam where lack of front lines, problems in communications, security of gun crews, and a requirement to move significant distances on foot frequently preclude the employment of the company's mortars as a section. These less efficient systems still have certain advantages under special conditions, and units must be prepared to employ the system appropriate to the situation.

Here at the Infantry School under our present programs of instruction, we teach the employment of mortars with and without the use of a fire direction center. We have also prescribed that training in fire without a fire direction center be added to the Infantry Advanced Individual Training Program. Such training will give the recently commissioned officer and the recently inducted soldier the basic fundamentals of employing mortars using either method. Units receiving these individuals as replacements should insure that their own training programs encompass both methods, for only through proper and continuous training will mortar crews obtain and retain the required degree of proficiency. It is not practical to restrict training to one specific method of fire control. Our mortar crews must be proficient in all techniques so that when the situation dictates the use of one method over the other, they will be capable of response.

Even though we train our men to employ the mortar without the FDC, and even though we are at times employing our mortars in Vietnam using this method, we must not disregard the use of the fire direction center. The FDC should be established each time the situation permits so that the mortars can be employed to the fullest of their capabilities. It is better to have a trained FDC and get along without it than it is to need an FDC and not have the trained men capable of establishing one.

A handwritten signature in black ink that reads "Robert H. York". The signature is written in a cursive, flowing style.

ROBERT H. YORK
Major General, USA
Commandant

JAMAICA ANTENNA

MAJ R. E. CHAMBLER, Royal New Zealand Signal Corps

DURING THE ANTITERRORIST OPERATIONS in Malaya, I served with the Royal New Zealand Infantry Regiment as battalion signals officer. This tour of duty provided unlimited opportunities to experiment with antennae of various designs to try and provide reliable battalion communications to long-range patrols operating in deep jungle up to 80 miles from battalion headquarters.

Of necessity patrols can only be equipped with lightweight portable radio equipment with extremely low output power. Base station sets must also be limited to those types normally found within the equipment table of an Infantry battalion—again in the limited-power output range. Since there is little one can do to modify actual equipment, the last ounce of efficiency must be obtained by the use of the most efficient and suitable antenna system. The distances involved make it necessary for us to work within the HF range of the frequency spectrum and we must accept the fact that communications will be extremely difficult during the hours of darkness. Also there is little one can do to counteract the effect of tropical storms on propagation conditions in the Southeast Asian theater of operations.

The most critical factors were found to be individual operator skill and an efficient antenna. The purpose of this article is to bring to your attention a type of antenna which was found to be most effective over the two-year period of operations in Malaya. Known as the Jamaica Antenna, its details are offered to enable you to try for yourself its capabilities for use in a base station where communications are required over Southeast Asian jungle and mountains.

CHARACTERISTICS

- A high-angle skywave antenna for use over close country with a communications range up to 200 miles.
- Needs space and fairly level open ground to erect, and is therefore limited in use to static battalion headquarters posts, jungle forts, etc.
- Not suitable for frequently moving stations.
- Is within the capabilities of an Infantry battalion

to construct and erect, and no special parts need be obtained from technical sources.

- A low impedance input.

CONSTRUCTION

- Use normal copper antenna wire for the radiating elements and spaced feeder, and 73-ohm coaxial cable (or field cable if more accessible) for the twisted feeder.

- The Antenna consists of 2 full-wave dipoles erected $1\frac{1}{2}$ wave lengths apart. Fed by a spaced feeder to which the set is connected via a twisted feeder (for matching purposes).

- Height $\frac{1}{8}$ to $\frac{1}{4}$ wave length—similar to a normal dipole antenna.

- Use of the formula $\frac{468}{F(\text{mcs})}$ to obtain the wire length of each of the four radiating elements in feet (e.g., for 5 mcs the length of each element would be $\frac{468}{5}$, or

93.6 ft.) Use the formula $\frac{492}{F(\text{mcs})}$ to obtain the physical separation of the two sides of the antenna system in feet.

- Ensure that the two sides are fed in phase. (i.e. ensure that there is not a cross-connection in the spaced feeder made during construction).

RADIATION

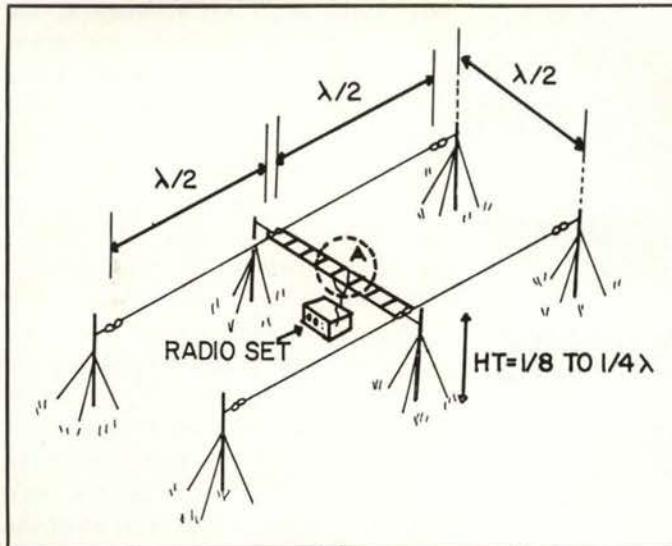
- Since the two dipoles are fed in phase there is cancellation of any horizontal radiation.

- All radiation is in a vertical direction.

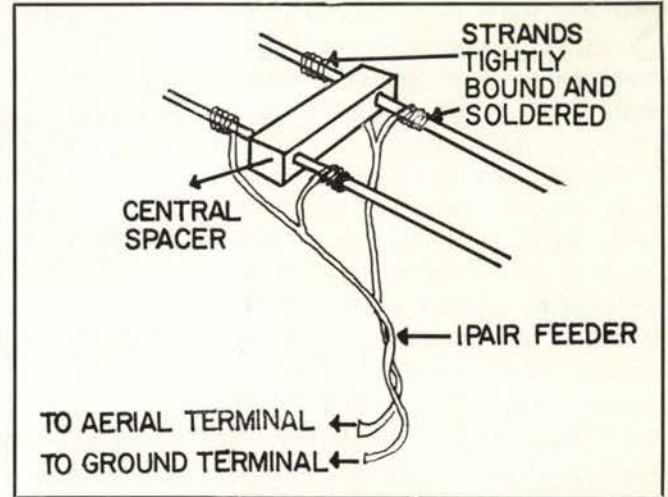
- Radiation is omnidirectional.

- Thus, this horizontally polarized signal is radiated at an extremely high angle to return to earth to provide a service area of good communications up to a radius of 200 miles from the site.

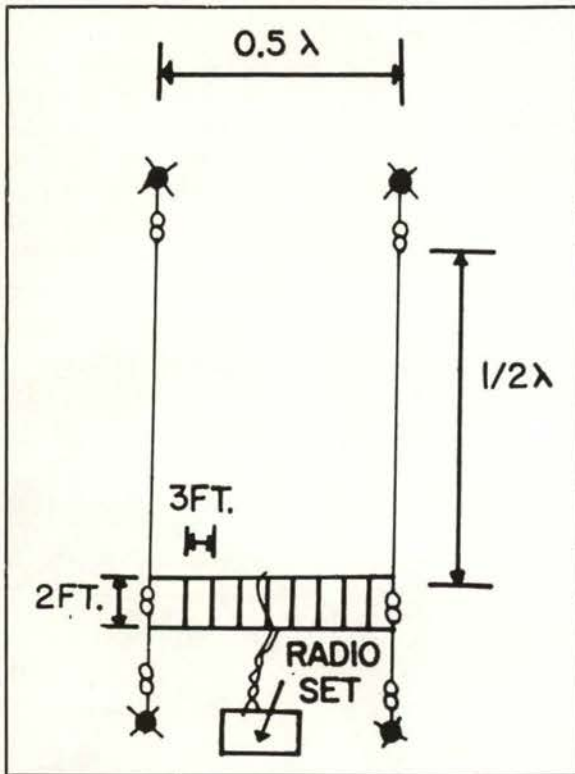
The first reaction is that the physical size of this antenna is an extremely limiting factor. My battalion had a permanent base in the small town of Taiping in the State of Perak, North Malaya and we were engaged in operations for a lengthy period on the Malaya-Thai



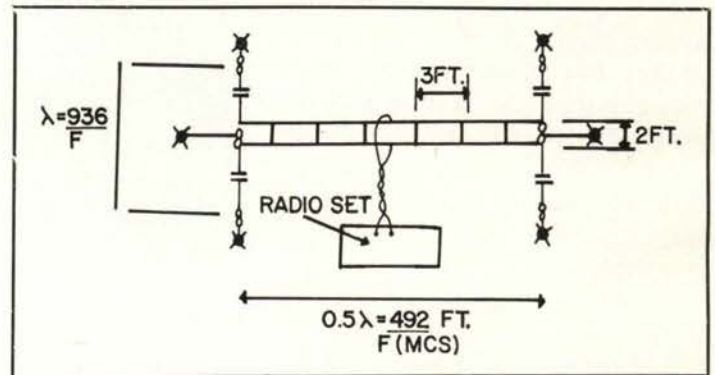
(a) General View



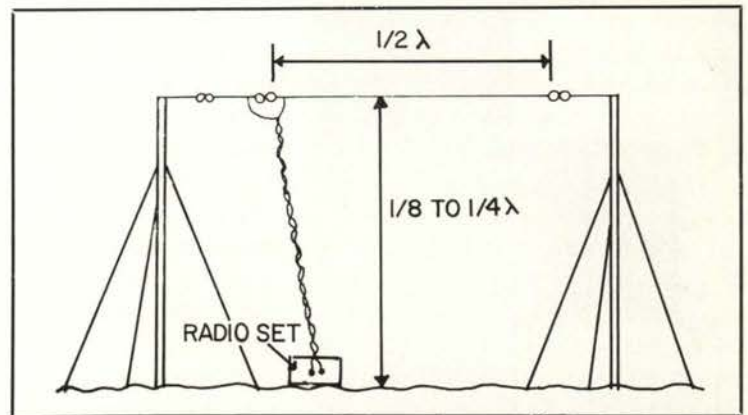
(c) Detail at "A"



(a) Plan



(b) Plan View



(b) Side View

Border. I first erected the Jamaica Antenna over the two or three tennis courts in the vicinity of the battalion operations center, much to the disgust of the battalion second in command—the 40-foot poles offended his soldierly sense of orderliness. Previous to this we had had a period of doubtful communications using dipole antennae and the efficiency of communications was so improved by the new Jamaica that it was soon accepted—poles and all—by even the most skeptical. Over the next two years, very few occasions arose when our patrols on deep penetration tasks could not pass their

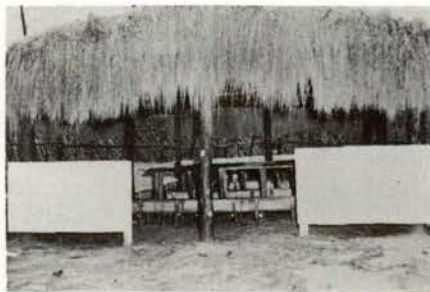
situation reports on time. On so many occasions, it was a case of communicating efficiently or suffering very grave consequences, including the risk of loss of personnel where the rigors of the jungle caused sickness and jungle accidents took their inevitable toll. On many occasions soldiers wounded or hurt at some distance away from a prepared helicopter pad were able to be medically treated by the patrol commander, assisted and advised by the battalion medical officer whose voice was transmitted over the battalion net by our efficient Jamaica Antenna. ■

SO YOU HAVE BEEN ASSIGNED the mission of constructing a typical Vietnamese village! The division intends to use it in their counterinsurgency training program.

The directive that you received from division states that minimum funds are available for the project. Actually, this is not an unusual assignment for a junior officer or NCO in one of our Infantry divisions or training centers today. It is an extremely reasonable assignment as the village can be used to demonstrate the techniques of the cordon and search operation and the difficulties of defending a village.

It is not necessary that the unit allocate thousands of dollars for this project. To construct a village with a tunnel system the cost is approximately 300 pounds of assorted nails and a detail to assist in the construction. The size of the detail should vary depending upon your assigned completion date.

If tunnel systems are to be a part of the village, then a careful selection of the village site must be made.



300 POUNDS OF NAILS

CAPT JOE L. ZIMMERS, Inf



In selecting a site the water table must be low enough to insure that the ground will sustain a tunnel system about six feet deep. A back hoe or a drag-line can be used to dig the tunnels and artillery ammunition crates can be used to reinforce the sides of the tunnels. Tear the crates apart and nail the boards to logs driven into the sides of the tunnels. There should be a solid log and board platform covered with earth. Logs used for the sides and top should not be less than six inches in diameter.

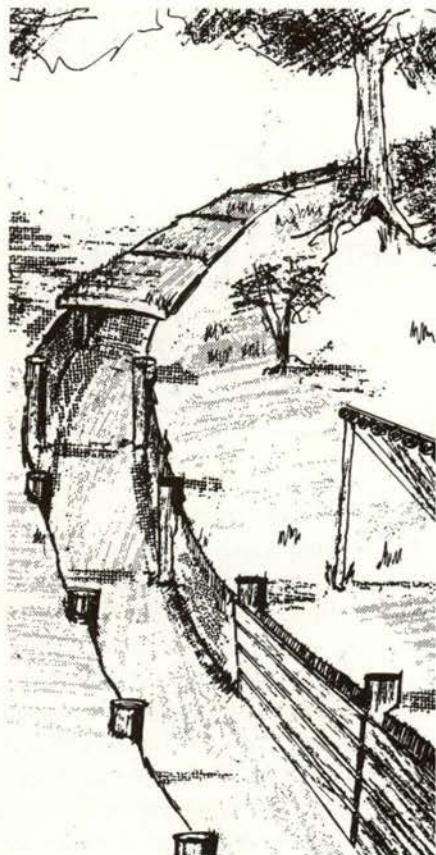
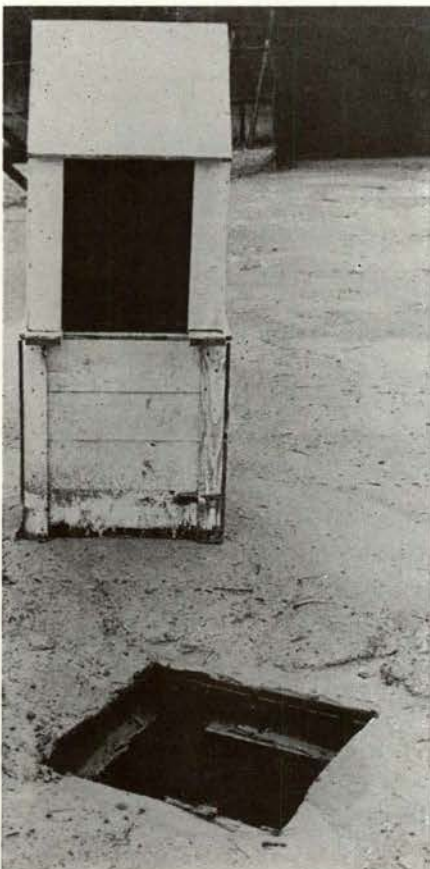
Properly made, your tunnel system will support a 2½-ton truck driven over it.

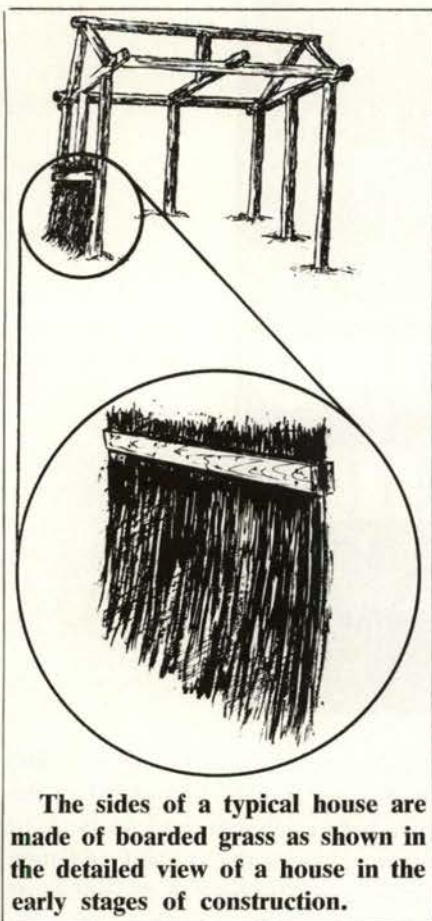
An authentic village should consist of about six peasant huts, a house for the village chief, a flag pole, a propaganda board or information booth, several latrines, a pigpen, a haystack, a religious monument, a vegetable garden, a high, jagged picket fence, a school house, and a cemetery.

Construction of the houses is the most difficult and time consuming. The most common home found in

the rural areas of Vietnam is the house made of bamboo, rice straw, and banana leaves. To build such a structure, simply make a frame measuring 12 by 15 feet out of small trees (six-inch diameter for posts and beams, four-inch diameter for connectors and eaves) and have a detail cut enough sage grass to cover the walls and roof. Now your scrounging ability comes into play. On every post there is much salvage lumber to be found. Cut the salvage lumber (one inch by four inches) into the desired length and place the sage grass about three inches deep on the bottom board. Next even the grass off to about four inches above the top of the board, and nail another board on top so the grass will remain securely in place.

When you nail the boarded grass on the hut frame always start at the bottom of the frame. After the sides and roof are completely covered with straw, tie small bunches of sage grass with commo wire. These can be used to fill in the eaves and the extreme top of the roof. Our next





The sides of a typical house are made of boarded grass as shown in the detailed view of a house in the early stages of construction.

task is to trim the house with a pair of hedge shears and wrap two strands of commo wire two feet apart around the sides so that high winds will not break the straw from its casing.

At least one tunnel system should have its entrance inside a hut. An ideal location is under a bed constructed of boards taken from ammunition crates. The other furniture for the huts can also be made out of ammunition boards or salvage lumber.

The other structures in the village can be made with salvage materials. The type of construction depends upon the ingenuity of the builder and supervisors.

Your directive might stipulate that a moat filled with punji stakes surround the village. This is appropriate as it will teach our soldiers to appreciate the difficulty of working their way through this type obstacle. Dig the moat with a drag line six to ten feet deep and about ten feet wide and fill the moat with sharpened punji stakes made of

splintered ammunition crates. Then build several "monkey bridges" across the moat. A "monkey bridge" is nothing more than one small log with one handrail.

If your village consists of the items mentioned previously, you should request a 20-man detail equipped with several cross-cut saws, hand saws, post-hole diggers, sufficient sickles to cut the sage grass, hammers, and 300 pounds of nails. Arrange with your engineer friends for the use of a power saw as this will save you endless manhours when you construct the frames for the huts, the tunnel systems, and the border fences.

Maintenance of your village is not as difficult as one might expect. The huts will last without maintenance for about six months and then spot patching with sage grass will restore their original condition. The other items require little maintenance.

The division directive will probably share the wealth among your friends. Another officer will be assigned the mission of writing a problem centered around the village. My



advice is to give the students a conference on the cordon and search operation and a demonstration of a search of a village.

The scenario for the practical work should be written in such a way as to require the students to infiltrate through difficult terrain into an objective rallying point. The infiltration phase should be on squad or platoon level so the maximum number of leaders get the benefit of difficult terrain navigation. Once the ORP (objective rallying point) is occupied send out platoon-size units to set up blocking positions around the village so the village will be isolated when the search element [rifle platoon (-)] conducts the detailed search. Then have the "cordon troops" conduct the perimeter search by closing the encirclement.

To make the problem realistic and difficult, the infiltration should be conducted during the hours of darkness and the search of the village should be conducted at first light.

What a training bargain for only the price of 300 pounds of nails! ■

REDEYE

GROUND TO AIR

CAPT JOHN S. YAKSHE, Inf

IN 1958, A DECISION WAS MADE to develop a weapons system that had an air defense capability while at the same time was man-portable. In a joint effort, the Army and Marine Corps awarded a research and development contract to General Dynamics of Pomona, California, to test the feasibility of such a weapons system.

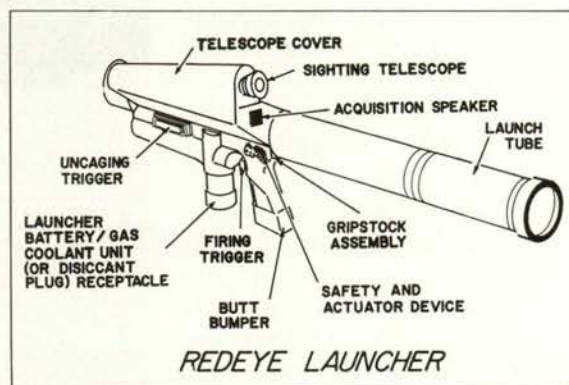
This weapon, now known as the Redeye, was not very successful in its early stages. Rumors to the effect that the Redeye missile would home in on a cigarette lighter, the sun, or even the engine of a vehicle on the ground were soon spread throughout the Army. These rumors were not far from the truth. As a matter of fact, the Redeye program was almost dropped because of poor performance and lack of funds. Fortunately, the program was not cancelled, and in 1963 a technical breakthrough occurred and the present weapon was developed. This Redeye is known as the M60A.

The Redeye is a man-portable, shoulder-fired guided missile used as a defense against slow, low-flying enemy aircraft. It weighs 28.2 pounds and is 49.7 inches long. The weapon consists of two parts, the guided missile and the launcher. After firing the Redeye, the launcher is expended in the same manner as the M72 LAW. The launcher is made of molded fiber glass and includes a gripstock assembly, a sighting telescope, and a launch tube which houses the guided missile. Operating controls located on the gripstock assembly are a safety and actuator device, an uncaging trigger, and a firing trigger. Other features include an adjustable sling and a receptacle for insertion of the launcher battery/gas coolant. The battery/coolant unit is required to energize the weapon's electrical circuits and cool the

infrared detector cell in the missile's seeker section during the warm-up period. This coolant is inserted in the launcher by the gunner before launch and can be used only once. If the gunner activates the coolant and then decides not to fire the weapon, the battery coolant must be replaced.

Inside the sighting telescope is a reticle to permit range estimation and lead and super-elevation prior to launch. Two wedges within the telescope let the gunner know that the seeker section of the missile has warmed up and acquired the target. An audible signal located directly beneath the telescope eyepiece serves the same purpose.

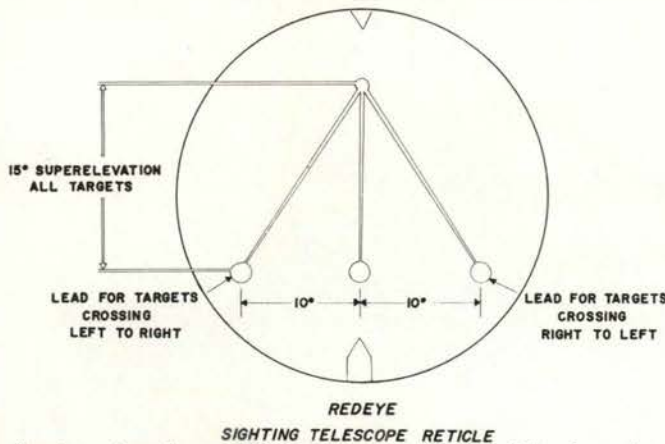
The missile is a rocket-propelled infrared (heat sensitive) homing missile which consists of a guidance section, a warhead/fuze section, a two-stage solid propellant rocket motor, and a tail assembly. The missile is sealed within the launcher in an atmosphere of inert nitrogen and cannot be removed in the field except by



firing. The missile is connected to the launcher by a friction screw and electrical connections that are sheared at launch.

To fire the missile, the gunner must go through a certain sequence to insure a successful launch. The warm-up period of the Redeye begins with the activation of the safety and actuator device. At this time, acquisition indicator circuits and the gyrocase circuit are energized, and freon gas flows to the infrared cell in the seeker section. Assuming a target is within range of the seeker, the warm-up time will be approximately five seconds.

Once the acquisition signal is obtained, the gunner must depress the uncaging trigger and continue to track



the target as he applies super-elevation and lead angles. He then presses the firing trigger which activates the missile battery within six tenths of a second. At this time, the ejector rocket motor is fired, launching the missile. The ejector motor is completely expended within the launcher tube and, under its six-Gs of force, the missile coasts approximately 24 feet from the gunner. Here, the sustainer motor is ignited and flies the missile to the target.

Arming of the missile occurs approximately 1.6 seconds after launch. When the missile becomes armed, a self-destruction time cycle is started. If the missile does not hit a target within 15 seconds, the fuze timer will set off the warhead, otherwise detonation will not occur unless the missile hits the target.

Three Redeye missiles and nine launcher battery/gas coolant units are packed in a shipping and storage container. The container is a vacuum-formed plastic shell designed to provide protection against shock and vibration during movement.

One of the major disadvantages of the container is its excessive weight of 137 pounds. There is some indication that this container may be changed to a one-round pack and thereby eliminate the weight problem. Future models will also have an iron sight rather than the telescope which will reduce the overall weight of the weapon by two pounds.

The exact cost of the Redeye system has not been established; however, it appears that the cost of the

missile and the aircraft or drone target will be large enough to warrant the training of gunners through training devices rather than actual firings of live missiles. One of two training devices have been accepted by the Army. This trainer, the intercept aerial trainer, will have operational characteristics based on the present Redeye weapons system design. An infrared emission by the seeker and a timing mechanism located on the launch tube will allow the instructor to detect any errors the trainee might make in the normal sequence of operations. This trainer can be used both outdoors and indoors. When used indoors, it is used in conjunction with a 40-foot curved movie screen. On this screen can be projected any type of background to include type of aircraft, speed, trajectory, and sky conditions.

The other trainer is the eject trainer which was designed to provide the gunner with a realistic feeling by launching a missile about 20 feet from his position. The amount of benefit that would be derived from such a trainer is questionable and for this reason it is still under study.

Individual physical qualifications for Redeye personnel will include 20/20 vision, combat area profile 90, branch qualified, and hearing not more than 10db below normal.

Although it will be some time before the Redeye system is in the hands of the troops, the responsibility for training and qualification of Redeye gunners has been given to the U. S. Army Air Defense School at Fort Bliss, Texas.

The mission of the Redeye will be to provide local air defense for small combat and combat support units. It is to be employed by a two-man team allocated on the basis of one per combat and selected combat support company/battery/troop. These teams will be assigned to an air defense section at combat battalion level.

Since there is no Identification Friend or Foe (IFF) device for the Redeye system, teams will depend on visual means of detection and identification of targets. Continuous surveillance of the surrounding airspace can be performed by alternating team members as gunners during periods of intense activity. The Redeye gunner will normally be permitted to engage all targets committing hostile acts. The gunner should be able to engage the target on his own initiative since time and space limitations do not allow the gunner to logically request permission to fire. The engagement of low performance aircraft is accomplished firing a single weapon whereas high performance aircraft may be engaged using more than one missile.

With the innovation of the Redeye, the present lack of air defense weapons in the forward area of the battlefield will soon be reduced. With the individual soldier having an air defense capability, the enemy will no longer be able to venture unchallenged in his corridor. ■

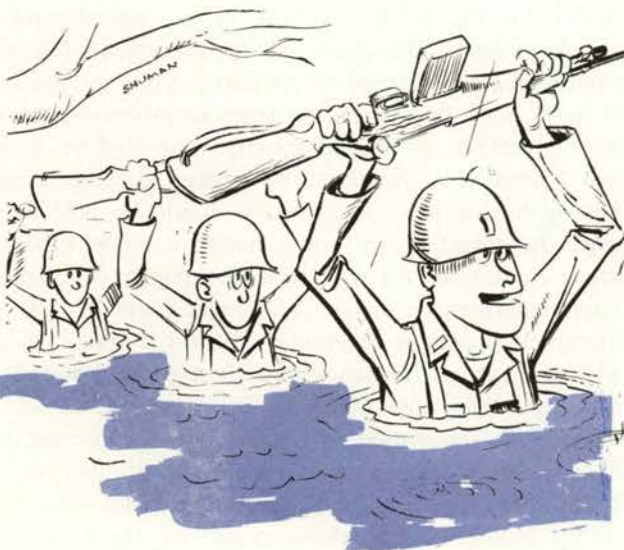
ROUTE STEP



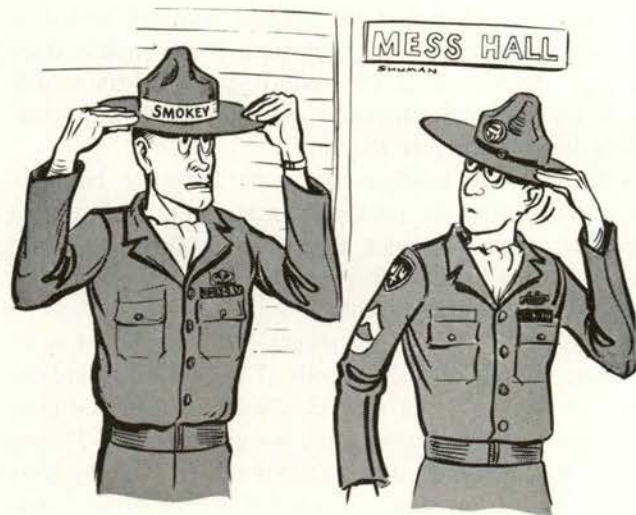
"Well, General, what did the Joint-Chiefs-of-Staff think of your suggestions on how to run the army?"



"What a horrible, miserable, unbearable existence . . . Lucky we're tough Special Forces men!"



"It's starting to rain, men . . . Break out the Ponchos!"



"Wait a minute, this isn't my hat."

NAME HUNTING TECHNIQUES

GY SGT STEVE J. ILLES, USM

ALTHOUGH THE LESSONS learned by the 1st Battalion, 7th Marines in their cave search and clear operations on the Trung Phan (Nam Trang) Peninsula cannot be considered doctrine, they should be useful to units currently serving in Vietnam and to those Infantry personnel who will eventually serve there.

Since the techniques and procedures used in cave operations are not found in any field manual, they require guidelines developed from past operations (Starlight and Piranha). The techniques used by the units in these operations were collected and consolidated and the following information concerning cave search, clear, and destruction operations has resulted:

As stated in the beginning of this article, these techniques are not doctrine. But, until other methods evolve and become proven, the 1st Battalion, 7th Marines has some workable solutions. They continue to deny the VC use of their tunnels and caves while conducting search and clear missions.

Locating the Cave Entrance



The principal method of locating cave entrances is through exhaustive search. Normally a tactical approach march formation will be employed by leading elements passing through the area, while the exhaustive search is performed by elements following behind. The area

to be searched is segmented by means of boundaries and phase lines to facilitate control. Detailed search will normally follow seizure of the key terrain in the vicinity, from where covering forces will be employed. Special care must be taken to guard against snipers from the flanks and rear.

VC caves are more often found outside the villages

than in them. (Caves found in villages are usually shelters for the villagers). Caves are frequently much larger than the entrance indicates; in fact it is impossible to tell the size of a cave from its entrance alone. A good clue to the presence of a cave in the vicinity is an accumulation of spoil on the ground. However, the VC are clever in concealing or scattering even large amounts of this spoil. While the entrance to some VC caves are unhidden, most will be concealed in a clump of bushes, under large storage jars, or under piles of brush or firewood fagots. In some cases, a VC cave will be a concealed offshoot from an obvious, unhidden "civilian" cave.

Native cooperation is an important factor in cave finding. If villagers are gathered together and told that the Marines are going to search for and blow up all the VC caves, often the natives will take measures to induce their friends to come out, or will offer to guide the Marines to the caves and ask their friends to come out.

There have been several instances where VC captured in one cave cooperated in helping locate other caves.

Approaching the Cave Entrance Once Located



A typical VC tactic is for one or more snipers to fire at Marines, then scamper into a nearby cave. Seldom do the VC actually defend the cave entrance with small arms. However, in several instances they have lobbed grenades out at the Marines. Usually the VC defends the cave well inside the entrance.

Simultaneous with an approach to the cave entrance, it is necessary to have troops far out around and beyond the cave entrance, in order to cover possible exits.

A normal procedure is to approach the cave entrance with a fire team and an interpreter. Two men cover the advance of the others. Approach is at an angle to the cave mouth. The interpreter uses a bullhorn (AN/PRQ-5) to warn the occupants of the cave that they must come out or they will be destroyed by explosives. If after several tries and several minutes this practice does not work, the cave is prepared for physical search by throwing a white phosphorous or fragmentation grenade inside the entrance as far as it will go. This prepares the way for the entry of the searching party.

If a native collaborator or a cooperative captured VC is available, he can be used in lieu of the interpreter to coax the occupants out of the cave.

Cave Assault



Cave assault has never been necessary in the experience of this battalion. The most serious resistance encountered has been the throwing out of a grenade. If assault were necessary, conventional techniques would be used, *i.e.*, use of white phosphorous to blind, flamethrowers to burn, and satchel charges to destroy.

Interior Search and Clear Procedures



The following equipment is deemed necessary for interior search and clear: powerful multi-cell flashlights; bullhorn; compass to determine direction cave extends; sound power phone with reel of wire; lightweight line for guidelines; .45 cal. pistols or submachine gun for searchers; M26 grenades; white phosphorous grenades; mine detectors for locating weapons; self-contained breathing apparatus; post-hole diggers, picks, and shovels for opening vents; and demolitions equipment. If permitted, tear gas grenades would also be employed.

After an interpreter at the entrance has tried and failed to get cave occupants to come out, and after a fragmentation or white phosphorous grenade is thrown well into the entrance to clear it, a two- to four-man search party enters the cave. If resistance is met, it is returned in kind with .45 pistol and fragmentation grenades. The VC will usually fire a few rounds at each bend in the tunnel. The lead Marine is the only one who returns fire unless the tunnel is large and more than one can come up on line. The lead Marine holds his flashlight out to the side as far as he can, not in front of him, so as to deceive the VC as to his true location. Another technique is to lash or tape a flashlight to a weapon so that the flashlight is in effect "boresighted" with the weapon as an aid to aiming. After initial resistance, try the psychological approach again with the bullhorn and interpreter. If resistance persists, a heavy demolition charge is placed as deep in the tunnel as possible and is detonated. This procedure is drastic in that it will probably kill all cave occupants, and should be resorted to only after initial efforts outlined above. The reason for this is twofold: first, dead VC yield little intelligence information; and second, frequently there are women and children in the caves with the VC. The

charge is placed by engineers, who are covered by Infantry troops. All then withdraw, throwing back a grenade to deter VC from neutralizing the charge.

If a cooperative VC is available, he may be used to precede the search party. The Marine behind him carries the flashlight and a pistol, and controls the VC captive by means of a line tied around his ankle. Before he enters the cave, the VC captive is instructed by an interpreter on what to say to the cave occupants. He uses a bullhorn in the cave if feasible.

The explosion will probably kill all cave occupants, and will expose numerous other vents and entrances. Troops who are positioned in the vicinity of the cave entrance will spot and report these for further investigation.

After all resistance in the cave is neutralized, a careful search is instituted. Search teams trail wire behind them and have sound power phones for safety and for keeping the commander advised of their progress. Compasses can be used to plot the trace of the tunnel as an aid to troops on the surface who are searching for other exits. Ends of tunnels and tunnel walls and floors are extensively probed with a pointed steel rod to check for false walls, thin "push-out" walls, or caches. All floor boards and mats are lifted. Mine detectors may be used (if space permits) to locate weapons and munitions caches.

As soon as the initial charge is detonated, troops on the surface attempt to locate surface vents to the cave. If there are any, these are expanded. If there are none, some are made by use of post-hole diggers, shovels, and picks. This is important for ventilation, since the caves contain very little oxygen.

Self-contained breathing apparatus should be maintained on hand for search in caves in which the oxygen is exhausted. Oxygen, scarce to begin with, is quickly exhausted by white phosphorous, explosives, or just hard-working troops.

A technique which is recognized but which has not been used is a smoke generator together with a device to force the smoke into the tunnel. Such a device would expedite the finding of all vents and exits to a cave system.



The use of tear agents such as CS or CN would be highly desirable for use in caves. It would be a humane substitute for the use of demolitions in bringing about the neutralization of resistance. Cave occupants would be rendered helpless and readily manageable. After being removed from the cave, occupants could then be sorted out as VC, VC sympathizers, and civilians.

Special Hazards



Oxygen asphyxiation is a constant danger in caves. Sound power phones, safety lines, buddy systems, and self-contained breathing apparatus reduce the danger.

Cave-ins must be considered, especially after using grenades and explosives. Weak caves in wet weather

may also be hazardous.

Booby traps may be encountered in caves. None have been found so far, however.

Troops in caves or near cave entrances must be constantly alert to grenades being thrown at them.

Cave Reduction Procedures

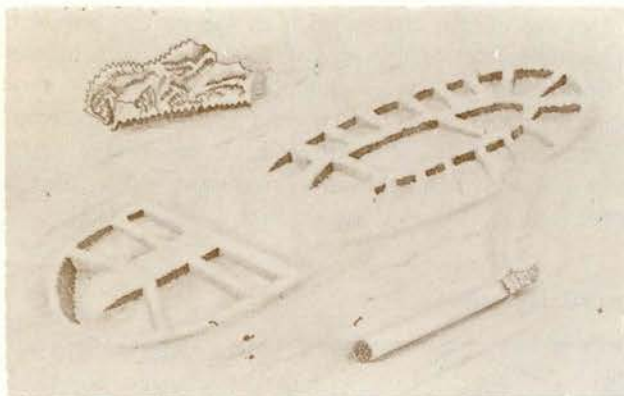


Infantry unit.

Caves are best destroyed by use of demolitions. All portions of a cave must be caved in, not just its entrance. The demolitions work is best performed by engineer personnel attached to the rifle company. Protection for the engineers must always be provided by the

A normal procedure is to place 2½-pound blocks of C-4 about four feet apart throughout the length of a tunnel system, and to link them together with detonating cord. Shorings, if any, are rigged for demolition. The entire cave is destroyed in a single detonation. If the cave is very large, or has a particularly thick ceiling (15 feet or more) it is desirable to use more demolitions and to attach or shore up the demolitions to the ceiling. The amount of C-4 required for a single cave has varied from just a few pounds up to 1,500 pounds. A time fuze is preferred over electrical systems due to the safety, ease of carrying the materials, and simplicity.

Small individual family shelter caves are not destroyed, since civilian families have a valid need for them and will only dig new ones. These caves are thoroughly searched, however. ■



FUNDAMENTALS OF TRACKING

LT COL FRANK L. BROWN (Ret)

THERE ARE some very good reasons for the small-unit leader and his men to learn the fundamentals of tracking and to gain experience in reading trail signs. First, the success of a mission may hinge upon the ability of one or more men to perceive and interpret trail signs left by the enemy and thus gain contact without being detected. Second, and possibly of greater immediate importance, there is often a necessity for small-unit members to avoid leaving signs of their own activities which will forfeit surprise and give advantage to the enemy. A further use of tracking, as it applies to animals, is pertinent to food-gathering in a survival situation. We shall focus upon the trail signs made by men as they move on foot over the face of the earth, but it will be apparent to the thoughtful reader that much of what is written will also apply to tracking animals.

Tracking is often considered to be an art to be practiced only by highly experienced individuals. There is a great deal of justification for this attitude. Our Army hired civilian scouts as trackers during the campaigns to pacify the American Indians. We used native trackers in the Southwest Pacific against the Japanese. The British used native trackers in hunting down the Communist terrorists in Malaya, and many other examples could be cited.

All of these trackers were specialists and the idea of the specialist still prevails. But the need to avoid leaving trail signs of value to the enemy demands a thorough understanding of the basic fundamentals of tracking at troop level. By fulfilling this obvious need it is likely that we shall discover men in our small units who need only to have their natural talents developed to become surprisingly good trackers.

The need for trackers to pursue and pinpoint the locations of guerrillas justifies further extensive study of this primitive art. But we need to identify basic ideas now and to focus the attention of the Infantry soldier upon the knowledge currently available. Once involved, he will contribute to the art. That is the purpose of this article—to provide basic information on tracking.

The Basic Concepts

The basic concepts involved in tracking are *displacement, staining, weathering, littering, camouflage,* and

interpretation. Stealth is also important to success in tracking in many situations. So stealth will be treated briefly. Let us examine the practical aspects of each of these concepts, such as we might in giving initial instructions in tracking to the members of an Infantry small unit.

Displacement

The most obvious example of displacement is probably a set of clear footprints left in soft, moist ground. The ground within each footprint has been displaced by compression. Footprints may indicate the number of persons in a moving party, the direction of travel, the speed of movement, and whether heavy loads are being carried. Deep footprints, widely spaced, indicate rapid movement. Deep footprints, especially deep toe prints, and the displacement of soil that occurs where a load has been set down at a halt will often tell something of the weight being borne by marchers. When men run, their footprints are wide apart with toe prints usually deeper than heel prints.

The clearest footprints are often left by the last man moving in a file if no effort is made to obliterate the trail. Study this key set of prints for worn (or unworn) heels, indentations left by cuts or worn places, or any other marks that will be easily recognized. Cut a small stick exactly the length of one of these key prints. Notch the stick to show the width of the footprint at the widest part of the sole. Note the angle of the key prints to the direction of travel. Compare the key prints with other prints that seem to have been made by the same party. Then if trail signs merge with others or take a turn, you can measure and study the key prints to increase accuracy of identification and aid you to stay on the track of the group being pursued.

Footprints are only one example of displacement. There are many others. Foliage may be stepped upon and dragged out of place so that the lighter undersides of leaves show unnaturally. Vines growing across a route may be dragged parallel to the direction of movement and have some of their leaves stripped off. Displacement occurs when men move through dew-covered grass, dislodge the droplets of condensed moisture from the grass and leave a clearly discernible

trail. Bark may be scuffed from roots growing across a path. Stones may be dislodged so that the part formerly embedded in the earth is turned up. The hole from which the stone was scuffed will be apparent and the displaced stone will be ringed with dirt impacted against the sides. Grass stems and small shrubs will be bent in the direction of travel as they are stepped upon by marchers. Displacement also occurs when men move over swampy ground to leave footprints made more clearly visible as the prints fill with water.

A jungle environment is hard on clothing. It is not unusual to find threads or bits of cloth clinging to thorny brush along a route where men have moved, particularly if the movement was hurried. Thus thorns may often displace threads and fabric to leave clearly visible trail signs.

Another type of displacement may occur when wild birds or animals are flushed suddenly from their hiding places by rapidly or carelessly moving men. Birds, in particular, may emit cries of alarm when disturbed and rise above brush or tall grass used for concealment by moving men. And the waving tops of brush or tall grass being displaced by men moving carelessly through it on a windless day is another clearly visible sign.

The displacement resulting from clearing a trail through virgin undergrowth with a machete is obvious even to the most amateur tracker. Only a little less apparent may be the careless breaking of overhanging branches to clear the way. Some men may habitually break branches "to keep the trail open" unless they are forewarned. These practices may sometimes be necessary to speed movement, but the acts must be deliberate and done with full knowledge that the trail signs being left are unmistakably clear. This also applies to clearing a place to rest with a machete during breaks in marching.

In some environments the absence of spider webs across trails may be an indication of recent movement. Spiders often spin webs across open trails at night to trap flying insects. When spider webs are noted across a trail you may duck under or go around them as a subtle deception. The absence of spider webs on a narrow trail in calm weather may be a strong indication that someone has preceded you.

If a patrol wades a stream in an effort to cover tracks or merely to obtain a cleared route, algae and other

water plants may be displaced because of slippery footing. Rocks in the stream may be displaced so that algae formerly growing under the surface is fully exposed. Apparent use of a stream as a route demands close examination of stream banks for indications of departure. Even when moving on a compass azimuth, there is a human tendency to follow the path of least resistance. This is particularly true of men (and animals) in a hurry. Thus departure from a stream may often be at an open area on the banks. Close examination of such areas may yield confirming footprints and other trail signs.

Staining

The most vivid example of staining may result from profusely bleeding wounds. Blood signs often will be in the form of small circles or spatters as blood is dropped or slung from a moving arm or leg. Look for blood signs on leaves and branches above the ground to the height of a man, as well as on the ground surface. Blood smears may appear on leaves at the height of the wound or below it as blood runs downward from a wound. Staining also occurs when muddy footwear is dragged over grass, stones, and shrubs. Thus staining and displacement combine to divulge evidence of movement and point to the direction taken. Staining or change in color may be noted where bark is scuffed from tree roots or vines and colored sap oozes forth or white interior wood shows through. Crushed and stained fallen leaves may indicate usage of a route where the ground is too hard to leave footprints. Dried leaves may literally be pulverized by the pressure of many feet. Where only a few men have passed it may be necessary to lift and examine leaves one by one for signs of staining and crushing.

Closely related to staining is the change in color and pattern that results when foliage is disarranged to show the lighter undersides of leaves, as mentioned earlier. And roots, stones, and vines may be stained where green leaves or berries are crushed on them by moving feet.

The muddying of clear water, usually a sign of very recent movement, is another example of staining discernible even to the untrained eye. Exposed stones in a stream may be stained by mud or algae from the bottom when men use them for stepping stones. The water collection in footprints on swampy ground will be mud-stained if the tracks are very recent. With time, the mud will settle and the water in the tracks will become clear—a sign of a trail perhaps an hour old or older.

Weathering

Weathering points mainly to the recency of trail signs. Wind, rain, snow, and sunlight will change the appearance of trail signs and often obliterate them entirely. Weathering has a distinctive effect upon blood stains. Initially, fresh blood stains are bright red. But air and



sunlight change them, first to a deeper, ruby red with a glazed surface and finally to a dark brown as moisture evaporates.

Footprints are greatly affected by weathering. When soft, moist earth is displaced on the edge of a footprint, the moisture tends to hold the earth together initially so that it protrudes above the ground surface. As sun and air dry the displaced soil on the perimeter, particles tend to fall of their own weight and drop into the print. When this drying, crumbling, and falling of particles can be observed by the tracker as it occurs, recent passage is apparent and the tracker must become a stalker. A light rain may round the edges of even the most recent tracks, then it becomes pertinent to remember when the last rain fell in the area if one is to estimate the recency of the tracks. In calm weather, leaves, grass stems, and the like will be crushed by the weight of the marcher. But wind may blow leaves, seeds, and other light litter into and over footprints to increase the apparent age of the trail. Thus it becomes necessary to examine the litter in prints to determine if it has been crushed or if it was merely blown into the print. If it was the work of the wind, the tracker will need to recall when the wind was last blowing if he is to establish approximately when the tracks were made.

Trails emerging from streams will often appear to have been weathered by rain because of water running from trousers and footgear into the tracks. This is particularly true if a patrol crosses in a column of files with one dripping marcher following the next. The mere existence of damp earth near the tracks with dryer earth at a distance indicates a recent trail despite the weathered appearance of the tracks nearest the stream bank. Thus it may often be worthwhile to leave a stream (or a trail) in line, rather than in column, to reduce the signs left at any one place.

It is worth repeating that fresh trail signs—dirt still falling from the edge of footprints, grass and shrub stems slowly rising after being crushed, and fresh red blood—demand increased stealth on the part of the tracker and his party.

The effect of wind on sounds and odors also needs mentioning while considering the effects of weather. If you are downwind from the source of sounds and odors, the wind wafts them to you. If you are upwind from the source, sounds and odors will be carried away from you. Determining wind direction may help you to locate a guerrilla camp if you suddenly smell wood smoke, tobacco smoke, or food being cooked. Voices and chopping (machete) sounds are examples of noises that may be carried by the wind. To learn wind direction, drop a handful of light, dry grass or dust from shoulder height and point to where it lands. You will be pointing downwind. Sounds can also be localized by cupping the hands behind the ears and rotating the whole upper body. When the sounds are loudest, you are usually looking toward the source.

During calm, stable weather, the air currents that propagate sounds and odors may not be strong enough to be felt on the face as wind. It is well to remember that the air cools in the evening and flows downhill to the valleys. So if you are moving uphill at night the air currents will generally be flowing toward you unless a breeze is felt from some other quarter. As the sun rises in the morning to warm the air in the low places, the flow of air is usually uphill along the surface of the slopes. Thus it may often be useful to consider wind direction in plotting a patrol route. If you can keep the wind in your face, sounds and odors will be driven away from the enemy on the objective. As a practical example, suppose you want to ambush a trail leading to a village. If you move toward the village with the wind at your back, every dog in the village will have your scent blown into his nose and is likely to react by barking warnings of your approach.

One other point worth mentioning is the effect of sunlight on enemy shooting. It is difficult to shoot directly toward the sun. So it may be worthwhile at times to plan an approach to an objective that puts the sun at your back. With the sun at your back and the wind in your face, it is apparent that several advantages are gained. All of these bits and pieces of knowledge are employed by the experienced tracker. He habitually uses all of his senses and all of his knowledge to the utmost and it is very likely that he continues to learn more about his art as long as he actively practices it.

Littering

The littering of a trail is a direct result of ignorance or poor discipline or both. The obvious results of littering are discarded cigarette butts, gum wrappers, match sticks, ration cans, the remains of cooking fires, piles of feces, and even serviceable pieces of equipment. These are unmistakable signs of troop movement. Indications of weathering are important in interpreting the recency of littering. Ration cans rust first at the cut edges where the plating is broken to expose the steel. Rain washes, flattens, fades or rusts exposed litter. Rain-washed dirt may partially cover litter so that it is overlooked by the untrained eye. On the other hand, a still-smoking cigarette butt is unmistakably a sign of recent human movement to any observer who notices it.



Litter may not only indicate recent movement, it may serve the guerrilla's purpose even more directly. A ration can become a drinking cup or a switch for a detonator. Empty cartridge cases may be reloaded. A discarded radio battery may yet serve to detonate a mine. Even human feces may be used as an infectious dip for punji sticks. So there is double danger in littering. Bury litter and camouflage the burial hole carefully.

A major danger exists where litter and other trail signs are left on outbound movement and the same trail is followed again on return a few hours later. There is a natural human tendency to use the familiar return route. There is a false security about a familiar route, too. The two factors combine to invite enemy ambush. Always avoid littering. Minimize all trail signs. Plot and record an alternate return route and give serious thought to use of the alternate route to guard against ambush.

Camouflage

Camouflage concerns the techniques employed to baffle the tracker, or if possible, to prevent him from learning that any movement has occurred. Two examples are the employment of most-used and least-used routes. Movement over a hard-surfaced public road or a dirt road used by many people on foot and in vehicles may leave no easily distinguishable trail signs. The guerrilla, dressed as a peasant, can use these techniques and often does. This most-used route is rarely, if ever, of value to the small regular unit. If it leads to the enemy it is likely to be ambushed, mined, covered with indirect fire or under observation by snipers.

The least-used route avoids all man-made roads and trails to move cross-county on a series of magnetic azimuths between easily identified checkpoints. Such a route avoids inhabited places unless they are specific objectives directly related to the mission. Trail signs will be left on such routes, for it is all but impossible to avoid leaving some signs of foot movement. But such signs as are left are less likely to be noted than if left on regular trails and paths likely to be under the scrutiny of the guerrilla or his sympathizers. Obvious tracks can be brushed out with a handful of branches when time permits. But the greatest safety lies in adherence to a route that is unlikely to be seen by an enemy.

Burlap or other cloth wrappings over boots may reduce the sharpness of trail signs. The use of smooth-soled tennis shoes may serve the same purpose, but in some terrain cleated boots are required for sure footing. Korean veterans will recall the blurred footprints left by the Chinese Communists who often wore canvas shoes with worn rubber soles.

Walking backwards for some distance upon emerging from a stream or upon changing direction at a checkpoint may confuse a careless tracker or at least cost him some time. But an experienced tracker will see

through such a ruse. He will note at once that steps of the key set of prints are unusually short and toe prints unnaturally deep. He will probably note, too, that any crushed grass stems point mainly toward the heel instead of toward the toe of the footprints. Then he will patiently mark the point of the last clear signs and seek a turn-around point that tells the true story of the movement.

Walking in streams or along logs, adhering to hard or rocky ground and brushing out obvious tracks may also baffle a tracker. But when clear signs are no longer visible, the last visible ones will be carefully marked and the tracker will cast in ever-widening circles until he is again on the right set of truly definitive trail signs.

Speed is often a great enemy of a man who would hide his trail. The man who has time to pick his way slowly and thoughtfully will leave fewer trail signs and can take the time required to obliterate the most obvious ones that he does make. Great improvement can often be wrought in reducing obvious trail signs merely by focusing attention on tracking and the obvious dangers of leaving easily read trail signs.

Interpretation

Several aspects of interpretation of trail signs have been recorded above. Perhaps a combat example may be useful to emphasize the value of being able to read and interpret trail signs. The following example was recorded in Korea by Brig Gen S. L. A. Marshall and is used here with his permission:

In the bowl-shaped extension of the ridge where George Company had set up, it was practically back-to-back and bottom-to-bottom with Gough's two remaining rifle platoons. The bowl was open on one end in the manner of a horseshoe, that side facing toward the main road. Captain Jack Michaely and his men (the strength was 116, including fourteen ROKs), on first taking over the ground, had done a little imaginative scouting and convinced themselves that they were not far from a considerable enemy force. The crest was already pocked with rifle pits when they gained it—and in the spoil around the pits were blurred footprints. The holes were deep, but not as wide as a GI digs them. Lt John F. Land concluded from these signs that the hill had but recently been held by the Chinese. The ridge top was only about 60 to 70 feet above the



valley floor, and the gradual facings of the ridge were well covered with densely grown screw pine and scrub oak. Several of the men prowled this forest on the lower slope and found numerous piles of horse dung—enough to suggest that upwards of twenty pack animals had been picketed there. In front of First Platoon's position, SFC Marvin P. Martin investigated a small frame house, carefully camouflaged and well bunkered in: it looked like a command post. SFC John W. Kennedy drew his attention to a dozen split gourds scattered about the main room. Bits of cooked rice—perhaps fifteen or twenty grains in all—clung to the sides. Kennedy pressed them with his fingertips; they were still soft to the touch. Adding all these things together, Michaely speculated that an enemy force, of approximately battalion strength, had held the same ground not more than forty-eight hours before.*

Note how the commander considered all the signs of enemy activity reported by his men and finally made an interpretation to keep his estimate of the situation current.

When men first learn to interpret tracks and other trail signs, they must guard against the tendency to report interpretations as facts. It is necessary to make interpretations and often to use the interpretations as a basis for decisions while patrolling. For example, fresh trail signs apparently just made by the enemy demand increased stealth and a slower rate of movement. But when the patrol is being debriefed, only that which was actually perceived by the senses can be reported as fact. An experienced tracker may sort out trail signs indicating that twenty heavily loaded bearers moved southward past a given point on a trail sometime during the past six hours since a rain ceased. But he did not see the bearers or their loads. He can report only what he saw. When he makes an interpretation, he must clearly label it as such.

Stealth

Stealth implies use of secrecy to attain an end. No matter how expert a soldier may be at reading trail signs, he invites ambush if the enemy detects his presence and gains surprise. Particularly during patrolling there is often a continuing necessity to avoid any behavior likely to be sensed by the enemy. To be *seen*, *heard*, or *smelled* usually forfeits surprise. (In rare instances even *touch* may play a part in detection and identification.) The conclusion that all stealthy movement must be extremely slow and deliberate is not entirely correct. Nor is the use of stealth always coupled with movement during darkness. An element of a patrol forced to cross an open area during daylight may move at top speed to minimize exposure time. Still the rapid movement must be as quiet as possible and

often should be executed with immediately available covering fire. Stealthy movement is usually most difficult during darkness, but unlimited visibility increases the probability of visual detection by the enemy, particularly when noisy movement provides cues to location. Thoughtful study of these facts and observation of your men may disclose the need for increased practice of stealthy movement during unlimited visibility.

Only rarely can perfect stealth be attained by the small unit. It is almost impossible for the small unit to move on foot without leaving signs of the movement if the enemy is adept at tracking. It is equally difficult to move noiselessly. But the aims must always be: to move as silently as possible commensurate with the speed required; to use cover, concealment, and camouflage to avoid visual detection; to avoid smoking, fire-building, cooking and the use of soaps, lotions, insecticides, or anything else to leave as few trail signs as possible. This last need is too often neglected and few soldiers practice all aspects of stealthy movement to a degree that becomes habitual. Thus, when ordered to move quietly, the unpracticed soldier often directs the major part of his attention to deliberate attempts to escape detection. The result is an intensive focus on the environment immediately surrounding him with neglect of the more distant segments of the environment that may harbor the enemy in ambush.

Quiet, rapid movement is probably the most difficult part of stealth to master. Odors can be controlled largely by avoiding specific acts. Camouflage, particularly of outlines and bare skin surfaces, can be mastered rather quickly. Cover and concealment are easily recognized and used. Control can be maintained by visual and tactual signals to keep voices silent. But noise often results from anticipated contacts with objects in the path of movement. Only rarely is any environment in a temperate or hot climate completely quiet. The wind rustles leaves and grass; decayed branches and tree trunks fall from time to time. There are often the noises of movement and cries of wild creatures. Especially in clear, warm weather there will often be a high level of insect noises. So man's movement noises need only be kept below the level of the natural noises to maintain reasonably effective stealth. Rain, wind, and even distant battle noises or deliberately delivered diversionary fire may mask fairly rapid but effectively stealthy movement of a small unit.

To master stealthy movement, practice initially during unlimited visibility. This will permit men to identify the objects that cause noise during movement and to develop techniques to minimize such noises. Loose stones, dry leaves and sticks, thorny brush, vines, tall grass and thick vegetation must be recognized and dealt with by practice until reasonably quiet movement is possible. Once men are thoroughly familiar with the source of noises as a result of daylight practice, they must practice during limited visibility. Here the sense of

**The River and the Gauntlet* by S.L.A. Marshall ©, William Morrow & Co., New York, 1953, pp. 219-220.

touch largely replaces vision, but when the soldier encounters noisy objects he can visualize them and move through or around them by using the knowledge and skills developed by prior practice of stealthy movement during daylight.

When men are transported quickly to an environment that differs widely from the one in which they learned stealthy movement, they often must face sources of noise not previously encountered. Again, daylight practice is demanded to permit men to learn how to recognize and handle these new noise-making sources. Practice during limited visibility must follow. Short patrols in relatively safe areas of the new environment will permit the necessary learning to occur if the leader focuses the attention of his men and emphasizes the need to learn quickly to move quietly in the new environment. Until the adjustment is made through practice, men in a new environment are at a disadvantage against an enemy who is native to the area of operations.

Thus tracking is directly related to stealthy movement. Neither is likely to be fully effective without the other. Fortunately the skills and knowledges pertinent to stealth and tracking can be developed concurrently even in a strange, new environment. The thoughtful commander will recognize the need to adapt to a new environment and will allot time for practice with the knowledge that by so doing he is increasing the chances of survival for his men.

Training in Reading Trail Signs

An abundance of trail signs is essential for the beginning tracker. So beginning tracking is best taught immediately after a fresh fall of snow or after a hard rain when fresh tracks show plainly and old trail signs have been covered or washed away. To provide unmistakable trail signs, take a two-foot section of log, five or six inches in diameter, and drive 12-penny common nails two or three inches apart to half the depth of each nail on all sides of the log. Tie a six-foot section of half-inch rope to a heavy staple driven into one end of the log. Have two men drag the nail-studded log over a half mile of varying terrain. Then let your beginning trackers follow this clear trail sign, but grasp every opportunity to point out signs of *displacement*, *staining*, *weathering*, *littering*, and *camouflage* deliberately placed as "training aids" by the two trail-makers.

As your men grow more proficient, abandon the nail-studded log and deliberately and systematically reduce the "training aids" left by the trail-makers. Vary the time between making the trail and following it, first by a few hours, later by a day or two or longer, so men learn something of the time element involved in weathering. Note the men who become most adept at reading trail signs so they can serve as the small unit's trackers in training and in combat. Practice tracking during patrolling against Aggressors so that men learn to read trail signs and perhaps most important, learn to avoid leaving trail signs that will aid the enemy. ■



DOUGHBOY'S SWAP SHOP

ITEM 9

Write Infantry
Box 2005
Fort Benning, Georgia
31905

The Problem: To conduct realistic land navigation training.

An Idea: A squad is told that they are to be transported (preferably by helicopter) from point A to point B, the forward assembly area where a specific mission will be assigned. They must get there on time. Enroute, the pilot of the helicopter (or a person designated to accompany the vehicle) declares an emergency and requires the squad to unload and proceed on foot. In the meantime, the vehicle or helicopter has purposely gone off course, and the squad leader is required to determine his location with map and compass and then to navigate on foot to point B. Arrival at point B within the allotted time constitutes successful completion of the problem.

A Challenge: How have you solved this problem? Share your solution with other Doughboys. Write INFANTRY. ■

THE PILOT

MAJ JAMES J LINDSAY, Inf



RUSSIAN INTELLIGENCE OFFICERS, Ivan Yezhov and Boris Yagoda, are former co-workers in the Soviet Order of Battle Section. Ten years ago, Boris left the section on a special assignment. They have just met again in a Moscow restaurant.

"... Ivan, you mean that you're still working in U.S. Army Order of Battle?"

"Naturally, I am a permanent fixture there. And besides, I enjoy it, since it's quite interesting. But, I'll bet that it's not nearly as interesting as the special project to which you were assigned. I don't suppose that you're in a position to discuss it?"

"No, I am really not supposed to, but... well you are in the same business, and... you probably learn about it soon anyway, so I guess I could let you in on it. But remember, not a word of this to anyone!"

"You know me."

"You probably don't remember, but just before I left the Order of Battle Section, I mentioned to all of you that there was something peculiar going on in the American Army. And, if I recall correctly, the whole group got quite a chuckle out of it."

"Yes, I remember now, the name tape and stripes business."

"That's right. I could not understand why they were putting colored identification tapes and bright yellow enlisted rank insignia on their olive drab combat uniform. We both know that the Americans are a very cunning and at the same time practical people. If it had

been simply a question of identifying the soldier and the fact that he was in the Army, they surely would have adopted olive drab and black identification tapes. And they never would have put those gaudy yellow stripes on a combat uniform. Instead, it would have been more logical for them to have used black pin-on collar insignia. And..."

"Slow down a bit comrade. I see the logic in what you are telling me, but of what significance is all this?"

"I am getting to that. After everyone had their big laugh, I went to our old boss, Colonel Kirov, and explained the whole matter to him. While he couldn't understand it, he agreed that they must be up to something. He then arranged to have me transferred, so that I might devote my full attention to their activities in this area. At first it appeared that I had gone off the deep end, since nothing new developed. Oh, there were a few minor happenings such as an occasional qualification patch showing up on their combat uniform. But then, all of a sudden, several of their divisions started wearing shoulder patches on the combat uniform."

"What's so peculiar about that? They have had those patches since World War I. Actually it's a very good idea. Their Army is a big organization, and this patch helps to increase the soldier's identification with his parent unit. This in turn enhances unit esprit."

"True, Ivan! But, think about it for a minute. Where does the soldier go in this combat or fatigue uniform? For the most part he remains in the division area or in



the field. And, who sees him in the uniform? As a rule, only the other members of his unit, who are also wearing the same 'distinctive' patch. I don't see any esprit building in that. But, the real clincher here is in their code of conduct. It specifically states that, if captured, the soldier will give only his name, rank, service number, and date of birth. And yet he's wearing a patch that gives his unit."

"Well, it does seem a bit strange, but they can always take them off when they are deployed."

"Ivan! And, I thought that you were a real Order of Battle specialist. First, even if they take them off, you could still identify the unit from the imprint left on the uniform by the patch. Even more important is the reaction capability, which . . ."

"Slow down Boris! I am aware of the fact that they have developed immediate and division ready forces, which can be deployed anywhere on very short notice."

"Short notice! They have worked so hard at this reaction business that they can now deploy in an absolute minimum of time. So surely you don't think that they are going to waste precious minutes removing patches, etc., and at the same time probably cutting the combat uniform to shreds. Some of their junior officers and NCOs have so many 'special qualification' gadgets sewn on their uniforms that by the time they cut them off, the unit could be halfway around the world."

"Then you think that they would wear these 'aiming stake' jackets into combat."

"It's hard to say. Reports from Vietnam indicate that

most of their advisors remove all these things after their first trip to the rice paddies. But, on the other hand, the Americans have provided some of the crack Vietnamese units with excellent camouflage uniforms, and then turned right around and assisted them in sewing a bunch of patches over the camouflage."

"I agree that this is a bit confusing, but I still can't see what it proves."

"Ivan, I can see that you have been in one job too long. You've lost your perspective. Now we both agree that the Americans are very practical. This being the case, they would not adopt such an impractical combat uniform without a very good reason. Right?"

"I'll go along with that."

"Now, as you know our friends in Peking are a pretty wild bunch. And, they tend to underestimate the western nations. It now appears obvious that the Americans, or at least their Army, realized this a long time ago. And, their aggressive and imperialistic leaders saw a means of taking advantage of this situation. They decided that in spite of some obvious disadvantages, they would gradually make their Army look as unprofessional as possible. If you study the reports, you will see that each year their appearance has become a little more amateurish. At the same time the Chinese have gradually grown more overconfident. The Americans will soon have them believing this 'paper tiger' bit. When that occurs, the Chinese will probably make one of their typically aggressive moves. And then, WHAM, the U.S. will clobber them; patches, badges, and all." ■

ate contact can be maneuvered without being observed, small arms fire on our part can be extremely accurate, and assault distances are very short.

One total result of the jungle terrain is the extreme difficulty of locating oneself accurately on the map. The flat nature of the terrain, the inability to see terrain features, and the fact that many of the streams encountered on the ground during the rainy season do not exist on the map, all tend to reduce navigation to a simple matter of following an azimuth while pacing distances. The only time one can be absolutely sure of his location is on the rare occasion when he comes to a relatively isolated hill that shows on the map.

Consequently we have found that critical terrain is neither high ground nor communications junctions. It is clearings. These provide us the ability to resupply, to evacuate casualties, and to find out just where we are. High ground may provide some slight obstacle advantage but no observation advantage whatsoever.

ENEMY

The vast majority of search and destroy operations result in no enemy contact at all. Storage sites, jungle training camps, domestic animals, even VC dependents may be encountered, but actual contact with the VC is rare. His primary tactic is the ambush. He uses snipers in the trees both to harass you and to signal your location. And he makes use of booby traps to protect his installations. By and large these are not particularly ingenious nor are they exceptionally difficult to find. But they can be dangerous if troops are not on their toes. The most dangerous are electrically detonated artillery or mortar shells. A good tip in this matter—always destroy used radio batteries. If left where the VC can find them, they still have enough juice to set off such a mine.

The VC lives in the jungle in camps built under the jungle canopy. Normally these are relatively small, anywhere from three to 15 shacks, although our sister battalion found one huge complex believed capable of holding at least a battalion and probably two. These camps are built near a stream and are impossible to detect from the air. Along a particular stream there may be a series of such camps, but they do not form a continuous defense because they are not mutually supporting. The camps are protected by security posted in trees or along the trails in foxholes. The VC will often surround villages with a bamboo fence, punji stakes, and barbed wire if he can get it. Trenches will be dug around the village and tunnels underneath. The tunnel systems are extremely elaborate, and so far we have not been very successful in tracing out these systems. It is relatively easy to burn the buildings left above ground, and to throw hand grenades into the tunnels. But destroying the tunnel system itself represents a fantastically difficult engineering job, beyond the normal capacity of an Infantry unit.

WEAPONS AND EQUIPMENT

Before discussing the battalion organization for search and destroy operations, a few comments are in order concerning some basic changes in organization and equipment accomplished prior to our movement to Vietnam and shortly after our arrival. It was immediately apparent that there would be no need for the battalion's antitank weapons system and that the only use for vehicles would be in base camp administration. Consequently the ENTAC platoon's equipment was left back on Okinawa, and shortly after arrival in Vietnam the platoon was broken up and its personnel assigned either to the rifle companies or the mortar platoon. Further, all 106mm rifles were left behind except the two in the reconnaissance platoon. Although the 90mm recoilless rifles were brought along to Vietnam, they have never been carried on a search and destroy operation. At the ranges at which we operate, the LAW can accomplish any bunker-busting mission that the 90mm can at a tremendous saving in weight.

Weight is the key to search and destroy operations. Such operations are totally by foot within the Infantry battalions. The battalion is flown into an LZ by helicopter assault, and from there it moves cross-country on foot. It is resupplied by helicopter; medical evacuation is accomplished by helicopter; and, at the end of the operation the battalion is either lifted out by helicopter or hiked to a point where it is picked up by truck and driven back. The main point is that everything the battalion needs to do its job has to be carried on someone's back.

Everything except supporting fires, that is. And because supporting fires are relatively plentiful and easy to get, it is possible to drop off a considerable amount of weight. In order to get a good overall picture of how the battalion is organized, equipped, and operates, an examination of each of the weapons systems is in order.

Artillery

Artillery is our major form of fire support. The brigade 105mm artillery battalion is always moved into position to support us whenever this battalion goes on a search and destroy operation. Sometimes a platoon or battery of ARVN 155s is attached to the 105s. The artillery is moved into position in time to lay down a preparation on the LZ and then is available for fires on call. We use it to soften up objectives and for H&I fires at night. The term H&I may be somewhat of a misnomer here, as we use it in such volume around our positions at night as to constitute protective fires. Illuminating fires are used extensively at night.

Air Support

Air support comes in two forms—USAF tactical air and Army armed choppers. USAF close support is provided by propeller-driven A1Es and by jet F100s. They

are controlled by an airborne FAC who maintains his position over the operational area all day long in an O1F (USAF version of the L19).

Preplanned requests must be submitted 24 hours ahead, while immediate requests can be submitted at any time. Verification of strikes seldom arrives until just before the strike. Ground haze and fog in the morning sometimes cause cancellation or delay of preplanned strikes designed as a preparation for our jump off in the morning, thus delaying our attack. All in all about half of our requests have been granted. This is simply a matter of weather and priorities. If we were to be attacked in strength by the VC during good weather, I have no doubt that we could get all the air support we could possibly use.

Helicopter fire teams are attached to the brigade during all operations. At least one fire team is kept aloft during helicopter landings and extractions and on strip alert at other times. In addition fire teams accompany all resupply and medical evacuation choppers. The company commander acts as his own FAC for the armed helicopters, normally by throwing a colored smoke grenade and then announcing the range and azimuth from the smoke to the enemy. On two occasions companies of this battalion have been closely engaged with the enemy in dense jungle and have successfully brought in helicopter strikes on the enemy very close to friendly troops. The key to this whole process is the company commander's ability to talk directly to the pilot and to adjust his strikes after each pass. The armed choppers carry either rockets or machine guns, and it is wise to warn troops to beware of hot falling brass when the choppers pass over their heads on a strafing run. The experience of this battalion with the armed choppers has been very good, and we are mighty happy to have this rapid, responsive, and highly effective form of support in the arsenal.

Mortars

The 4.2-inch mortars have proved to be too heavy for jungle warfare. It was necessary to divert a considerable amount of combat strength to their protection; they required an exorbitant amount of helicopter lift; displacement was an extremely slow, back-breaking task just for 100 meters; and there were no missions assigned to the mortars which could not have been fired by the artillery.

The 81mm mortar, less the outer ring of the baseplate, is light enough to be man-carried, though it is certainly not a light load. Actually many personnel throughout the entire company carry a couple of 81 rounds as additional weight, thus insuring that each company has enough to last for several hours of a pretty good firefight. A point to remember is that the VC want them desperately and reportedly would give up a platoon in casualties to get one. The mortars can't be left behind to support the company. They have to keep up with the troops.

I previously mentioned the use of the M72 LAW as a bunker-busting weapon. In addition, we have used them as shock weapons for assaulting the woodline during the helicopter assault. Several LAWs are carried in by fire team leaders and other designated personnel. Upon leaving the helicopter they open up with a barrage of LAWs on the woodline and then move in with assault fire. The same technique is SOP if brought under fire by the VC while crossing a clearing at any time.

The M79 grenade launcher is proving to be an outstanding weapon. One company commander has developed an SOP which sounds like something out of the Napoleonic wars. At the command, "Grenadiers forward!" all grenadiers in the company rush forward, deploy, and lay down a barrage on an assault objective prior to starting assault fire. This technique has also been used for keeping a ring of fire around an extraction LZ while the helicopters are coming in. All companies carry a double basic load of M79 ammunition. This weapon is proving extremely useful.

Small Arms

The really important weapons innovation for all of us "old soldiers" has been the M16 rifle. The very light weight of the weapon makes it extremely popular. But the most important factor is the light weight of the ammunition. Each man armed with the M16 now carries between 300 and 400 rounds of ammunition, enough to carry on a fight for a good long period of time, provided there is good discipline on the use of the selector to prevent overuse of automatic fire. We have strongly enforced the rule that only the automatic rifleman in the fire teams will fire full automatic, and our troops have displayed good discipline under fire in obeying this directive. The weapon is very easy to carry in a ready position, either right or left, with the thumb on the safety for immediate reaction to ambush. Magazines should not be loaded with more than 18 rounds to prevent a first-round jam. The weapon is easy to maintain and has had few maintenance difficulties.

We have 30 shotguns in each rifle company, using 00 buckshot, which have proved quite useful. We just don't use pistols unless there is no other weapon available to issue a man. Each man carries four grenades, and it is essential that leaders very closely supervise the proper care and handling of these items. Since the arrival of American troops in Vietnam, several have been killed as the result of accidents with grenades. It appears that the method of carrying the grenades externally on the ammunition pouch subjects them to too much abuse, and a pouch of some type is needed.

COMMUNICATIONS

In the area of communications we have found radio to be the only really effective means. We did use wire on two operations, and in both cases were handicapped

empty water cans, pans, and honeycomb. However, if the choppers fail to show by a reasonable hour, we destroy these items rather than leave a party behind with them to wait for the choppers.

All medical evacuation is accomplished by helicopters, which respond very rapidly to requests. The problem here is to find an LZ. A decision must be made whether it is better to carry the casualty to the nearest clearing or to cut one where the casualty is located. Cutting an LZ in the dense jungle big enough for a HUEY to land takes several hours, even with the help of plenty of C-4, and in most cases we have found it quicker to carry the casualty to a clearing.

EXTRACTION

The most difficult aspect of the helicopter extraction is the timing of the withdrawal of the security. I like to keep security out three to five hundred meters from the point where the choppers are landing. But assembling a unit, double timing it in through wet rice paddies from the distance, and then breaking it up into plane loads to distribute around the LZ, all take time. We have found it best to bring the security in quite early and turn the security job over to the armed choppers. Brigade has also helped by laying down protective fires using high-angle artillery over the choppers as they come in. This is hairy but effective.

Responsibility for selecting the exact LZ for extraction rests with the pathfinder from the helicopter unit. However, it simplifies movement on the ground if the ground commander can select a good one and present

for a long clear space for the choppers after they take off. Since they come in light and go out heavy (usually in late afternoon when the density altitude is the lowest), they require a good long run to gain altitude.

A technique developed by the brigade in conjunction with the 145th Aviation Battalion to assist both the pilots and the ground commander is the use of guides wearing a cerise sleeveless slipover jacket spotted at each helicopter loading point. The guides are selected from the extraction unit, while the cerise jackets are brought in by the pathfinder. The personnel to be extracted are lined up in chalk order behind the guides, and as the choppers come in they can quickly see exactly where they are to land. This simple technique has proved extremely useful in expediting extractions.

As the war continues, search and destroy operations can be expected to continue on a larger scale. By these operations, which get down on the ground and root out the VC, it is possible to destroy his base of operations and bring him to combat. The experience gained by the 2d Battalion (Airborne), 503d Infantry and the remainder of the 173d Airborne Brigade during their first three months in Vietnam should prove of considerable benefit in preparing other units and replacement personnel for their assignments in Vietnam. They in turn will develop techniques of their own with experience, so that in the end we may root out the VC from his jungle base and destroy him in open combat. ■



DOUGHBOYS'S SWAP SHOP

ITEM 10

*Write Infantry
Box 2005
Fort Benning, Georgia
31905*

The Problem: To develop the individual soldier's ability to stop hemorrhage effectively in a wounded buddy.

An Idea: On field problems, arrange for each squad to encounter a simulated wounded soldier during a patrol, an attack, or a maneuver at a time and place when the squad can be halted in order to treat the casualty. The squad leader should call on one or two of his men to undertake treatment, and a company medical aidman should, by pre-arrangement, then come on the scene to offer a critique on the technique of handling the casualty. Simulated wounded can be made up very realistically by using medical moulage kits available through medical supply channels. In fact, several of the standard "wounds" even bleed profusely when the casualty presses on a concealed rubber bulb. In this way, each Infantryman can practice meeting a life-threatening emergency, gaining confidence in his ability to save lives on the battlefield which might otherwise be lost through failure to control hemorrhage.

A Challenge: How have you solved this problem? Share your solution with other Doughboys. Write INFANTRY.

the contenders

"In my opinion, the M1 Rifle is the greatest battle implement ever devised."

*General George S. Patton
26 January 1945*

"The M14 Rifle is the best general purpose weapon for the Infantryman that we can procure today."

*General Earle G. Wheeler
Congress, 1963*

"The American soldier now carries the outmoded M14 rifle. He badly needs a modern Billion Dollar Rifle."

*Joseph Morschauer
Look Senior Editor
Look Magazine
23 February 1965*

THE STANDARD SERVICE RIFLE, M14, has recently been challenged by a host of 5.56mm (.223 cal.) contenders. Although the Army has not requested a new rifle, firearms manufacturers are certain that the time is drawing nigh for a change in the status quo.

Several rifles and complete weapon families which fire the 5.56-mm cartridge have been developed.

Considering only the rifles, there is a total of four primary contenders with the M14: The Colt XM16E1 (currently limited standard for the US Army), the Stoner 63 Assault Rifle, the Armalite AR-18, and the Harrington and Richardson G3 (M).

A comparison of the characteristics of the challenged with the characteristics of the contenders can best be illustrated in graphic form.

Just what is the U.S. Army looking for in a combat rifle?

One logical source for the answer to this question is a qualitative materiel requirement (QMR-A Department of the Army approved statement of a military need for a new item) submitted for a combat service rifle. What did the Army desire in our present standard rifle, the M14? (Desirable physical characteristics and essential performance qualities of the U.S. Army service rifle are outlined on pages 00 and 00.)

The QMR for the M14 Rifle lists twelve (12) desirable physical characteristics of a standard combat rifle:

1. Durability: The rifle shall be rugged and durable enough to withstand continual hard field usage to include bayonet fighting.

2. Simplicity: The rifle shall be simple in design and easy to strip, assemble, and maintain in the field without the use of a special tool.

CAPT THOMAS M. JOHNSON, Inf

3. Caliber: The rifle shall fire ammunition of approximately caliber .30 (7.62-mm).

4. Size: The rifle shall be as short and compact as possible without compromising other essential characteristics but shall not be so short as to prohibit three point support (chest and elbows) when the firer is in the prone position.

5. Weight: The rifle shall be as light as possible without sacrificing other characteristics; the ultimate weight is a maximum of seven pounds (without sling, magazine, and other accessories).

6. Shape: The shape and manner of operation of the rifle shall be such that it is usable by all personnel who meet the physical requirements of Army Field Forces. It is not essential that the rifle be capable of being fired from the left shoulder.

7. Manual Safety: The rifle shall be provided with a positive, manually-operated safety that is easily identifiable.

8. Integral Safeties: The rifle shall be provided with integral safety features incorporated in its design so as to prevent dangerous malfunctions.

9. Projections: The projections of the rifle shall not become readily entangled in brush or grass.

10. Portability: The rifle shall be comfortable for carrying slung on the shoulder and at the ready.

11. Ease of Firing: The parts necessary to fire the rifle (trigger, safety, changer lever, etc.) must be easily located and identified by touch for firing in darkness.

12. Reversibility of Parts: No part of the rifle shall be capable of being assembled in reverse position to the detriment of the functioning of the rifle.

	U S M 14	COLT XM101	ARMALITE AR 18	CADILLAC GAGE STONER 63	HARRINGTON & RICHARDSON G 3 M
CALIBER	308	223	223	223	223
CARTRIDGE (mm)	7.62	5.56	5.56	5.56	5.56
OVERALL LENGTH (INCHES)	44.1	38.6	38.0 28.75*	36.4	36.1
LENGTH OF BARREL (INCHES)	22.0	20.0	18.3	15.7	15.4
SIGHT RADIUS (INCHES)	26.8	19.8	20.1	21.4	UNK
WEIGHT UNLOADED (POUNDS) W O SLING, BIPOD OR MAG	8.8	6.5	6.4	7.8	6.6
WEIGHT LOADED (POUNDS) W SLING MAG	11.3	7.5	7.1	9.4	7.7
SYSTEM OF OPERATION	GAS	GAS	GAS	GAS	GAS
FEED	MAGAZINE	MAGAZINE	MAGAZINE	MAGAZINE	MAGAZINE
CAPACITY OF MAGAZINE (ROUNDS)	20	20 OR 30	20	30	20 OR 30
WEIGHT OF MAGAZINE (EMPTY)	.5	.2	.2	.5	.2
MUZZLE VELOCITY (FEET PER SECOND)	2800	3250	3250	3250	3182
CYCLIC RATE OF FIRE (ROUNDS PER MIN.)	700 - 750	800 - 850	750	700 - 800	600
MAXIMUM RANGE (METERS)	3725	2653	2653	2653	2653
MAXIMUM RANGE EFFECTIVE (METERS)	460	460	460	460	460
TYPE OF FIRE	SEMI-AUTO AUTO*	SEMI-AUTO AUTO	SEMI-AUTO AUTO	SEMI-AUTO AUTO	SEMI-AUTO AUTO
TYPE OF BIPOD	NONE	SNAP ON	SNAP ON	ADJUSTABLE	FOLDING
STOCK MATERIAL	WOOD	PLASTIC	PLASTIC	PLASTIC	PLASTIC
CARRYING HANDLE	NO	YES	NO	NO	NO

* STOCK FOLDED ** WITH SELECTOR

What about the desirable performance characteristics of a combat rifle?

FM 23-7, Rifle Marksmanship, lists seven (7) essential performance qualities of a modern combat rifle:

1. It must be accurate: The mission of the combat rifleman is to *kill* or capture the enemy. A rifleman who merely "sprays" bullets in the general vicinity of the enemy produces little effect.

2. Its trajectory must be flat: Flat trajectory complimented by high velocity reduces the complexity of hit adjustment required in low velocity, high trajectory weapons.

3. Its recoil must be moderate: Recoil is defined as "The rearward thrust of a fired gun, caused by the reaction of gases which push the bullet out of the barrel."

4. It must be powerful: The military rifle must be powerful enough to inflict casualties at extended ranges. Its bullets must easily penetrate enemy helmets and armored vests at these ranges. The bullets also should be relatively small and light for high speed, yet heavy enough and large enough in diameter to deliver a killing blow when they reach the target.

5. It must be easy to master: The military rifle should be simple in design, allowing for quick mastery even by those with no previous knowledge of firearms.

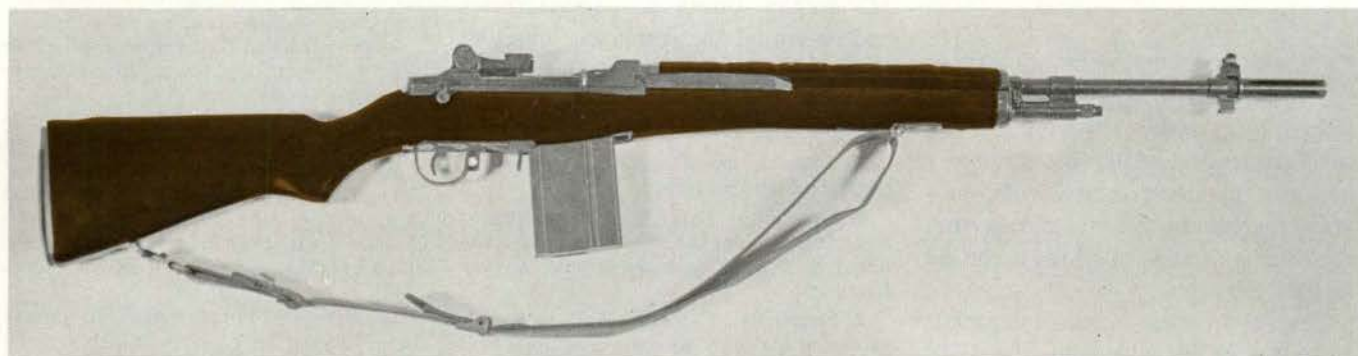
6. Its mechanism must be unfailing: The reliability of the weapon mechanisms must be confirmed by Ordnance tests and later field testing.

7. It and its ammunition must be light enough to carry under combat conditions: Lightness of a rifle and ammunition is a highly controversial issue. It must be remembered that the ruggedness of a military weapon must be balanced against its weight. The much-argued-for superiority of lightweight plastics and glass compounds must be compared to the yet-to-be confirmed field observations of their wearing qualities and stress resistances.

The very extensive small arms weapon testing currently being conducted by the Army will determine how each of the test weapons measures up to the desirable physical characteristics and essential performance qualities outlined on these pages.

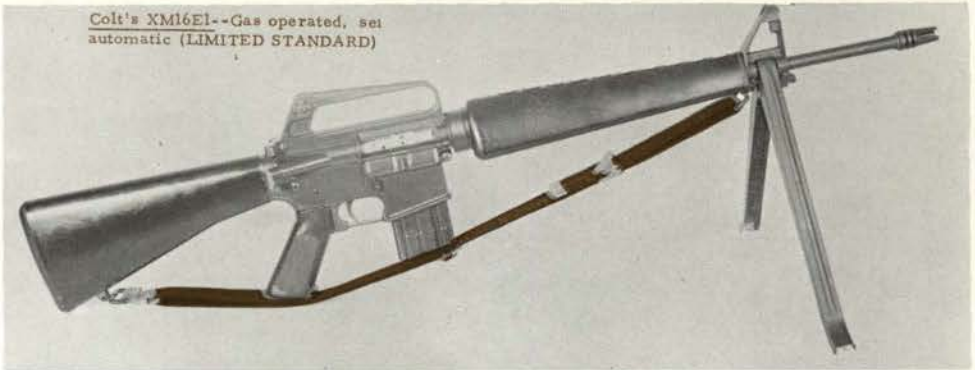
Much controversy exists concerning the possible adoption of the 5.56-mm cartridge. The standard 7.62mm cartridge is $\frac{5}{8}$ inch longer and twice as heavy as the new round and, consequently, resupply of the 5.56mm would be easier when U.S. Army units are operating independently. However, the 7.62mm was adopted in 1953 for the member nations of NATO as the standard rifle and machine gun cartridge, and unless the other nations also adopted the 5.56, logistical problems of resupply of both type rounds could negate the advantages of using a lighter and less bulky cartridge.

The 5.56mm cartridge is described as "controversial" for another good reason. A great deal of contradiction presently exists in published test results in the categories of penetration



M14 Rifle. The US Rifle, 7.62mm M14 is a lightweight, air-cooled, gas-operated, magazine-fed, shoulder weapon. (STANDARD).

THE CONTENDERS—These are the four 5.56 mm weapons that are currently being evaluated for a place in the defense effort.



Colt's XM16E1--Gas operated, semi-automatic (LIMITED STANDARD)



Armalite's AR-18 --Gas operated, front-locking rotary bolt, semi- and full-automatic.



Cadillac Gage's Stoner 63--Gas operated, semi- and full-automatic.



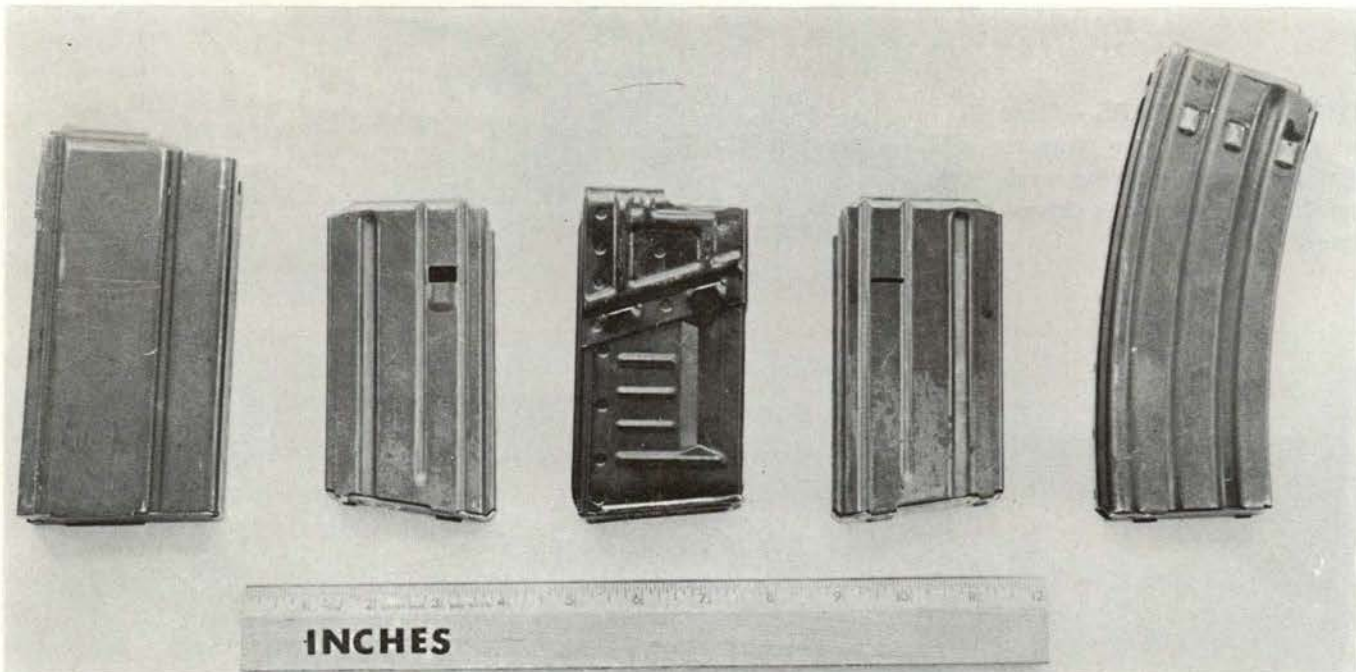
H&R's G3 (M)--Gas operated, delayed blowback, semi- or full-automatic

and range. For example, some test results indicate that this bullet will penetrate both sides of a government-issue steel helmet at a range of 600 yards, "(New GI Machine Guns", *Guns and Ammo*, June 1965, page 33) while for the identical range, other tests have indicated that this bullet will penetrate only one side and heavily dent the opposite side

(Annex B to Service and Troop Tests, Stoner 63 Weapons System-Rifle Configuration, page 337). Still another publication states that this round will not penetrate either side of a helmet at a range of 600 yards ("Report on the Stoner 63: A New Small Arms System," *Marine Corps Gazette*, March 1964, page 35).

The only penetration test that I

have personally conducted was to fire both the 7.62mm and the 5.56mm cartridges through government-issue ammunition cans filled with water (Figure 2 and 2a) at a range of 25 meters. The lids were securely fastened and then one round was fired at each of four cans, two cans were engaged through the short axis, and two were engaged through the long



Contender and candidate magazines. From left to right, standard M14 (20 rds.); Colt XM16E1 (20 rods.); Harrington and Richardson G3 (M) (20 rds.); Armalite AR-18 (20 rds.); and the Cadillac Gage Stoner 63 (30 rds.). All magazines pictured are 5.56mm with the exception of the M14, which is 7.62mm.



Targets used in the penetration tests were four government-issue ammunition cans filled with water. Top photo shows entry side of cans prior to tests marked with an "X" to designate the aiming point. Lower photo shows exit sides of cans after the test. From left to right in top photo: Can engaged by 7.62mm round through short axis; can engaged by 5.56mm round through short axis; can engaged by 7.62mm round through long axis; can engaged by 5.56mm round through long axis. Lower photo shows cans (after test) in reverse order, from left to right. (All cans were engaged at 25 meters)

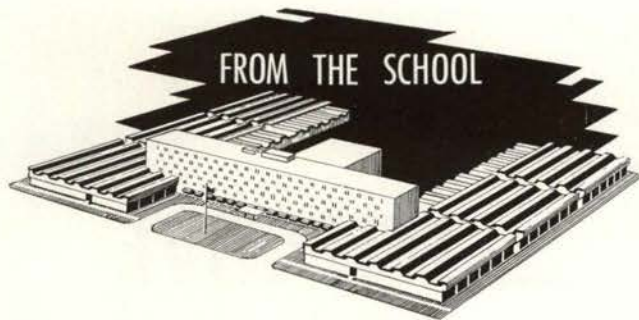


axis. The results of the firing are shown in the accompanying photographs. The larger 7.62mm cartridge has more punch or "knock-down" power at a range of 25 meters, as evidenced by the much larger exit holes. However, the 5.56mm cartridge apparently delivered more of its energy within the target (properly because of a tumbling action) as

evidenced by the extreme distortion of the ammunition can.

Another fact worth mentioning is that the smaller 5.56mm round, though having a much greater velocity (3,250 fps for the 5.56 mm as compared to 2,800 fps for the 7.62-mm), failed to exit the can engaged lengthwise. The shattered bullet was located inside the can.

While none of the 5.56mm rifles have proven superior to the standard M14 rifle, the following statement made by General Earle G. Wheeler in 1963, while Army Chief of Staff, appears to be just as relevant today: "The M14 can never be sure its slot in the rack will not be filled by a newer weapon when it gets back to the barracks." ■



Sinking of Baseplates

The oldest method of preventing mortar baseplates from sinking has been to spread the force received at the baseplate over a larger area with planks, PSP, or logs; however, the newest method which has proven effective in Vietnam is to place the baseplate into a used truck tire. The tire absorbs the recoil and prevents excessive sinking.

Firing Tables

81mm Mortar. The latest firing table for the 81mm mortar is FT-81-AB-2 dated December 1965. This table reflects range in meters. Units which have not received this table should request it through AG Publications channels.

60mm Mortar. FT-60-L-2 dated September 1965 is the latest table available for the 60mm mortar.

4.2-inch. FT-4.2-H-O (Rev) dated October 1965 reflects firing data for the A1 series of 4.2-inch ammunition.

Patrol Antenna From Vietnam

Small units and patrols have always been faced with the problem of outdistancing the communications range of their portable radio sets. This problem is further amplified in the forested high plateaus of Vietnam and in the jungles along the Cambodian border. These areas often reduce the range to one tenth of the range obtainable in the Delta region.

Operations in these areas indicated a need for a lightweight, easy-to-erect antenna that could be elevated to give effective "line of sight" communications.

Based on these factors, the Combat Development and Test Center-Vietnam (CDTC-V) developed the patrol antenna, MK III-PRC-10 (a vertical folded dipole antenna).

This antenna is manufactured in Vietnam and is sized to one half wave length for three different operating frequency ranges to the radio set PRC-10. The dipoles (antennas) are made with one wire on either side of a hollow plastic tube, forming a complete loop, ending at the center. There are three dipoles (antennas) in each kit in order to better match all frequencies

associated with the PRC-10 FM radio. The correct dipole is connected to the transmission line by a household electrical cord connector. The transmission line is common "twinlead" TV wire on a reel. On the side of the reel is a coil of black wire with an antenna connector which forms a transformer to match the antenna to the set. The elevating device is a nylon cord on a dispenser and a weighted throw stick which is thrown over a tree limb and used to elevate the antenna vertically. The entire antenna fits into a canvas bag four by seven by eight inches, with carrying strap. When the operating frequency is known and will not change only one dipole need be carried. With a little practice, one man can erect the antenna quickly and silently without revealing his position. The antenna is normally erected vertically but can be erected horizontally if the receiving antenna is also horizontal.

This antenna, properly installed, and used with a high-gain antenna at base site, will increase base-to-unit communications by two to three times the normal operating range of the radio set being used.

The Communications-Electronics Department, United States Army Infantry School has developed a field expedient version of the antenna that can be made from materials easily obtained in the unit. A complete description and illustration of the field expedient patrol antenna is found in paragraph 126 D, Chapter 9, page 150 of the Infantry Communications Data Book, dated January 1966 published by USAIS, Fort Benning, Georgia. The field expedient patrol antenna will also increase communications ranges two or three times normal range of the set.

The antenna is constructed with the use of the following formula to determine $\frac{1}{2}$ wave length of the operational frequency:

To determine length of antenna in meters: divide 142.5 by your operating frequency.

EXAMPLE: $Constant = 142.5 = 3.17 \text{ Meters}$
 $Operating \text{ Frequency} = 45.0$

OR TO DETERMINE $\frac{1}{2}$ WAVE LENGTH
 IN FEET:

$Constant = 468 = 10.4 \text{ Feet}$
 $Operating \text{ Frequency} = 45.0$

The antenna can be hoisted to any height desired depending upon the length of the lead-in. Two critical points are that the lead-ins should be twisted together from the antenna to the radio set, and that no portions of the antenna itself should touch another portion. Either lead-in can be used for ground or attached to the antenna connector.

This antenna and its field expedient version offers one solution to the unit to base communications problems in Vietnam's forests and jungles or in many other situations requiring ranges greater than the normal range of portable FM radios.



EFFECTIVE INTELLIGENCE

CAPT JOSEPH B. PLANCHE, Inf

ANY GOOD INFANTRY UNIT fighting in the Republic of Vietnam today, no matter what the nationality, is going to have a difficult task in getting accurate, up-to-date intelligence. Especially will this task be difficult in the "hard" areas of the Republic such as War Zone D, the Central Highlands, and along the Cambodian border. These areas vary in their hostility toward government forces. Regardless of the degree of hostility manifested or not manifested in these areas, the intelligence effort will be "uphill all the way."

Intelligence is the most critical and important factor for successful operations against a hostile force as found in the Republic today. Considering the task requirements for intelligence collection primarily from the district¹ level, where the Vietnamese Infantry battalion I was advising was operating, I will describe an experience that led to the capture of two important Viet Cong agents from North Vietnam.

The technique used may be of value in the planning of better methods for the collection of intelligence in a similar situation. This technique is in use today in some provinces of the Republic, and could have been tried and adopted before this unit, the 3rd Battalion, 51st

Regiment, 25th Infantry Division, put it to use. An after action report was submitted through channels.

BACKGROUND

After a number of search and destroy operations (hard-hitting military actions to keep the VC off balance) over a six-week period in a large valley south of the city of Quang Ngai, I began to realize that we were accomplishing very little in the mission of area pacification. Time after time, after a two- or three-day move through the mountains, across rivers, and numerous village searches—we came up with nothing, nothing other than a good first-hand knowledge of the terrain and a few wounded or dead soldiers from booby traps and snipers.

The S2 and I talked at length one evening trying to decide on some solution as to why we could not make contact with the Viet Cong units or agents that we knew were in the area. He and I agreed that the battalion-size operations were not the answer. It was becoming obvious that there was too much area to be searched and because of the terrain, the VC on the mountain tops could alert and move their units far in advance of our arrival into any area of the valley. If we moved at night, signals went out from one village to the next alerting all to our pending presence.

During lulls between division-directed operations, various pacification projects were instituted in the area. The battalion commander dispersed the three rifle companies as far away from the CP as possible to extend to the maximum the pacification effort. He checked each to see that they put out nightly patrols and ambushes for area security. The ranger platoon was used for road security during the day and on S2-directed patrols at night. With this system producing little results, the battalion staff soon concluded that there must be other factors to be considered and that the company commanders would be called in to meet with the staff and American advisor to devise a plan or solution—a plan that would enable the battalion to accomplish the mission of pacification, other than merely guarding the bridge reconstruction and conducting road security.

EVALUATION AND PLANNING

Using U. S. Army FM 30-5 (Combat Intelligence) the S2 listed seven areas that should be considered or re-evaluated in this particular situation. These areas were: (1) search and seizure operations, (2) establishment and operation of check-points and roadblocks, (3) documentation of civilians, (4) censorship, (5) physical and electronic surveillance, (6) maintenance of

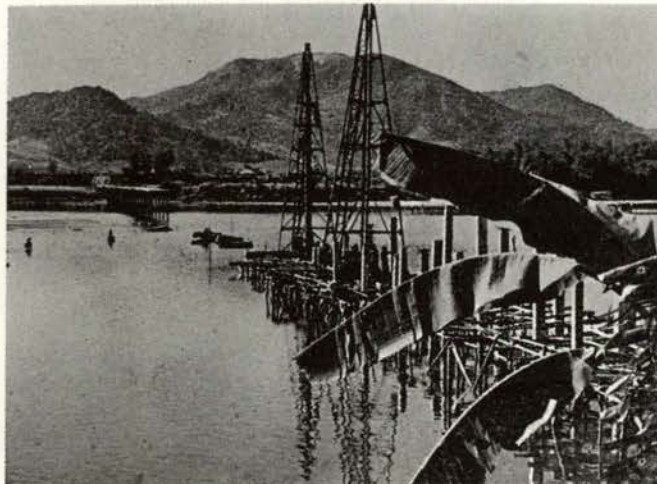
¹ District—a political subdivision of the province also referred to as a subsector for military purposes.



Advisor and XO plan to apprehend the two known strangers.



The assistant battalion advisor joins ARVN Ranger platoon leader in a small fishing boat.



The S2, in black clothes without hat, moves out with lead Ranger squad.

Reconstruction of the Cong Hoa bridge, destroyed by the Viet Cong, was an additional mission.

The vector control man moved freely throughout the area and was a good source of intelligence.



extensive dossiers, and (7) intensive interrogation.² The S2 also quoted the FM . . . "The presence of both friendly and hostile civilians in the area dictates modification of normal collection procedures."³

The battalion commander agreed with the items or areas listed, but pointed out some areas that we had failed to consider. First, the capability of this battalion had to be considered. With a three-man intelligence section authorized, some type of augmentation would have to be devised in order to work the seven areas listed. This particular district at the present time had little or no funds and what few agents they did have were ineffective. So the CO suggested we add training and some type of financial support to our plan. Another important item that the CO pointed out was that there had been

very few government forces this far south in the valley in close to a year. Therefore, we should plan for some resistance from this particular area.

It was decided that the list would be given more study during the next few days to see if we could improve some of the areas within our capability and that I would seek assistance from the division G2 and G2 advisor.

The G2 advisor told me he would consider the request for additional funds, both for the battalion and the district, but at the time other areas of the division tactical zone had more priority. He recommended I talk with the G5 advisor about population control measures that were being considered apart from the G2's area of interest. The G5 had the same problem—teams being trained at the present time for population control measures were already scheduled for areas of higher priority.

The battalion commander and I

decided to visit the 51st Regimental CP at Bia Gia. We stopped first at division. At the time we were the division reserve battalion, but regiment still had logistical support responsibilities. Our visit proved to be most profitable. While having lunch with the regimental commander and discussing various problems, the regimental doctor reported that he was having trouble holding sick calls in the northern sector because VC agents or agitators were mixing in with the local village people. He wanted the regimental ranger company to provide security on the next scheduled sick call. This request was approved and after lunch a meeting was held to discuss some of the 3rd Battalion's problems. I asked the regimental commander if he thought the VC would be able to recognize the rangers if they were dressed as medics and mixed in with the sick call group. If they wouldn't it seemed to me this would be a good way to capture a few live VC. The

² Field Manual 30-5, *Combat Intelligence*, Hqs DA July 1963, USACDCIA, Ft Leavenworth, Kansas. Chapter 7, Section V, Para 173.

³ *Ibid.*

battalion commander suggested using both rangers and our own intelligence section personnel. The regimental commander said, "Try it."

A PLAN IS DEvised

The first day back at the battalion CP was spent in conference with the battalion executive officer (who was in command of special projects), the S1, S2, S3, and the assistant American advisor. They concluded that the search and seizure operations would continue and that any time the Regional Forces personnel of the district were included, they would be added to the troop list at the last possible moment and briefed while on the move to avoid any possible compromise.⁴

The checkpoint and roadblock troops would be augmented as much as possible with Regional Forces personnel and local or national policemen who would know the local population better than our regular troops. The ranger platoon would be used to patrol all back roads and conduct ambushes at night as they moved from one area to another.

Physical surveillance would be conducted by the three dispersed rifle companies and some trusted civilians who had been recruited by the S2 in the city of Quang Ngai.

The maintenance of dossiers was out of the question, but the S1 and his clerk were directed to assist the S2 in any files that could be collected. All agreed that the S2 sergeant had been doing an excellent job in intensive interrogation, but he needed to spend more time writing it down. The S3 clerk would assist him in writing up reports.

The group then discussed the plan for holding a sick call in one of the more hostile villages in the south, using the rangers and intelligence personnel (both from district and battalion) along with the medics. The battalion doctor and his medics were briefed on the plan and it was

decided to use part of the ranger platoon as a security element in order to keep the size of the unit small.

The battalion executive officer contacted the district chief and requested a national policeman, one Regional Forces squad with radio operator and any medics that could be spared. The assistant battalion advisor had already departed for Quang Ngai to pick up additional medical supplies from the division G5 and the MAAG compound.

At daybreak the following morning the team moved out across the river by boat. The national policeman was the only person from the district that was briefed on the purpose of the operation. A radio check was made to alert the two companies deployed at the base of the mountains on the east side of the river (the third company was deployed on the opposite side of the mountain chain). One squad of the ranger platoon moved out one kilometer to our front, one squad remained with the main party, and another squad covered our right flank, between the road and the river. The fourth ranger squad moved down the west side of the river and was to join us later at the selected village, approaching it from the south. With the S3 remaining at the battalion CP where there was one "two-tube" 105mm Artillery platoon and a Regional Force company stationed some 10 kilometers to the north, everyone felt we had adequate fire support and area security in the event of an ambush. The two rifle companies deployed at the base of the east mountain chain could assist us on call. The Regional Forces squad gave us an additional radio net in that they were in the district and province operational and intelligence net, which was linked by wire to the division net.

The village chief was out to meet us and the battalion officer explained the reason for our visit. We had passed through Dai Lac village on several previous operations, so the chief knew us on sight. He was asked to furnish a large building for



XO and a national policeman meet the village chief of Dai Lac.



Registration for sick call begins.



Ranger platoon sergeant "breaks the ice" with candy.

the sick call and to call the people to start registering. The battalion doctor set up the registration point outside the village schoolhouse and the S3 clerk started the registration. Some of the people did not want to register or answer any questions about themselves or about their family. Three men had to be removed from the front of the line because they would not answer the required questions.

The ranger platoon leader was giving out candy to children in the area and the intelligence personnel (dressed as medics or in civilian clothing) were talking with groups of people standing in and around the school yard. The S2 and the national policeman checked nearby houses to see if all the people had been mustered.

The S2 sergeant got the first word from one of the local people that there were two strangers in the village. Someone in the crowd told him

⁴ Regional Forces are paramilitary and, in this particular area, did not have the same level of combat effectiveness as a regular Army unit.



The two suspected VC agents are separated to facilitate interrogation. The two current ID cards gave the men away. There had been no government registration in this area in 11 months.



Ranger checks a woodcutter's sacks and cart.



Registration progresses smoothly.

this as they talked about the sugar cane harvest. The national policeman was called and a conference was held to decide the next move. A few more people were questioned, but the people would not tell the location of the two strangers.

The ranger squad with the main party was ordered to start a house-to-house search starting in the northern part of the village. The squad coming from the south was ordered to start a search on their way to our location. By 1200 hours (30 minutes after the search began), the ranger squad to the south produced the two suspects. The S2 and his team searched the men and after a brief interrogation concluded that they were agents who had recently arrived from North Vietnam. It was decided to get these two to division as soon as possible. They were sent back to the battalion CP by foot and from there by truck to Quang Ngai City.

The two agents from the north claimed that they had not been in the area long enough to know any other VC agents and that their only mission was to "tell the truth" about the war.

It was learned a few days later that these two agents were new in this area and that the division G2 planned to move them on to II Corps Headquarters at Pleiku. At our level the two agents contributed very little to the collection effort.

CONCLUSION

At last some useful intelligence was gained . . . and not by a real show of force or combat operations as such. But rather by the subtle use of group psychology and a simple civic-action program. The most important aspect of this experience was getting people away from their homes or fields where they could talk, yet not be fingered by the VC. Possibly the simple civic-action program as-

sisted in making the people more friendly, but the fact is someone had the opportunity to talk while the group was in the school yard and had the shield of the whole village. In this setting, a given villager did not have to talk about the Viet Cong because he had little to gain—in fact he had much to lose if he did talk. The VC had been treating the people well, the VC wanted to keep the area quiet. We believed it was a rest or way stop for various VC elements moving south to Binh Dinh Province.

The whole village of Dai Lac was not sold on the government's intentions, but the break was very significant. At that time the VC were making every effort to avoid any attention in the area preceding their upcoming operation in the province and in the Binh Dinh Province.

Looking back, now it could be seen why some of the factors of intelligence collection were not working. The most important factor was the lack of a current census. As each village was searched there was no way to account for people mustered. Each time we checked Dai Lac Village thereafter, we had a basic list of who was supposed to live there and who was not there the last time we visited.

Neither the Infantry battalion nor the district forces had the required forces to do all the jobs or tasks outlined in FM 30-5. But some combinations of personnel and equipment, assistance from both the G2 and the G5, and a little time and experience furnished a formula for success. This small civic action program cost the government very little. We had to wade a wide river, walk a few kilometers carrying medical supplies, talk and plan a few days; but this was the first operation in the Dai Lac Valley where we didn't have to kill any people or carry out any of our own dead soldiers. The two VC agents, in fact, carried the empty medical containers back to the battalion CP for us. ■



THE VICTORY

Capt William C. Westgard, Inf

MARSHALL AWARD WINNER



Each year the Marshall Award is selected from articles submitted by students of the Infantry Officer Career Course.

This article is the winner from class #1.

THIS is a true story. It is the story of a victory, not one of much military importance, but a victory of one system over another, of order over chaos, of professionalism and dedication over sloth and incompetence.

In the middle of March the first battalion relieved the third and took over the security of a 20 to 25 square kilometer area around the village of Rach Kiên and the hamlet of Hot Toc. The battalion was tired. It had come from four days of operations and found itself stuck on the wrong end of the road to the regimental headquarters, a road that was safe only when lined with troops, and in a town that had been overrun two months previously.

That night there was a tight defense. The normal small ambushes went out, but the Viet Cong did not come. The next morning the battalion met the town. The people of Rach Kien had known soldiers before—regulars, civil guards, militia, and Viet Cong. They liked none of them. None of them would leave the village in peace. Their attitude was plain: there is no difference between these and the last. They will steal

from us, they will live in our homes, they will take our girls and draft our young men; and when the Viet Cong come, they will shoot a little and run away. However, we will make the best of it for they have money and they have with them four of the Americans who have even more money, and we will get some of it.

They were contradicted that day for they saw a soldier beaten by his commander in the market place for stealing a duck, and even made to pay money for it; but they said to themselves, this will pass.

The Viet Cong came that night to test the new battalion. The soldiers were awake. There was blood on the paddy dikes the next morning where the shooting had been.

The second day that the battalion was in Rach Kien the commander called all the adult men and women to the school to talk. He told them that he had come to their village to protect them, but that he could not do so if they did not help him. He said that he knew their experiences with the Army were not good, that they probably did not trust him. He asked them to test him and his men, but he reminded them that it was their town, and if they wanted to live in peace, they would have to work for that peace. He asked for a showing of hands of those who would help him. There were only a few. The people were afraid.

A week later the commander called another meeting and again asked for his vote of confidence. Now there were only a few who did not raise their hands. During the week the Viet Cong had come four nights.



They had not been able to enter the town. Six families had come to the market to buy burial clothes for their sons. The battalion had protected the village.

Although the battalion was required to leave the area of the village on many occasions in the weeks that followed, the people were able to see that they were still being defended effectively. A holding force was habitually left behind to fend off small Viet Cong raids.

The battalion's operations in the surrounding area were becoming more successful. The villagers were volunteering information of Viet Cong activities and locations. The intelligence section had established a series of excellent civilian information sources, and was using its own personnel, dressed in civilian clothes, as roving outposts. Though the people in the area were well aware of the identity of these men, they were never betrayed.

Community relations reached a high point on the Birthday of the Buddha. At this time the battalion provided the first large-scale celebration the village had been able to have in five years.

The battalion's success was measured in another distinct way. The Viet Cong began to give propaganda loudspeaker broadcasts from positions just outside the range of the 81mm mortars. The appeals were directed to the civilians and asked them to petition the district chief to have the first battalion relieved by another, preferably the battalion which had previously occupied the town. These broadcasts persisted until

the battalion ambushed and captured the propagandists.

Meanwhile, intelligence was being received which led the commander to formulate a plan by which he could more definitely secure the village from Viet Cong raids in the future. He knew he must make the VC afraid of coming to Rach Kien. Since the battalion had been in the area, the Viet Cong had been unable to collect taxes or to obtain necessary foodstuffs. Indications were that they were growing desperate.

In the past the Viet Cong had established a definite pattern of entrance into the village when the government troops had left. It was:

1. The VC would approach the village with one or two scouts and conduct a reconnaissance by fire.

2. If no return fire was received, the scouts would proceed across the foot bridge and reconnoiter the market place and then push into the main street of the village.

3. If still no opposition were met, the main body would enter and would proceed with its program of tax collection, extortion, and intimidation.

4. The main body of the VC had varied in the past from a squad to a reinforced platoon, depending on the extent of their proposed operations.

The concept of the plan was simple. "If the hunters could not find the tiger in the jungle, then the tiger must be made to come out of the jungle to the hunters."

The night before the execution of the plan the commander held a conference with his executive officer

THE UMPY-UMPTH INFANTRY DIVISION is scheduled to move into the field Monday morning for a week-long FTX.

During his final staff meeting prior to the FTX, the division support command commander includes in his remarks the following announcements:

"The division band will be under division control for at least the first two days performing its primary mission."

"The division ammunition section will be located at BLANK which is about 17 miles from our CP at a simulated ASP. HHC will be required to feed them at that location."

"The chief of staff has indicated

that the division transportation section will operate from the division CP."

"S1 and HHC & Band company commander, I want our CP established without delay and I want to emphasize that local security must be in operation from the minute we move into that CP area."

Following the briefing, the support command S1 and the company commander of HHC & Band hold a brief discussion. No snags are encountered until they discuss what is normally a routine, SOP matter—CP establishment and local security. After rechecking their figures they discover that with the detachment of the band, ammunition section, and transportation section, and discounting the mess section which will be involved in its normal duties, they have a grand total of 24 enlisted men. Deducting a minimum of three drivers for staff officers and two KPs they have 19 available men to set

up six general purpose tents (two medium and four small), dig latrines, establish lighting, put up signs, etc., and most important—establish local security. But hold on a minute. Of the 19 available men, two are E9s; four are E8s; two are E7s; and one is an E6. To further complicate the matter, all of the staff section chiefs will want their senior NCOs operating in the sections as soon as possible.

What's the solution? At this stage most articles in service publications give you a solution so simple and

obvious that you can only marvel at your own denseness. I don't know of a solution. Maybe the addition to the TOE of HHC & Band of DISCOM of a motorized rifle platoon which could be utilized for CP security, rear area defense missions and rear area damage control duties, and which could also provide some indians when needed is the answer. All I know is that we need some indians! ■





THE COMMON FACTORS

LT COL DIXON C. ROGERS, Inf

A CAREFUL ANALYSIS of the written evidence of what happened in battle would reveal that the elements of the tactical classification which appear most frequently are maneuver, distribution, and organization of forces. These elements are the framework of the operation order and operation plan and they are usually covered most often and fully in the journal and after-action reports of a unit.

The frequent occurrence of these items is only one measure of their importance. Another way to understand their importance is to understand that battle is a combination of offensive and defensive operations

designed to impose the victor's will on the vanquished. In both offensive and defensive operations, the opposing forces maneuver, distribute, and organize so that they may win. Recognition of these facts is so important that the form used by the Army to convey operation orders—the five-paragraph operation order—has definite places for these topics to be taken up: For example, "Task Organization," "Concept," "Maneuver," and in this same "Concept" paragraph distribution of the force into main and supporting attacks and reserve.

One last reason why we study maneuver, distribution, and organization of forces—the concepts of each area are useful to us in planning and executing operations and in studying past operations. The knowledge of how these elements help to bring combat power to bear allows us to plan our operation intelligently. The intent of the operation once started does not deter us from changing our minds when the facts show that our intent can no longer be executed as planned. Rather, we shift emphasis in the execution or conduct in order to carry out an intent which corresponds with the new facts. Finally in studying an operation after it is over, the cold facts of the battle no longer honor the dynamic intent of the commander, but they can recreate the battle and identify the final maneuver, distribution, and organization as the battle was fought. If we know what the commander intended, the critique can be complete, but even without the commander's intent we can see how and why the winner overcame the loser.

Maneuver of Forces

A maneuver is a movement to place ships, troops, material, or fire in a better location with respect to the enemy. A successful maneuver achieves a tactical advantage over the enemy. Without an actual or assumed enemy, maneuver of forces is tactically meaningless. Movement is made toward or away from an enemy or against his flanks or rear to place the force where the enemy is at a relative disadvantage. Thus the maneuvering force can achieve results with less cost in men and materiel. Such results in the case of movement allow the force to avoid enemy strength, maintain freedom of action, or exploit success. In the case of placement or disposition, the force places effective fire on the enemy, cuts his escape routes and supply lines, or forces him to fight on terrain that is not of his choosing.

The character of maneuver is different in the attack and defense. The attacker performs his maneuver so that he can close with the enemy at the time and place chosen by him. On the other hand, the defender makes his maneuver prior to the battle in a place which facilitates his bringing maximum fires to bear on the enemy. He also maneuvers after the battle is joined to exploit his enemy's error or weakness.

Throughout the history of military operations, various patterns or forms of maneuver have been identified as being used by commanders on the battlefield. These forms are associated with the advantage the commander intended to gain over the enemy. These are expressed in the offensive as an intent to overrun a weaker enemy, divide and defeat the enemy in detail, fix the enemy, destroy the enemy in position, or turn him out of the position. In the defense, the intent may be to prevent, resist, repulse, or destroy the enemy attack.

The scheme of maneuver of a tactical plan is the way the commander expresses his intentions. It may employ one or more offensive or defensive maneuvers or a combination of offensive and defensive maneuvers. Because defensive maneuver of forces will be treated later, only offensive maneuver of forces will be covered in this article.

In the offense, a commander can move his forces in either of two directions: To the front or to the flanks (or rear) of his opponent as the two face each other. We can identify two maneuvers in each direction which have been repeated by commanders in military history. The frontal maneuvers are the frontal attack and the penetration. The flanking maneuvers are the envelopment and turning movement. In their purest classical form they are independent of size or organization of a force; however, the range of the weapons available to a commander may make one or more of the forms of maneuver impractical from the planning point of view. Recognition of this fact explains why some manuals have listed two or three forms of maneuver as the basic forms and the rest as variations of them.

The forms of maneuver are methods of moving and placing forces to gain a tactical advantage over the enemy. They are particularly suited to the combat action: the attack. They are applicable to all offensive operation to the extent that the offensive operation and the attack are the same. The forms of maneuver may vary when viewed from various portions of a force. For example, the whole force may be making a penetration, but one of the subordinate elements may be making an envelopment using airmobility. Another subordinate element may be making a frontal attack to fix the enemy in position. By their very nature, the forms of maneuver often require division of the force into two or more subordinate elements, one to fix the enemy in position and one to carry out the intent of the commander. The fixing force is the supporting attack while the other force normally takes the principal objective of the attack and is the main attack. The implications of these forces are discussed in distribution of forces.

The **frontal attack** is a form of maneuver which strikes the enemy all along his front by the most direct route. It is used to overrun and destroy a weaker

enemy or to fix the enemy in position to support another form of maneuver. The objective of a frontal attack is usually key terrain which will accomplish the mission; however, the objective may be the enemy or the enemy position to the front of the attacking force. See figure 1. The frontal attack is favored when the

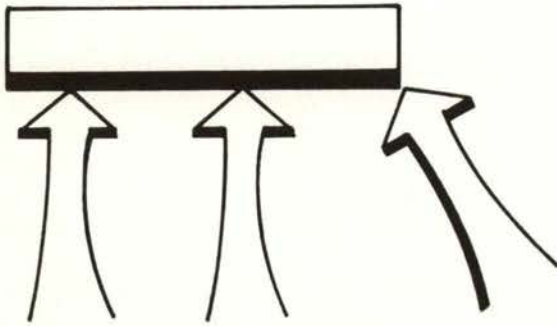


Figure 1: Frontal Attack.

enemy is weak or disorganized; when the attacker has overwhelming combat power; when the situation is vague or not fully developed; when time or the situation require an immediate reaction; and when the mission is to fix the enemy in position, deceive him, or seize terrain to aid another attacking force, *e.g.* a supporting attack. The frontal attack is seldom a decisive maneuver, and it is not employed unless overwhelming combat power is available or no other form of maneuver can be employed to accomplish the mission.

The **penetration** is a form of maneuver which breaks through an enemy position, widens the gap created, and destroys the continuity of the position. The intent of the penetration is to disrupt the continuity of the enemy position so that the enemy cannot reconstitute his defense and to defeat the enemy in detail. This is accomplished in three phases. These phases are not necessarily distinct or separate, but though they are

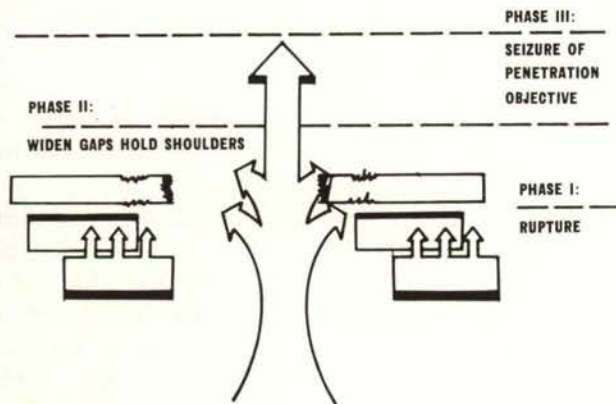


Figure 2: Penetration.

carried out simultaneously each may be identified: the rupture of the forward defenses; the widening of the gap and holding the shoulder; and the seizure of the penetration objective which destroys the continuity of the position. See figure 2. The penetration objective is a key terrain feature in the enemy rear at the depth of the opposing enemy force reserve. When this objective is seized, the enemy can no longer reconstitute his defense with the reserves of his force. He can block or wait for forces from a higher commander to eliminate the penetration. To insure capture of the penetration objective, intermediate objectives are required. The rupture of objectives which destroy the reserve of the opposing major subordinate element assures the breakthrough. Objectives necessary to widen the gap and hold the shoulders are also assigned. Two forces are required to execute a penetration, a fixing force and a penetrating force. The fixing force fixes the enemy in position and deceives him concerning the location of the attack of the penetrating force. The penetrating force ruptures the enemy forward position and moves to seize the penetration objective. A portion of the penetrating force, the fixing force, or reserves may seize objectives which widen the gap and hold the shoulders. It is in the distribution of the force that the commander shows his intent, since he puts the preponderance of his means in the penetration force which breaks through the enemy defenses and completes the destruction of the position by seizure of the penetration objective. The penetration is a decisive form of maneuver which is used when the situation is fully developed and there is no assailable flank. Strong fire support, particularly nuclear fires, favor the penetration. When time is not available to make an envelopment, the penetration should be used, even if there is an open or assailable flank. The penetration is most often used in a coordinated attack when there is no assailable flank and in a break-out from encirclement.

The **envelopment** is an offensive form of maneuver which is directed at the enemy flank or rear toward an objective behind his forces. The purpose of the envelopment is to cut off the enemy escape routes, disrupt his communications, cause him to fight in two directions simultaneously, and to destroy him in his present position. The envelopment objectives are key terrain chosen to fix the enemy in position and to disrupt the enemy's communications and cut off his escape routes. This latter objective must also facilitate his destruction by forcing him to fight in two directions at once. Thus the fixing objectives and the envelopment objective must be within mutual support range of each other. Two forces are required, a fixing force and an enveloping force. The fixing force fixes the enemy in position and the enveloping force moves around or over the enemy

flank of the envelopment objective avoiding major engagement with the enemy until it is in position to seize the envelopment objective. As in the case of the penetration force, the enveloping force contains the preponderance of the combat power. See figure 3. In

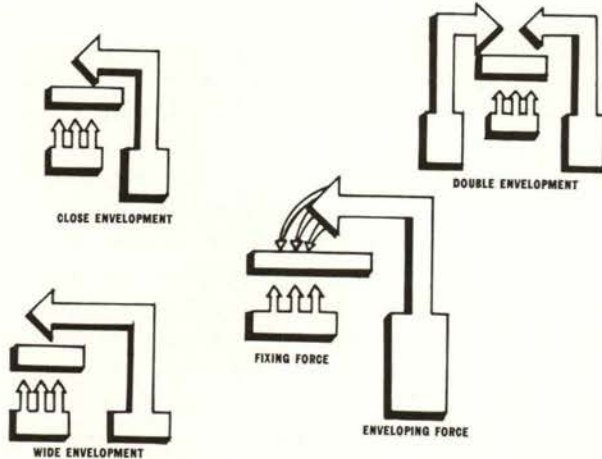


Figure 3: Envelopment.

order for a force to conduct an envelopment, the enemy must have an assailable flank or such a flank must be created by fires. An assailable flank exists when it is created by a successful penetration, when the flank can be infiltrated, or when the flank can be created without use of a major portion of the force. The envelopment must have adequate control means, and it is facilitated by superior firepower, mobility, and surprise. When a choice of maneuvers is available, the envelopment is favored over the penetration in a coordinated attack because it applies the available combat power to the best advantage. It is also used in bypass operations,

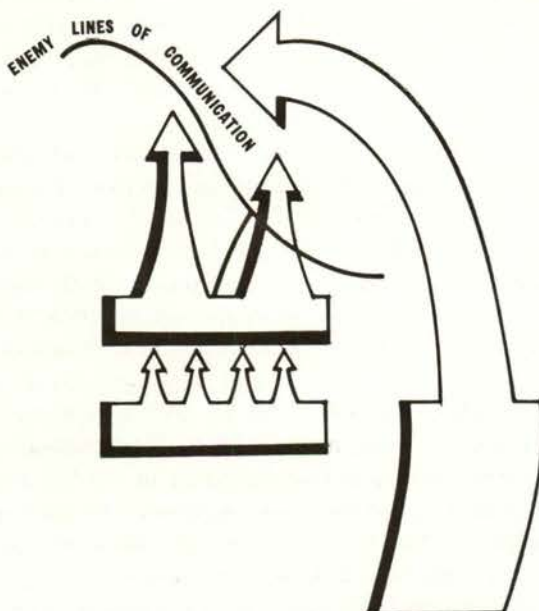


Figure 4: Turning Movement.

the exploitation and pursuit. There are two variations of the envelopment: aerial (vertical) envelopment and the double envelopment. In the aerial envelopment, the enveloping force passes over the enemy to seize its objective and in the double envelopment, two enveloping forces pass around both flanks of the enemy to seize the envelopment objective.

The **turning movement** is an offensive form of maneuver which passes the major portion of the force around or over the enemy force to seize a vital objective deep in the enemy rear. The intent of the turning movement is to force the enemy to abandon his position or to divert a major portion of his force to meet the threat. Thus he must fight at a time and place chosen by the attacker. The objective of a turning movement is key terrain deep enough in the enemy rear that in meeting the threat, the enemy abandons the position with all or a major portion of his force. See figure 4. Two forces are required in the turning movement, a fixing force to fix the enemy in position and a turning force which contains the preponderance of the available means and seeks to avoid major engagement with the enemy while moving to a position to seize the objective of the attack. To conduct the turning movement the enemy must have an assailable flank. It is facilitated by superior mobility, firepower, adequate control means, and secrecy and deception. The turning movement is used when there is an opportunity to seize vital areas in the enemy rear before he can withdraw his main force or support or reinforce the area. This occurs most frequently in the exploitation or pursuit. Because the turning force normally operates independently and out of mutual support distance from other elements, it is seldom planned and executed by a battalion or brigade.

Offensive maneuver of forces requires a distribution of forces in three of the four forms of maneuver. This distribution was into a fixing force and a penetrating, enveloping, or turning force. A discussion of distribution of forces is appropriate, but because distribution of forces in the defense is covered in a later article, only offensive distribution will be discussed.

Distribution of Forces

Distribution of forces is the arrangement of troops for any purpose such as battle, maneuver, or march. It is the allocation and arrangement of the available elements of a force laterally and in depth on the battlefield to carry out the commander's intended maneuver. The arrangement or distribution covered in this subject does not cover the command relationship of the forces which is the subject matter of organization of forces. The purpose of the troop distribution is to be sure that all tasks vital to the accomplishment of the mission have been allocated resources in accordance with the

means available and the importance of the tasks.

Distribution of forces is closely related to two principles of war: economy of force and mass. When the force is distributed in accordance with these principles, sufficient forces are allotted to all necessary tasks, but the bulk—mass—of the force is assigned to that task which will contribute most to the accomplishment of the mission. Distribution of fires is important to the principle of mass, particularly when nuclear fires are considered.

The commander's decision and concept usually give the distribution of the force only in broad general terms. The details of the distribution are worked out in detailed planning by the commander and his S3. The detailed distribution is worked out by visualizing the combat power that must be generated to accomplish the planned combat action. Having determined the required combat power, the commander then determines the means needed to develop this combat power by visualizing how the force will be distributed two elements below his headquarters; *i.e.*, the battalion commander visualizes the battle and generation of combat power in terms of platoons; the division commander in terms of battalions. During this procedure if it becomes apparent that the means available are not adequate to perform the priority tasks assigned, the commander must inform his superior of the situation, the additional troop units needed, and the justification for them. When complete, the tactical plan distributes the force laterally and in depth on the battlefield in a manner giving the greatest probability of success.

A force which has been distributed either laterally or in depth or both laterally and in depth is by definition in a formation. The combat formations of the rifle squad and platoon are extended formations which specify a distribution of means for situations these units may meet in combat. They emphasize development of combat power through the use of fires and maneuver/movement. The two basic formations are the column and line; all other formations are variations of these two. The advantages and disadvantages for the column or line that are listed in the platoon and company manuals are applicable to any force using the column or line no matter what size. For example, the column is strong to the flanks, has great depth, is more flexible, and relatively weak to the front and rear. The line is strong to the front and rear, weak to the flanks, has little depth, and is relatively inflexible.

Offensive forces are distributed in depth—from front to rear—to maintain flexibility and continuity of the attack and for efficient location of fire and other support means. Although the various echelons of a force distributed in depth can be identified, this does not mean that the area they occupy is mutually exclusive.

On the contrary, the echelons operate where they can carry out their mission even though the preponderance of troops in the area may be of another echelon. Thus, there is no clear-cut dividing line between echelons in depth as shown in figure 5. The echelons of a force

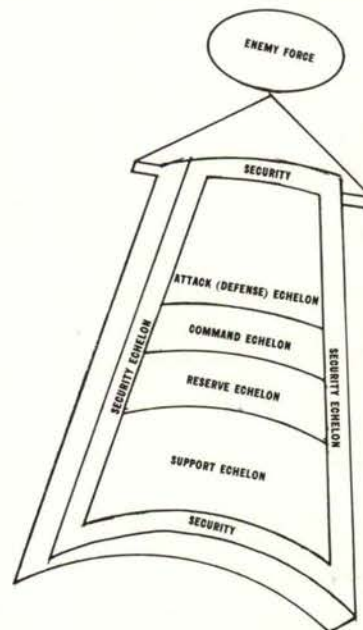


Figure 5: Distribution in Depth.

distributed in depth are the security echelon, attack echelon, command echelon, reserve echelon, and support echelon.

The **security echelon** is composed of those elements of the force which may be disposed to the front, flanks, and rear to preserve freedom of action, reduce vulnerability, and prevent surprise. The size of the echelon is dependent on the degree of threat involved. In the attack, the security echelon to the front may be a covering force, an advance guard, or another force which is in contact with the enemy and which will be passed through on or near the line of departure. During the conduct of an attack, frontal security is provided by the attack echelon which holds its subordinate elements responsible for security within its area of operation.

The **attack echelon** is composed of those maneuver elements and the fire support elements of the base of fire whose mission for a particular operation is to close with and destroy the enemy. Other combat support and combat service support elements may be allotted to the attack echelon as required for its effective employment. The combat and combat service support elements do not need to be under the command of the force commander as long as they are responsive to his request for support. They are disposed laterally within and to the rear of the attacking echelon where they can give close and continuous support to the maneuver elements. They displace when necessary to insure the maintaining

of this relationship with the maneuver forces.

The **command echelon** is composed of those elements of the force concerned with coordination and control of subordinate elements of the force. Such elements are the command group, command post, and organic and supporting communications elements. The command echelon is normally located immediately behind the attack echelon where it can achieve maximum control of the force. The command post may also be divided into a command group or tactical command post, a main command post, and a rear echelon.

The **reserve echelon** consists of the maneuver elements of the force not employed in the attack echelon and of those nuclear rounds held out to engage targets of opportunity. As in the attack echelon it may also include those combat support and combat service support elements needed to accomplish its mission. The reserve is the commander's means of influencing the course of battle once the attack echelon has engaged the enemy. The reserve is held out to provide flexibility in meeting unforeseen contingencies, to enter combat offensively at the decisive time and place, to exploit success, and to complete the accomplishment of the mission. A mobile reserve vastly enhances the potential of the force. The reserve is not used to redeem failure, but to perform missions such as: exploit success of friendly nuclear fires; exploit enemy weakness or friendly success; attack an enemy position which has held up the advance of friendly units from a new direction; reduce enemy resistance which has been bypassed or that develops in the rear of the attack echelon; protect the flanks or rear of the force; hold ground seized by the attacking force; defeat or block enemy counterattacks.

The size of the reserve retained by a force commander depends on his mission and the situation. A large reserve is needed to preserve freedom of action when the force attacks to seize a deep objective, when there is limited knowledge of the situation, or when the commander cannot visualize the attack to its final objective. When the situation is reversed, the commander retains a smaller reserve. A force also needs a smaller reserve when it has superior relative mobility compared to the enemy. When relative mobility is equal or inferior to the enemy, a larger reserve is retained. Dispersal of reserves into multiple assembly areas or march columns provides some protection from nuclear attack. The reserve is located to favor the main attack, to provide security to the command, and at or near a road net which facilitates rapid movement to points of probable deployment and which provides maximum protection from hostile observation and fire. The availability of the reserve for employment is based on time rather than distance. The reserve is positioned for rapid move-

ment and must always remain within supporting distance of committed forces. In fast-moving situations, the reserve may move at a specified distance from the attack echelon. In slow-moving situations, the reserve usually moves by bounds. When nuclear weapons are allotted, the commander normally retains a reserve of weapons to meet unforeseen contingencies. This affects the distribution of troop units since these nuclear weapons may be able to reduce the requirement for troops in the reserve due to their firepower potential. When a commander commits his reserve, he notifies higher headquarters and makes provisions to reconstitute his reserve as soon as possible.

The **support echelon** is composed of those combat support and combat service support elements not required as an integral part of the attack echelon or reserve echelon. It consists of all combat support and combat service support elements necessary to support the operation without regard to command relationship. This echelon is located to the rear of the attack echelon and is distributed laterally and in depth in the rear portion of the zone where it can accomplish its mission.

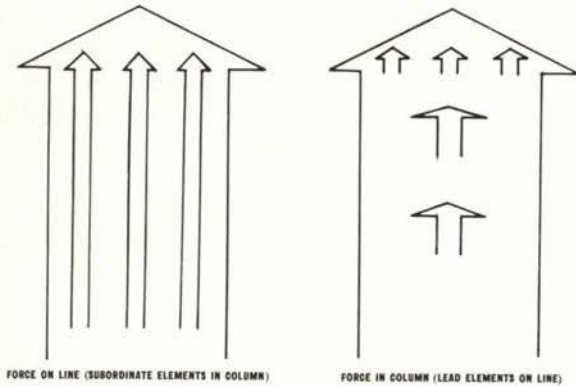
The **lateral distribution** of a force is the deployment of elements in width within the zone of action. The elements of the various echelons in depth are distributed laterally in the zone of action to insure proper application of combat power, flexibility of employment, and reduction of vulnerability. Because the reserve, command, and support echelons distribute themselves so they can best carry out their mission with relation to the attack and security echelons, only the lateral distribution of the attack and security echelon is covered. The specific lateral distribution of a force is a function of the width of the assigned zone of action, the frontage it is expected to cover, and whether the situation and mission require the force to move its mass on a broad, normal, or narrow front.

The frontage covered by an attacking element is determined by tactical considerations such as forces available, anticipated enemy resistance, mission of the unit, the unit's relative mobility compared with the enemy, range of unit weapons and need for mutual support among subordinate elements, range of unit communications, capabilities of unit surveillance equipment, the terrain, the road net, space needed for maneuver and dispersion, and speed of unit movement expected. A normal front exists when the element can effectively cover its assigned zone of action with available resources.

When units are moving or attacking on a broad front, elements of the force are deployed to cover as much of the assigned zone as is feasible without losing control. Gaps are located between subordinate elements of the force rather than within them. There are two

methods for moving on a broad front. See figure 6.

Figure 6: Advance on a Broad Front.



Subordinate elements may advance in column with the lead element on line. Each of these methods places considerable combat power forward; however, the latter method is a little more flexible since it results in the force having fewer elements committed at any one time.

Except when the zone of action is so narrow that an attack on a broad or normal front is precluded, a unit attacks on a narrow front only when its elements cover a small portion of the assigned zone of action. Normally, the elements of the force are in column to give maximum depth to the attack and to facilitate retaining the initiative, providing versatility, and enhancing security.

In the attack echelon, elements of a force are distributed laterally as attack forces or security forces. Security forces permit a force to effectively cover a frontage that would not otherwise be possible using only attack forces. See figure 7.

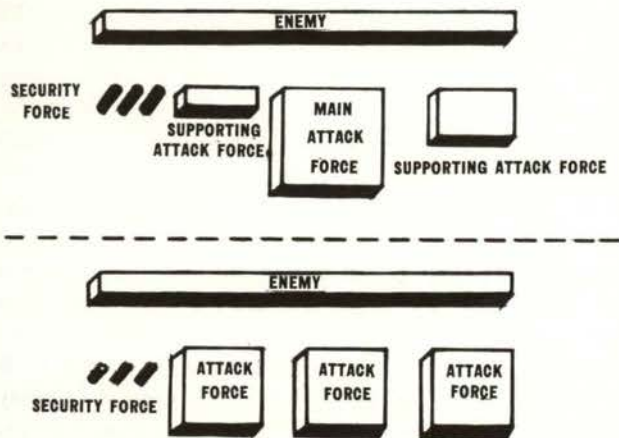


Figure 7: Lateral Distribution of Force.

Attack forces are classified according to the relative power and importance of the maneuver forces involved. The means available to a commander seldom permit all maneuver forces to be equal in combat power.

Furthermore, it is undesirable to expend excessive combat power against the enemy strength when it can be employed elsewhere more effectively. The forms of maneuver require mass or preponderance of strength in specified maneuver forces; thus, it is usually desirable to designate main and supporting attack forces. A penetrating force, enveloping force, or turning force is habitually a main attack force. Fixing or holding forces are supporting attacks. If the forces of the attack echelon are allocated essentially the same means for generating combat power, they are called balanced forces.

The **main attack force** is the maneuver force designated by the commander which he expects to produce decisive results and which he believes has the greatest probability of success. It is the effort into which the commander throws the bulk of the offensive power at his disposal. The main attack concentrates maneuver and fire support elements designed to create superior combat power at the decisive time and place. It exemplifies the principle of mass. The main attack is directed against that objective which best facilitates the accomplishment of the mission. It is given a preponderance of the means to gain superiority over the enemy and to maintain the momentum of its advance to the objective of the attack. All of these contribute to generating maximum combat power at the decisive time and place. The main attack may be changed from one force to another during the conduct of the attack to exploit a successful advance or take advantage of weakness detected in the enemy's defenses. When a force attacks in a single column, only a main attack is involved. When it executes a double envelopment, it may have two main attacks.

The **supporting attack force mission** is to assist the main attack. The supporting attack is a secondary effort which is allocated adequate though minimum maneuver and fire support elements to accomplish its mission. A supporting attack should reduce the enemy's capability to react to the main attack. It contributes to the success of the main attack by seizing terrain which facilitates the maneuver of the main attack; by fixing the enemy in position; by deceiving the enemy concerning the location of the main attack; by forcing the enemy to commit his reserves prematurely, piecemeal, or in an indecisive area; and by preventing reinforcement in the area of the main attack.

Balanced forces are employed when attacking elements are assigned tasks which are equally important; or when objectives, avenues of approach, and the disposition of the enemy forces do not provide an advantage to any attacking force; or when the force attacks in multiple columns to develop a vague situation or conduct a reconnaissance in force. As the situation

develops, one of the attacking forces may be designated as the main attack and provided with the means necessary to obtain decisive results. This distribution of equally weighted forces on multiple routes may also be applied in movement to contact, exploitation, and pursuit.

Security forces in the attack echelon are employed in two methods: either to secure the attacking force or in an economy of force role. The economy of force role is carried out by cavalry or other combat elements who cover gaps between attacking forces or who, as a part of a tactical deception plan to deceive the enemy, take part in a feint or demonstration. When employed in this role, the unit is regarded as a separate force of the attack echelon and is allotted the necessary means to ensure accomplishment of its mission.

Distribution of forces allocates combat, combat support, and combat service support elements laterally to forces and in depth to echelons. These elements are distributed without regard to the chain of command or span of control. When his force is distributed, the commander organizes the force for proper responsiveness to his will to accomplish the mission.

Organization of Forces

Distribution of forces in desired areas on the battlefield does not insure that they will be employed efficiently in accordance with their capabilities. It is necessary to organize the forces for combat by designating command relationships and tailoring them so that the most effective combination of means can be obtained. From a tactical point of view, the commander organizes, moves, and deploys forces on the battlefield in a given situation by assigning missions to his tactical control headquarters and allocating them the forces necessary to accomplish the assigned tasks.

Organization of forces is the unification and consolidation of the various means available within a force under a subordinate commander (command and control structure) who can effectively direct their efforts toward a common goal. Organization of forces is tactically important because it provides the support, coordination, and control necessary to dispose and maneuver the available combat forces to gain an advantage over the enemy. Organization for combat is a result of the detailed planning necessary to implement the commander's decision and concept, and it includes the tactical missions and command relationships between elements of the force. The commander may announce the command relationship of forces in the "Task Organization" portion of his operation order.

A commander should consider two basic principles when organizing his force and establishing the command relationships involved in the organization. These two

principles are mission and control.

The organizational principle of mission corresponds to the tactical principle of the objective. In providing a unit with the necessary means to accomplish its mission, the factors of economy, simplicity, and flexibility must be considered. Only the personnel and equipment required in the performance of the mission should be provided. Equipment or personnel not required on a day-to-day basis should be pooled at the highest echelon practicable and requested by using units as needed. This corresponds to the principle of economy of force. It is also one of the guides in distributing forces; *i.e.*, to allot only the minimum amount of force necessary to all but the tasks of highest priority. A force should be organized as simply as possible. Units must be capable of a wide variety of operations in any type of terrain, weather, or situation. The organizational structure must be one that will facilitate the formation of combat groupings containing the necessary resources to accomplish the essential tasks of finding, fixing, fighting, following, and finishing the enemy.

Control is obtained through an effective system of command and control. This is best expressed in terms of the principle of unity of command. The factors to be considered are those of unity of command, span of control, and chain of command. Only one commander can effectively control the units assigned a particular mission. His responsibility for all his unit does or fails to do must be matched with adequate authority. Maximum and minimum limits on span of control vary with the conditions under which a commander is operating and the complexity of the functions performed. Other factors affecting the span of control are freedom of movement, communication facilities, and staff and command assistants available to the commander. The chain of command enables the commander to exercise unity of command over all elements of his unit without exceeding the span of control.

Organization of forces is based upon an established mission. The command relationship to be adopted is guided by the considerations for most effective employment. Subordinate elements of a force may be organic, assigned, attached, under the operational control of, in support of, or within the area of responsibility of another unit.

An **organic unit** is one which is assigned to and forms an essential part of a military organization. Organic parts of a unit are those listed in its table of organization. A rifle company is organic to an Infantry battalion.

Assignment places units or personnel in an organization where such placement is relatively permanent and/or where the organization controls and administers the unit or personnel for the primary function or a greater portion of the function of the unit or personnel. An

example of an assigned unit is an Infantry battalion of an Infantry division.

An **attached unit** is bound temporarily to a command other than its assigned command; for example, a tank company organic to a tank battalion assigned to an Infantry division may be attached to an Infantry battalion for an operation. When a unit is attached, it is under the command of the commander of the unit to which it is attached. Unless the attachment order qualifies the degree of control involved, attachment implies full responsibility for logistics, administration, training, and operations, except that responsibility in matters relating to the transfer and promotion of personnel is normally retained by the command to which the unit is assigned.

Operational control places a unit under a commander or staff officer for assignment of tasks, designation of objectives, composition of subordinate forces, and authoritative direction necessary to accomplish a mission. Operational control does not imply responsibility or authority for administration, combat service support, discipline, internal organization, or training.

Support is a mission or task requiring one unit, under the command of its parent headquarters, to support another specific unit. The supporting unit is authorized and required to answer directly the supported unit's requests for support. Support as a command relationship should not be confused with the tactical missions normally given to fire support elements.

Area responsibility creates a command relationship between the area commander and the commanders whose organizations are located within the area. This relationship is limited to the specific function that the area responsibility mission is designed to accomplish; for example, rear area security in the division rear area.

Attachment represents the firmest control over a nonorganic unit, but it may fail to use the attached element fully while imposing additional combat service support requirements on the unit to which attached. Operational control provides a relationship where full use of the operational capabilities of a unit is made available without the burden of additional combat service support. The role of support makes the element generally available but does not limit the application of its resources strictly to a single force except in the case of direct support by fire support elements. Generally, the role of attachment is preferred when the commander designating this status is unable to provide effective control and combat service support. Operational control is preferred when outside resources are available for combat service support and effective control can be maintained. The supporting role is preferred when effective control can be exercised by the commander assigning the mission. Regardless of the command relationships involved

between a nonorganic unit and a force, the commander may assign the nonorganic unit a mission of supporting the force as a whole or the existing relationship may be further delegated within the command. For example, platoons of an attached company may be further attached to other companies of a battalion, or, squads of an engineer platoon in support may be placed in support of the companies of a battalion.

Support weapons of artillery units, tanks, mortars, and antitank weapons have more precisely defined tactical missions within the meaning of support (*i.e.*, direct support, reinforcing, general support, and general support reinforcing). The precise definition of these terms may be found in AR 320-5 or an artillery field manual; however, the terms direct support and general support are used in dealing with organic Infantry fire support elements and are clarified below:

Direct support requires the supporting unit to establish liaison and communications with the supported unit, and to use all available resources in the support of that unit. The supporting unit is responsive to its parent unit for task assignment provided that the task can be accomplished without interference in the accomplishment of tasks requested by the supported unit.

General support is that support which is given the supported force as a whole and not to any particular subdivision thereof. A general support mission may be modified by the commander's indication of priority for answering requests for fire support. When a priority is indicated, that priority for answering requests takes effect only when the supporting element has more requests for fire support than it can answer with resources available to it.

Within the larger field of organization of forces, organization for combat is the way the forces are tailored to meet the tactical requirements of the battlefield. Organization for combat accomplishes two things: it combines adequate forces to accomplish each element of the mission and it facilitates command and control of these forces. When the organization of forces is completed, the command relationship between elements of the force is established and tactical missions for each force are specified.

In organizing his division for combat to accomplish his mission, the division commander allocates combat, combat support, and combat service support elements to the six tactical control headquarters: division headquarters, three brigade headquarters, division artillery headquarters, and support command headquarters. These headquarters and their attached and supporting troop units form the tactical groupings that accomplish the division mission. The three brigades are the maneuver elements of the division. They accomplish the tactical mission by using the combat, combat support,

and combat service support elements allotted to them by the division commander for their particular part of the mission. The fire support elements of the division are organic to division artillery. Normally one artillery battalion is placed in direct support of each committed brigade. The remaining artillery supports the effort of the division as a whole and/or augments the fires of one or more direct support battalions in accord with the division tactical plan. The combat service support elements of the division are assigned to the support command.

When the division organizes for combat, the support command commander tailors the available combat service support by attaching it to or placing it in support of the brigades. The remaining combat service support units remain under the control of the support command and support the division as a whole. Combat and combat support units not assigned to or in support of the brigades are assigned to division troops. They carry out combat or combat support missions in accordance with the tactical plan under the supervision of the division headquarters.

Combat elements attached to brigades and combat support elements placed in support of brigades are employed by the brigade in one of two methods: they are employed as pure forces or as combined arms forces. Pure forces are composed entirely of like-type combat arms elements; *e.g.*, an Infantry battalion with no different combat arms attachments or with one or more rifle companies attached. Combined arms forces are formed by the attaching, detaching, or cross-attaching of different combat arms elements in battalion task forces or company teams. The brigade commander forms battalion task forces to accomplish the brigade mission. The number of battalion task forces that can be organized in the brigade is limited by the number of battalion-size tactical units attached to the brigade when the division commander distributes the resources of the division for the brigade mission.

A **battalion task force** is formed by the attachment, or cross-attachment of one or more company-size units of other types of combat arms; as an example, a mechanized Infantry battalion of one or more organic rifle companies with the attachment of one or more tank companies, armored cavalry troops, artillery batteries, or engineer companies. Battalion task forces, as a minimum, must include the battalion headquarters, one of the major subordinate elements of the battalion, and one comparable level unit of one of the other unlike combat or combat support elements.

A **company team** is formed when a rifle company has one or more tank platoons attached or a tank company has one or more rifle platoons attached. As a minimum, a company team must include either an

Infantry or tank company headquarters and one tank platoon and one Infantry platoon.

Attachment of like-type units of a force (such as a rifle company to an Infantry battalion or a rifle platoon to a rifle company) or combat support and combat service support units is considered reinforcement. Attachments to a force of combat units two echelons below the receiving units, such as a tank platoon to an Infantry battalion or a rifle squad to a tank company, are also considered reinforcements.

Combined arms forces may be organized as Infantry-heavy, tank-heavy, or balanced task forces or teams.

Infantry-heavy task forces or teams are task forces or teams in which Infantry units predominate and are used in both mounted and dismounted operations. Dismounted attacks are required against organized defensive positions, obstacles, strong antitank defenses, a built-up area, or in terrain unfavorable for the employment of a substantial number of armored vehicles. In operations of this nature, the tanks support the advance of the Infantry. In mounted operations, mechanized or motorized Infantry task forces or teams may be organized as Infantry-heavy. The tanks, in this case, are employed primarily to lead the attack and are supported by the Infantry.

Tank-heavy task forces or teams are organized primarily for operations that permit mounted attacks, tanks leading and supported by Infantry. Such task forces or teams are normally employed against light, disorganized, or discontinuous resistance such as in the exploitation and pursuit. They are best where terrain is suitable for tank employment, the enemy is strong in armor, and where great shock effect and speed are desired. Tank-heavy forces may also be appropriate for the enveloping force in an envelopment or for the reserve, organized to permit rapid movement through a gap (created by forward elements) to seize the penetration objective.

Balanced task forces or teams consisting of equal numbers of tank and Infantry elements may be organized when the enemy situation is too vague to determine the need for tank- or Infantry-heavy forces. This organization permits rapid commitment of forces capable of performing either tank or Infantry missions.

* * * * *

These then are the common factors that form the framework of tactical operations: maneuver, distribution, and organization of forces. A thorough knowledge of these elements of the tactical classification helps us analyze and classify the application of combat power in past operations to find out the tactics used and aids in planning and executing our own operations. Make them a part of your basic tactical knowledge and they will serve you well. ■



CAREER NOTES



New Mortar Course Underway

USAIS is conducting a new four-week Mortar Platoon Officer Course at Fort Benning. The new course which began its first class on 6 June, is specifically aimed at meeting battlefield needs in Vietnam, and will prepare lieutenants for duty in MOS 1543—Infantry Mortar Platoon Leader. Instruction will be concentrated on the command aspects of 4.2-inch and 81mm mortar tactical employment. The June pilot class will be followed by subsequent classes in November 1966 and April 1967. Prerequisites for attendance are minimal. Commissioned officers who are OCS or Basic Course graduates may apply for attendance through command channels on DA Form 1049.

Aviators in a Temporary Stall

The number of qualified applicants for aviation training has caused a temporary backlog in rotary wing flight instruction. Facilities are presently swamped at the Primary Helicopter School, Fort Wolters, Texas, necessitating cancellation of the June and July Infantry Branch quotas. This cancellation will cause some delays but no cancellations in the training of qualified rotary wing aviation applicants. Shortages are critical in the aviation field. Those interested who can meet the prerequisites set forth in AR 611-110 are encouraged to apply.

Educational Assistance

Veterans and Active Duty Personnel

The Veterans' Readjustment Benefits Act of 1966, signed into law by the President on 3 March 1966, establishes a permanent program of educational assistance for veterans who have served on active duty for a period of more than 180 days, any part of which was after 31 January 1955, have been discharged or released from active duty under conditions other than dishonorable, or have been discharged or released for a service-connected disability. Active duty personnel with more than two years of service are eligible for the educational benefits as well.

Effective 1 June 1966, monthly allowance rates for full-time study are \$100 for a single veteran, \$125 for a veteran with one dependent, and \$150 for a veteran with two or more dependents. Proportionate rates for part-time training are as follows: three-fourths time—\$75 no dependents, \$95 one dependent, \$115 two or more dependents; half-time—\$50 no dependents, \$65

one dependent, \$75 two or more dependents. Active duty personnel who participate in a less than half-time program will receive an allowance equal to the regular tuition fees or \$100, whichever is less. Active duty service personnel receive no additional allowances for dependents.

Veterans are advised to contact a Veterans' Administration office for further information. Active duty personnel should seek information from their Post or Unit Educational Advisor.

OCS Flight Applications

Commencing with Officer Candidate Class 11-66, Infantry officer candidates will be authorized to apply for Army Aviation Flight Training while in a candidate status. Arrangements will be made for candidates to take Class I flight physicals while at Fort Benning. Interested candidates should read AR 611-110 to determine eligibility standards and application procedures.

Depending on the availability of quotas, some candidates will be selected for flight training immediately following OCS. Selection of these particular candidates will be on a competitive basis using standard of performance in OCS as selection criteria.

A majority of eligible OCS applicants will be selected for flight training after initial CONUS assignments. Normally these selections will be made after the officer has served at least six months with troops.

Unit Specialists Needed

A worldwide need exists for junior Infantry officers trained in battalion-level communications and maintenance officer skills. These qualifications are essential to success of the Infantryman on today's battlefield as well as being of importance to the balanced career development of the new combat arms officer.

Training of the Organizational Maintenance Officer is accomplished at Fort Knox, Kentucky. The course is 10 weeks long. The Communications Officer Course is 10 weeks long and conducted at Fort Sill, Oklahoma. Both courses are given on a TDY and return-to-home-station basis or in conjunction with a PCS move to a new or first duty station.

Interested Infantry officers should indicate desire for attendance either on their first Preference Statement or by application, through channels, to the Chief, Infantry Branch, OPD, Department of the Army, Washington, D.C. 20315.

Book Reviews



Military Concepts and Philosophy by Henry E. Eccles, Rutgers University Press, New Brunswick, N.J., 1965. 399 pages. \$9.00

Col William F. Long, Jr., Inf

This book is a classic treatment of major military concepts and a philosophy for their interpretation and use. The author is a military scholar, analyst, and educator who is also a recognized authority in the field of logistics and whose active career in the Navy encompassed submarine and surface duty and command in combat. Already hailed as a standard work, it invites superlatives which are justified but may seem exaggerated. For example, several reviewers place Admiral Eccles in a category with Clausewitz and Mahan. This is appropriate only so far as the generation of intellectual power is concerned. Clausewitz' philosophy has been more attractive and useful to totalitarian systems than to democracies. His theories attracted and instructed Lenin and in turn Mao, the conceptualizer and innovator of communist "peoples' wars." Mahan, the apostle of seapower, became celebrated as the theoretician of maritime powers in the colonial era, but the environment for his ideas was such that his most timely applications differed little from his most appropriate historical examples.

Addressing a far more complex world than Mahan, Admiral Eccles retains an approach that is uniquely utilitarian for a democratic society. There is hard realism in his writings regarding the relationship of national strategy to social-political discipline which, he states, is the chief element of a national security for a free people. In this respect, civilian-interest group leaders must restrain selfish demands that are inflationary to the national economy, just as military commanders must accept political restraints. Both must then cope with their internal tactical and morale problems which this concept entails. The entire Vietnamese involvement and the interrelationship of the needs of the "Great Society" programs and the protest aspects of the civil rights movement demonstrate in practice what Admiral Eccles establishes in theory. This is no doubt the reason he keeps returning to his major theme, i.e., national security comes from sound strategy which comes from establishing common values and goals activated by blending coherent concepts flowing from a sound, compatible military philosophy—using words and ideas that mean the same thing to all concerned—and always appreciating human factors which defy and transcend logic and science. Just as theologians beginning with St. Paul use military phraseology to illuminate their concepts, the author—who does not foresee the peaceful millennium—continually uses words and ideas acknowledging the power of the spirit in the arena of protracted human conflict.

With all his political and social breadth of perspective and his profound respect for the key role of logistics, Admiral Eccles is with the Infantry in his understanding that the battle is the payoff:

"Finally . . . all major policies and organizations should be examined from the point of view of how they will influence the tactical operations of the combat forces. Without tactical effectiveness, the whole massive defense structure becomes not only a great waste but a fraud and a delusion."

The style is simple and graphic, reflecting a desire to educate and inspire the reader to appreciate the concepts and tools of strategy in preparation for producing better concepts. This bent is also apparent in the extensive, precise annotations and frequent and lengthy quotations from other military philosophers, scholars, and distinguished leaders. This demonstrates humility in a man with a thesis who is sufficiently poised to avoid both distortion and appropriation in pursuit of enlightenment.

In summary, the author is qualified by experience and intellect, the work is unique, and its value to the development of a dynamic, effective strategy for the free world should ensure the writer a place with his fellow admiral, Mahan, in the admiration and affection of his countrymen—civilian and military alike.

Weapons and Tactics—Hastings to Berlin by Jac Weller, St. Martin's Press, New York, 1966. 238 pages including nine maps, 111 photographs and 12 tables.

2nd Lt William L. Nack

In the vast majority of cases, the man who aspires to pour 900 years of history into one short volume will fall unhappily short of his objective.

This is so because he often fails, just as unhappily, to designate any meaningful line of departure or final coordination line, and in consequence is unable to control his thoughts and researches. With such a book thus sprawling uncontrollably in every direction, the reader is compelled to follow helplessly along, subject to the ambush of irrelevant facts, aggressive generalizations and other such intellectual booby-traps and punji sticks along the way. All the while, to make matters worse, the mortars of monotony thud around him.

Although short histories have a high casualty-producing effect, occasionally we are treated to a book which briskly leaves its assembly area, crosses a meaningful LD and pushes on vigorously to its stated objective. *Weapons and Tactics: Hastings to Berlin*, is just such a book. The reader is picked up on the first page, where the mission is explained, flown across 900 years of historical terrain and air-dropped on the present day. It is a hasty, whirlwind flight conducted at high altitude, which allows the reader to study the most imposing features of the terrain without getting lured into every fox-hole, ravine or intermittent stream en route.

Weapons and tactics, in their broadest applications, are seen initially in such battles as Marathan (491 B.C.), Leuctra (371 B.C.), Adrianople (A.D. 378) and Augsburg (A.D. 953). From

here, Mr. Weller flies the reader over Hastings (1066), to which he devotes an entire chapter, and then on to Crécy (1346) and the Crusades. Discussion of the evolution of weapons and tactics, always focusing on the effect they have had on each other, is continued in short studies of Gustavus Adolphus, the two god-heads of 18th century warfare, Marlborough and Frederick, and finally of Napoleon and Wellington. In his discussion of these figures he sticks closely to his mission, pointing out, sometimes with the aid of diagrams, the tactics applied in their military exploits.

From Waterloo the reader is carried rapidly forward. The terrain begins to change convulsively. Stimulated by a burgeoning industrial revolution and augmented by all sorts of technical leaps and bounds, the entire war-making motif of the Western World was redesigned. Mr. Weller accounts, in part, for the 2,100,000 casualties at Somme (1916) and Verdun (1916) to this industrial and technical growth.

The advent of the machine gun, the high-explosive artillery round and the modern military rifle sounded in unison a double death knell, one for the troops who leaped from trenches and the other for the old order of weapons and tactics. Two decades later the roar of the 2nd Panzer Division rolling across France and drone of the Luftwaffe added to the din of change, the culmination of which was the 20,000-ton salute in 1945 to man's capacity for restructuring his world.

The second half of Mr. Weller's book is a concise nation-by-nation study of weapons and tactics, a study which reflects the priorities of each nation as it views the former *vis a vis* the latter. The weapons of each country's small units are exposed and considered, with an historical background, in the light of the present day and with an eye on the future. The nations included are Great Britain, the United States (both Army and Marines), Germany and West Germany, Russia and the Satellites, Red China, Canada, France, Italy-Greece-Turkey and the Benelux Countries. Mr. Weller, an acknowledged expert in weapons, does a thorough enough job in his nation-studies, though the U.S. Infantryman will find it difficult to forgive him for writing, on

p. 216, that the U.S. M16, formerly the AR-15, does *not* have an automatic capability. Currently in use in Vietnam, it is both semi- and fully-automatic, having a cyclic rate of fire of 800-850 rounds per minute.

Within the limits of his mission, the author did a commendable job in controlling his presentation of historical matter and blending it into the modern day. With complementary diagrams, photographs and tables in the back, it makes profitable reading for the military man who has both an historical and practical interest in the development of weapons and tactics.

The History of Treaties and International Politics by Mario Toscano, The Johns Hopkins Press, Baltimore, 1966. 685 pages. \$13.50

Joseph Nile Peacher

This book is a scholarly work designed to meet the needs of persons seeking diplomatic source materials in the field of treaties and world politics.

This volume, apparently one of several containing documentary and private diplomatic sources, should prove to be a valuable aid to research students, particularly those delving into the international politics of World War I and World War II.

Mario Toscano, director of the Institute of Treaties and International Politics at the University of Rome, credits the book as having been born in the classroom specifically to aid students in their preparation for the Italian state examinations. This study, however, has far greater reach into the political research possibilities of any of the major powers as it documents in a highly critical fashion the sources from the archivists to the individual and private historians of the various nations.

Toscano provides the researcher information on how to use the source material once it is established, an analysis of the scope of the published sources, and information on the usefulness and reliability of the materials.

The volume was assembled, analyzed, and evaluated by the author and a staff of his associates at the University of Rome, more particularly, at the Institute.



DOUGHBOYS' SWAP SHOP

ITEM 11

Write Infantry
Box 2005
Fort Benning, Georgia
31905

The Problem: To prepare oneself for Vietnam assignment.

An Idea: Enroll in Vietnamese language classes conducted at an education center or use self-study tapes. Enroll in correspondence courses covering conventional and counterinsurgency tactics. Review FM 31-73, **Advisor Handbook for Counterinsurgency**. Read books about Vietnam such as **Street Without Joy**; read articles by Vietnam returnees in magazines such as **INFANTRY**, **Armor**, and **Army**; and keep up with the current situation in Vietnam through newspaper stories. Fire weapons for familiarization and/or qualification, particularly the M14, M16, M79, and .45 pistol. Engage in an intensive physical training program. Discuss Vietnam operations at every opportunity with returnees. Put personal affairs in order.

A Challenge: How have you prepared yourself? Share your ideas with other Doughboys. Write **INFANTRY**.

(1958), and the Command and General Staff College (1961). Col Kynard served as an Infantry Platoon Leader in Korea, Company Commander in an Armored Infantry Battalion in the 2nd Armored Division in Germany, and S3 in an Armored Rifle Battalion.

Maj James J. Lindsay, Infantry, has just completed the course at the USMC Command and Staff College, 1 June 1966. He also attended the Army Language School (Russian), Infantry Officer Career Course, and the University of Omaha. Maj Lindsay received his commission through OCS in 1953.

Capt Joseph B. Planche, Infantry, is Company Commander of B Company, 3d Battalion, 1st Training Brigade, USATC-I. He previously served as a Battalion Advisor and as Assistant G3 Advisor in the 25th Infantry Division, ARVN. He was commissioned through Southeastern Louisiana College ROTC in 1952.

Lt Col Dixon C. Rogers, Infantry, graduated from USMA in 1944. He served as a Senior Instructor with the Attack Committee, Brigade and Battalion Operations Department, USAIS, from 1963 until June 1965, when he retired. Col Rogers served in Europe during World War II, and in Saudi Arabia in later years. He has served as an Infantry Platoon Leader and Battalion Commander.

Jac Weller is a qualified engineer, firearms consultant, and military historian. He is an honorary curator of the West Point Museum. Mr. Weller is a qualified historian and is the author of the book *Weapons and Tactics; Hastings to Berlin*, reviewed in this issue.

Dr. A. Porter S. Sweet, Cmdr, DC USNR was commissioned as Lt Commander in 1942. He was the Officer in Charge of the School for Dental Technicians, USNTC, Samson, N.Y. from 1943 to 1945. Since his retirement as editor of *Dental Radiography and Photography* he has authored over 60 nonfiction articles.

Capt William C. Westgard, Infantry, received his ROTC commission upon graduation from Pennsylvania State University in 1959. He has just completed the Infantry Officer Career Course. Other schools attended include: Infantry Officer Basic Course, JFK Special Warfare School, Counterinsurgency Staff Officer Course, Psychological Operations Officer Course, Counterinsurgency Course, and Special Forces Officer Course.

Capt John S. Yakshe, Infantry, was commissioned in 1959 through OCS. He is presently the Redeye project officer for USAIS. He has attended, in addition to OCS, Airborne and Ranger Schools and Infantry Officer Career Course. Capt Yakshe has served as a Platoon Leader, XO, Recon Platoon Leader, S3 Air, and Company Commander before his present assignment to the Weapons Department, USAIS.

Capt Joe L. Zimmers, Infantry, was commissioned through OCS in 1961. He is currently an Instructor, Platoon Tactics Committee, Company Operations Department, USAIS. Capt Zimmers has previously served as a Company Commander in the 101st Airborne Division, as a Battalion Advisor and Ranger Company Advisor in Vietnam.

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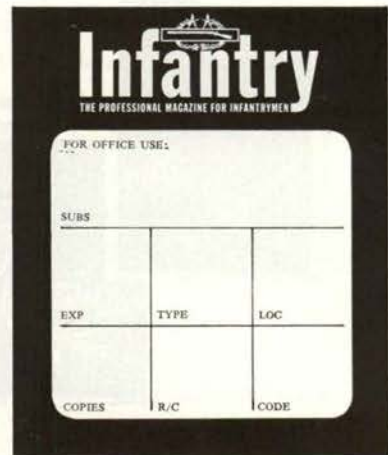
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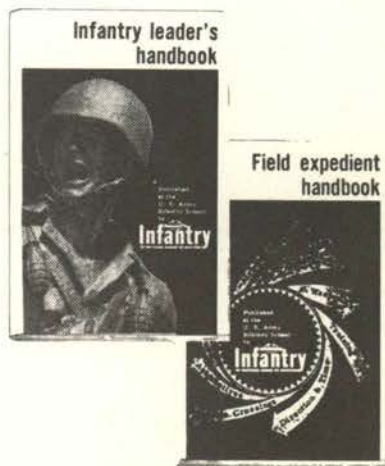
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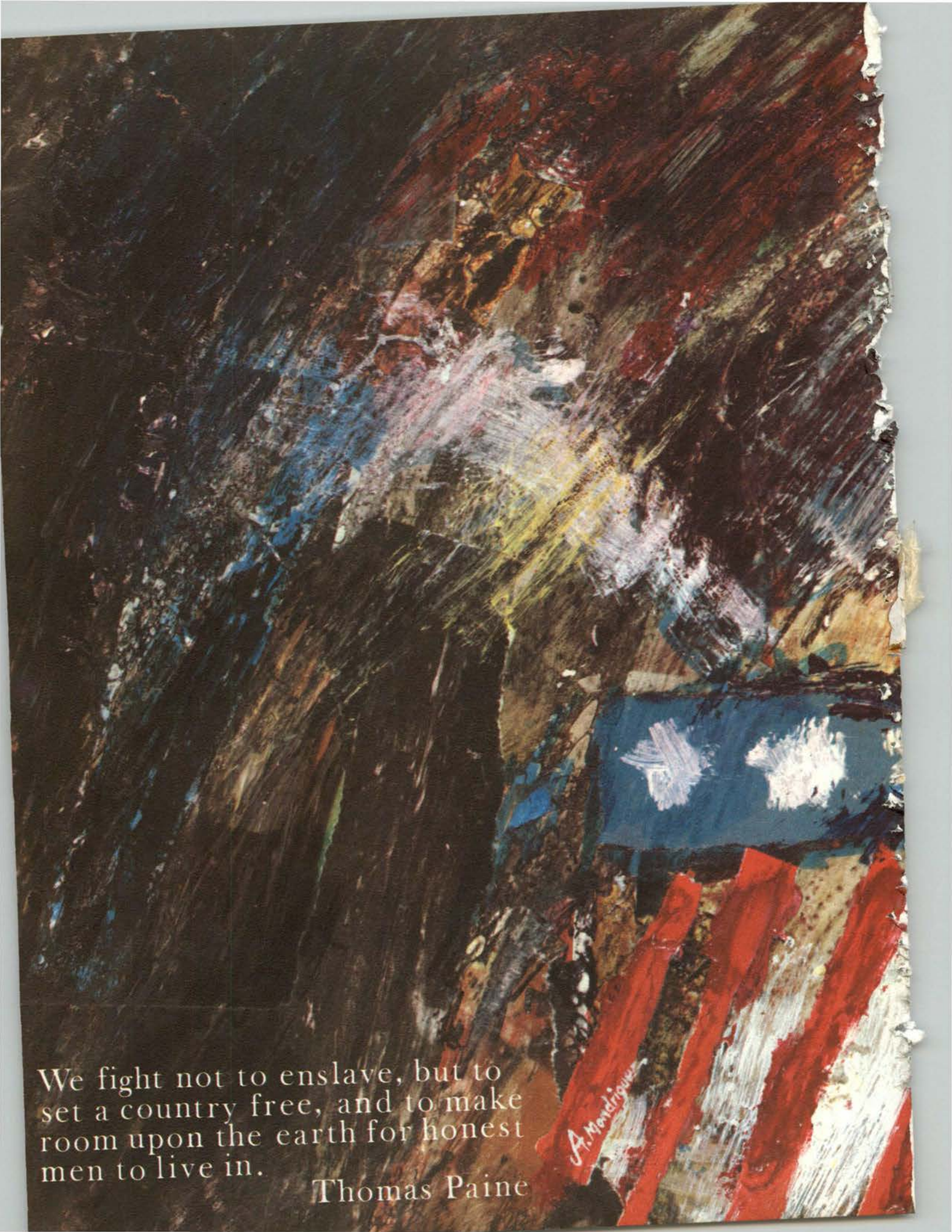
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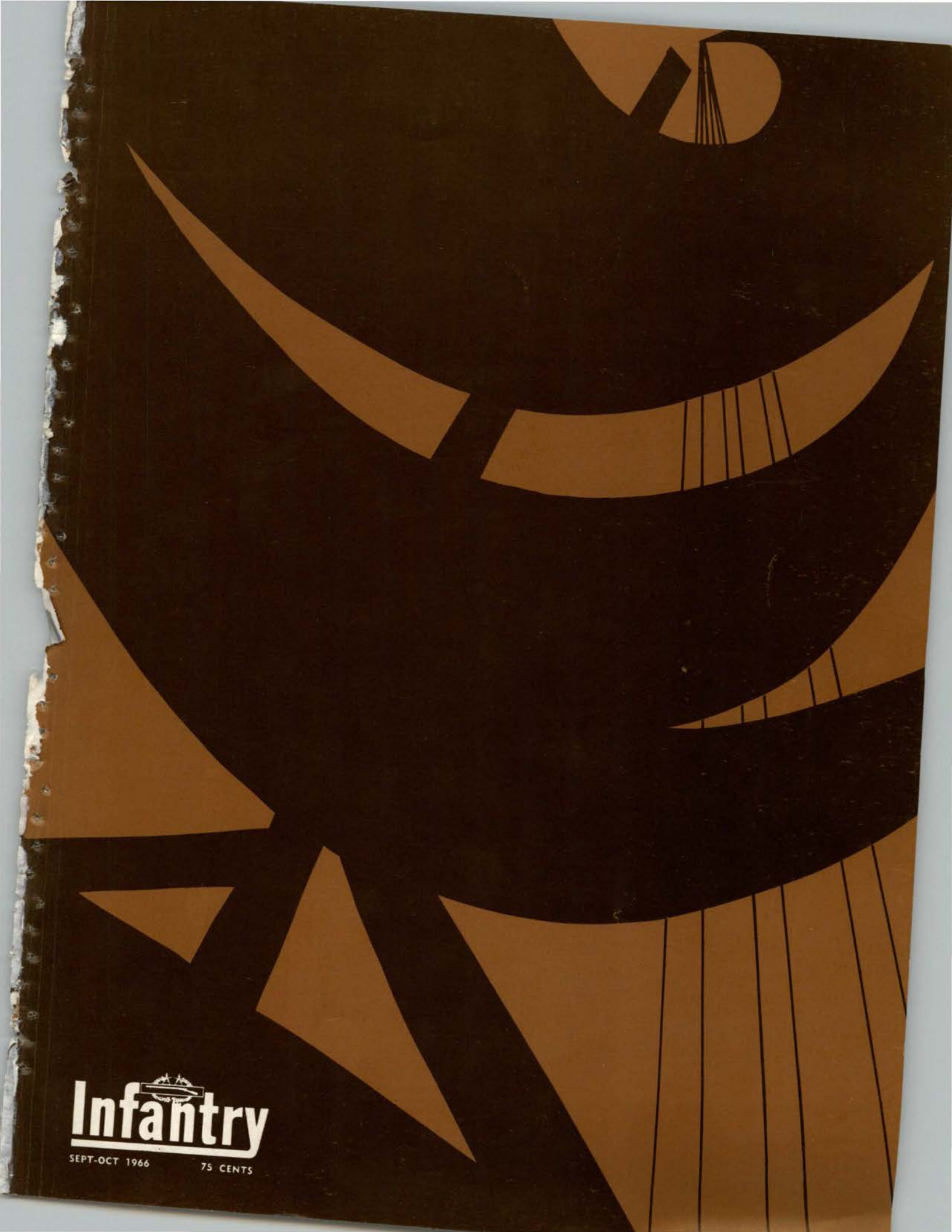
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Thomas Paine



Infantry

SEPT-OCT 1966

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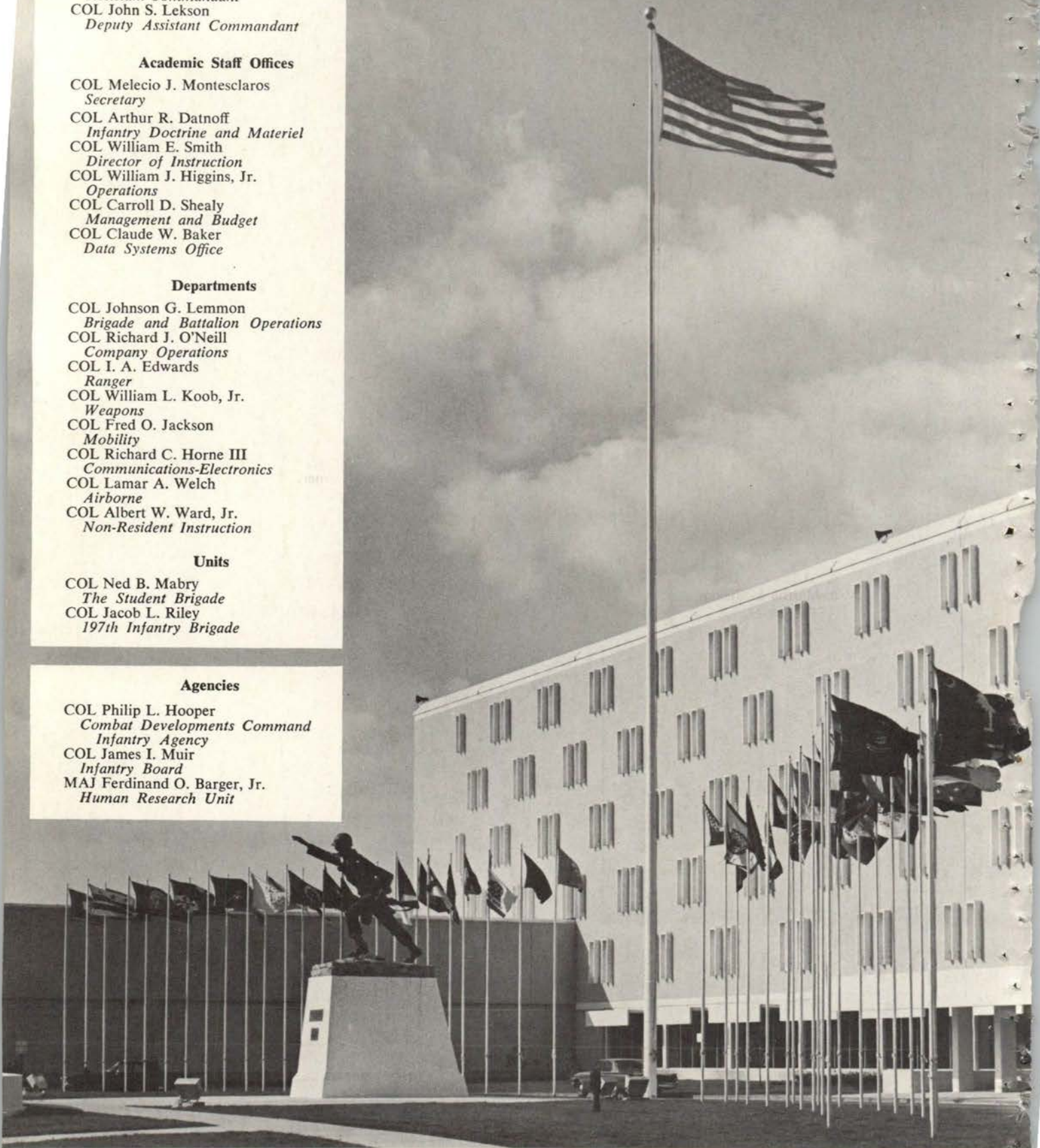
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Infantry

THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN

Vol. 56

SEP-OCT 1966

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Correspondence: Address all correspondence to Editor, **INFANTRY** Magazine, Box 2005, Fort Benning, Ga., 31905. Please use full address. Renewal, changes of address, or any correspondence concerning your subscription should be accompanied by an address label or by the number that appears on the label's first line.

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Infantry LETTERS

ARMY TRAINING FILM

• I was prompted to write this in hopes that a few more people will echo my sentiments. I am speaking of the sad state of affairs that our main media of instruction is in by this I refer to the Army Training Film (ATF) and the antiquity of same. The ATF is a main source of reference and training material used by Army instructors and as such should be current, in sufficient quantity, and readily available to CONUS and overseas requestors.

At present there is a very limited variety of current (up-to-date) films available for use. This is applicable from troop level to Career Course and possible higher. As a company commander in a basic training regiment, I sat through many hours of outdated training films that I had viewed as a basic trainee some six years earlier. While attending the 35-week Military Intelligence Officers' Career Course I once again saw some old familiar faces, map reading, first aid, and military justice.

It is unfortunate that the majority of training classes are "geared" around films but it seems that this is the horrid truth. The instructor introduces the films and on occasions he has previewed it and can ask a few pertinent questions at the end, which usually serves as a stimuli for those that have been semi-conscious while the reel sped on. Also unfortunate is the fact that over half the class, officers and EM, will have already sat through this film before, some for the third or fourth time.

I have recently viewed several excellent color films one, "The Third Challenge, Counterinsurgency," and another on "Helicopter Actions or Heliborne Tactics in Vietnam." Both are in keeping with current POI, timely and extremely interesting but being such they are in constant demand and usually not available. By the time these are circulated down to the lower echelons they will be outdated in concept and doctrine.

I would suggest that the "powers to be" re-evaluate our current listings of training films, and those with pinks and greens, Sam Browne belts and the old lifeguard method of artificial respiration, be hastily removed from the catalogue. Naturally, this would trigger an alarm on every training officer's cubby hole, and bring about a demand for replacements. The

best contribution this could bring would be that rather than relying upon film(s) to "get him through" his assigned hour(s) the instructor would be required to revert to the old, handy, ever-present field manual and his vast wealth of experience, schools, or gift of gab. The present apathy shown by many instructors and far too many non-participants would diminish, and our instruction and method of presentation would increase in overall interest, motivation, and sincerity. With this "weeding out" of the 'oldies but goodies" we would soon embark on a pattern of current, informative topics for our newly inducted troops. Our regulars could attend a training session without the present situation of viewing a film for the third or fourth time, which, besides being tiring is also a slam at their intelligence and an insult to their position as non-commissioned, warrant or commissioned officers.

For those insulted training officers that will read this and pass it off by saying, "Might be the way the MI desk jockeys do it, but not us"—I have run the gamut from a trainee with the 101st Airborne, to Signal Corps pole lineman, to Infantry Officer Candidate School (50th OC Company, 1958), Commanding Officer of an Armored Rifle Company, Basic Trainee Company and now as a member of the Army Intelligence and Security Branch. I have used the oldies, griped about them and sat through countless numbers in the past 10 years and I say now is the time to do something about this!!!

Capt Theodore F. Crosby, Jr., AIS
P.O. Box 99
APO New York 09154

TOO OLD?

• For some time I have wanted to write this letter but had remained hesitant until now. It concerns veterans with prior enlisted service who want commissions.

I am a veteran with eight years military service accrued through a combination of reserve and active duty. I was released from active duty in 1962 in order to attend college. I am now a senior and my planned graduation date is January 1967.

Upon release from active duty and entrance into college I attempted to enroll

in Army ROTC. Because of my age, 25, the commander needed permission of the regional commander at Fort Sam Houston before I could enroll in ROTC. The regional commander refused because I would be past my 28th birthday upon graduation and would be too old for commissioning. As a substitute I enrolled in the Army Precommission Extension Course through correspondence with the United States Army Infantry School at Fort Benning, Georgia. The course was subsequently completed successfully and diploma awarded 24 February 1965. I immediately made an appointment with the local reserve unit commander to apply for commission but once more was denied because I had passed my 28th birthday. The unit commander did say that after graduation I could apply for a promotion waiver and be commissioned as a first lieutenant if it is approved.

I want a commission and service career very badly. I'm not the only ex-enlisted man who entertains such a desire. In a letter from Maj Gen F. W. Boye, Jr., Chief of Legislative Liaison, dated 10 August 1965, reference is made ". . . to the many other similarly disqualified individuals whose requests for active duty have been denied. . . ." The great obstacle is the age limitation without an age waiver provision. In answer to my inquiry Lt Gen J. K. Woolnough, Deputy Chief of Staff for Personnel, wrote in a letter dated 19 August 1965, "The age limitation is statutory and cannot be waived . . . Although your qualifications may be desirable, you exceed the maximum age limit for appointment. . . ."

This age limitation should have a waiver provision for those prior enlisted men who possess other qualifications and a sincere desire for a military career in a commissioned capacity. Too many of the junior officers accepted their commissions only as a more comfortable means of fulfilling their military obligation. From time to time INFANTRY carries articles concerning the lack of professionalism and problems of retention in the junior officer. These problems might not be completely eliminated but they could be greatly alleviated by commissioning those men who, other than their age, do qualify. It seems to me these men would make much better officer material than those young

men who only want to be comfortable as they complete their military obligation. To assure professionalism in these older junior officers the commissions could be placed on a probationary system based on two or more years active duty.

Since enrollment in the Army Pre-commission Extension Course I have been a subscriber to *INFANTRY* and plan to continue my subscription on into the foreseeable future. I also have purchased the *INFANTRY LEADER'S HANDBOOK* and the *FIELD EXPEDIENT HANDBOOK* in order to keep up-to-date on Army news and procedures.

I still entertain a sincere desire that I may yet receive a commission and have a military career. If any stone has been left unturned I am willing to do anything to meet all qualifications (outside of age, of which nothing short of a waiver can be done). I would appreciate hearing from your office and *INFANTRY* readers concerning this matter.

David D. Taylor

Box 4517 Tech
Lubbock, Texas 79409

ROAD AND RIFLES

• The short article about development of a new competitive combat rifle training course on page 66 of the November-December 1965 issue of *INFANTRY* was good news indeed! Certainly the detection, location and identification of enemy targets and the delivery of lethal fire upon such targets are the most critical of the multitude of combat skills necessary to survival and the accomplishment of the Infantry mission.

Two statements in the article stand out so boldly that they deserve thoughtful study by every rifleman, every instructor, and every commander of Infantry troops. The statements are worth repetition in bold type:

"Upon discovering the enemy, the soldier must react instantly to shoot to kill. This quick (re)action results from the soldier's ability and confidence to use his weapon with the same confidence and ease with which he uses his bare hands."

Has anyone ever seen a boxer *aim* his fist before throwing a knockout punch?

It is perfectly safe to state that the majority of fire delivered by Infantrymen from hand-held weapons in combat is pointed, unaimed fire. This became increasingly true during the Korean War when the Communists focused their efforts primarily upon night attacks. The pattern continues in Vietnam. Even with the best available battlefield illumination, the Infantry rifleman must deliver pointed fire when visibility is limited by darkness, because he simply cannot see to aim through a standard peep sight under such conditions. Thus, as night inevitably follows day, the soldier must rely upon pointed fire half of his time, and even more frequently when an elusive enemy

elects to fight as often as possible during darkness to avoid artillery and air attacks. Add to natural darkness those periods when smoke, fog, dust and rain make peep sights practically useless for aiming and it is evident that the majority of the Infantryman's fire must simply be pointed, not aimed, at the enemy.

But the problem is not limited to the lack of illumination. Time and distance are also vital factors. In densely vegetated areas enemy soldiers frequently appear abruptly at close ranges in meeting engagements, in ambush situations, and in the assault. Here the enemy is often so close that only the man who fires first will survive. There is no time for aiming. Even when fighting from a covered position, the time required for aiming is exposure time that draws enemy fire. Time to aim at fleeting targets is severely limited, too.

Every soldier has some ability to use lethal pointing (unaimed) fire, if only at point-blank range. This ability needs to be recognized, then developed maximally within the limits of the time and resources available. Each Infantryman must learn his own capabilities and limitations concerning his individual ability to deliver lethal pointing fire. Left to learn in combat, the first lesson may cost him his life.

This does not mean that less emphasis should be placed upon the delivery of aimed fire. It simply means that we have finally recognized another vital area of training and must allot time and resources to the development of the skill and confidence requisite to increased success in battle with fewer casualties as a direct reward. Time, distance, limited visibility, limited target exposure and the firing skill of the enemy all must be overcome by our Infantryman with his hand-held weapons. He must be trained to meet the conditions he will encounter in combat. Hopefully, the new training now under development will realistically meet all of the Infantryman's needs.

Lt Col Frank L. Brown, Inf
3513 Irwin Way
Columbus, Georgia

• I recently had a chance to read a copy of your magazine and came across a couple of things I'd like to comment on.

"Washington's Secret Weapon," for one. The effect of specially armed men in combat has long been a subject of argument, except by those who got clobbered. We have had quite a large effort in this field in most of our wars, such as the 1812 period Regiment of Riflemen, the Mississippi Rifles of 1845, who happened to have a weapon accurate to a couple hundred yards, the far nastier U.S. Sharpshooters and smaller units of Civil War days, and we even had some training in WW I and II. I wonder if there is anything going on today.

Take Santo Domingo, for one thing. Here we have a deal where our men are fighting almost under 1898 conditions,

with very little heavy weapons use allowed. Quite a bit of countersniper work was done with M79 grenade launchers and they did well, where a suitable target presented itself. I did not see any news shots showing any firecontrol gear heavier than the old fashioned IX eyeball, though I may have missed something.

Had we been able to put some really hot snipers down there, it might have saved a few lives, oddly enough. No one sticks up his knot when the odds are someone will drill him thru it. If such things were known to the rebels, they'd have tried much less sniping. 'Tain't fun when the opposition is too sharp. Maybe a few Americans would not have been hurt. The same goes for the locals.

Suppose we take one of those much-talked of AMUs and spend a little effort making a combination Sniper School and Sharpshooter Company out of it. Take the standard or match M14 and work on it to make a better sniper arm, and try some commercial variable-power scopes, to see how far it can be made effective. No doubt someone at this point will grump about damn thousand-yard shooters. Who said anything about thousand-yard work? We have two matches fired at Perry at that range for the service piece, and with the eyeball for glass, the scores have been running 100x100 for some time. If a scope was used, they could do no better for score, but the V count would rise. But if you will get into the literature on the field, no one did much long-range stuff when they could avoid it. There is one tale of a Jerry who never missed, back in 1917. A British sniper ran him down, and he was found to be 70 yards from the British trench. He could take much smaller targets at that range, and no wonder he was such a deadeye! Any lessons here for us?

After all, the basic reason for scoping any rifle is to make the accuracy better within its usable range. Let's take the modern theory that 300 meters is all you can manage. A scoped rifle within this distance is pure poison, and needs little change in sighting over the distance. Maybe the sniper can now and then get a chance at 600. OK. He can raise a bit and try. So what if he misses? If he's close it will worry the intended victim. And, for example, consider the hurt feelings, and worse, of the Germans who kept getting hit by old time GIs and Gyrenes in France, 47 years ago. Up to 1,000 yards, yet. I recall one deal in Korea where the one-piece Heavy Artillery of I ROK Corps was said to have fired 30 rounds on a mission, at a cow within rifle range of the OP! Thirty rounds of 8-inch, when it cost like heck!

The second thing I wish to vent my spleen on concerns the present-day division. As a member of a National Guard division, I see the snafus of a year of active duty committed in two weeks, and it occurs to me that some of this dreck [sic(?)] ain't necessary. I work in the di-

LETTERS

vision ammo office and thought the weird deals we pull on Class V were limited to NG. Not so. Last year *Army Times* carried a short and pungent comment by a RA man in the same boat (MSgt Sam Hart of the 2nd Div). He noted some incredible pieces of number ten ammo service I thought even the Guard didn't do, done by full-time troopers. I wrote him and he gave me an even more ghastly example that could have cost like blazes. He traced it back to the unfortunate Pentomic monstrosity and later downgrading of ammo NCO jobs to lower-rated specialists.

For those fortunate souls whose memory doesn't go back past 1962, the old regiment used to have a full time Munitions Officer and a detail, and in each battalion, a detail of men and an NCO. The RMO got the stuff and kept a regimental ASP, which backed the battalions up with a nearby reserve on hand at all times. Came a flap, he could have his men go for more, while the battalions went thru the regimental spares. He also served as adviser and inspector of lower unit work, and since he was supposed to be trained to MOS 4514, he was usually a graduate of Aberdeen.

Came the five-sided traveling circus, and the fat went out, along with about 50% of the muscle. There is no RMO, and the battalion details now have to do the paperwork and go get their own. This is fun at AFT, and given one deal I recall of in I ROK Corps, can get downright bothersome. There was one 1952 flight that could have lost a lot of real estate, as the main ASP at Sokcho was zeroed out, and the ROKs sent all their spare trucks back over 60 miles to the reserve depot and zeroed it out. Had they been going on battalion reserves alone, there might have been a different location of the DMZ today, on the city limits of Sokcho.

Under the present ROAD, we have a copy of the 1937 British Brigade, a loose assembly of battalions governed by an HQ which toileth not, neither do it spin, but turns out lots of paperwork. What have the Limeys done? They have got our old RCT! Their brigade, the last I heard, was a self-sufficient outfit with its own armor, artillery, RASC, RAMC, REME, and all those other British initials. This reminds me of the time we copied the battle jacket and forgot the high-waisted pants to match! Remember?

If we had a more consolidated system of drawing ammo, say, by a brigade service platoon, it would cut a lot of lost motion down, and cut paper work at least 50 percent. Given a capacity to handle and store limited amounts of ammo, a brigade could manage a bit better, especially where they were on their own. But I gather this is done by attachments. That's the way the Limeys used to do it. There must be a better way, and maybe that is why they have their newer setup.

They do have a few good ideas, though saying such may cause my ancestors to revolve in their graves.

When we copy foreign ideas, how come we so often get the bad ones?

John P. Conlon

52 Columbia St
Newark, Ohio 43055

"GI," A SLUR?

• With reference to Lt Col Charles J. Milazzo's article in Vol. 56, No. 1, of *INFANTRY Magazine*, so "GI" is back, isn't it? Well, then, I ask you: So what?!

Fundamentally, what Colonel Milazzo has done is to trace a mere brief history of the term from World War II to the present. He has described the varying of the expression in frequency of use with the times and how, during various periods, various forces have been exerted from various corners to influence that frequency of use. But in doing all that otherwise commendable writing, he has strangely neglected one point of significance. He has failed to say exactly what it is that's derogatory about "GI."

True, much time, money, and other tangibles of effort have been expended to "educate" the public to use "soldier," whose validity I do not decry, instead of "GI," which the same public has understood perfectly well. But such effort might well be fruitlessly spent in that the end—the dream of a universal use of "soldier"—simply doesn't matter. If the Army is to help the average American wave the term "GI" goodbye, its first job, I think, is logically to clarify exactly what is wrong with the word. Yes, Colonel Milazzo has been semantically pedantic about the matter, for all I can see.

The image a word connotatively carries with it is, in the end, only what the users make it out to be. It seems that he has put the classic cart before the classic horse, so to speak, and has been presuming some suggestion that may not even be present! Indeed, many American soldiers regularly refer to themselves as "GIs" without a wince—and feel berated not at all. Thus, the use of that expression, as does the use of any expression, lies in the mind of the user, and that has been conditioned far before he ever decided to place it into his active vocabulary. There's nothing for him to "undo" now.

Ugly? Come, now. The whole science of semantics teaches that the entire beauty or distastefulness of any word is a direct function of the thinking of its user. "Logarithm," for example, can conjure up thoughts of excitement, or of nightmare, according to the individuality of the user. If you mention "politician," you'll probably immediately win the love of half the people who hear it and the hatred of the other half. Colonel Milazzo still has not defined, as is necessary, what it is about the term that makes it run against the grain of the Army.

Undoubtedly there are many immature

policeman who shrink at the mere utterance of the word "cop." Yet, a little re-education will probably go a long way to make them realize, as might a little boy who's afraid of the dark, that there's nothing really to be ashamed of. I would think—based in part upon my own chats with these representatives of the law—that the majority of American police not only don't mind that word, but actually use it freely among themselves, and cognizantly in reference to themselves, without giving the matter the proverbial second thought. For that matter, it hardly makes any difference to a professor if he's called a teacher, or to a scholar if he's called a bookworm, or to a radio announcer if he's called a disc jockey, or to a philosopher if he's called a thinker. Why can't a soldier have a guiltless nickname, too?

Joseph S. Lowenstein, BA, MA (Educ.)
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INFANTRY SUPPORT

• During WW II I was a BAR man with the 100th Inf Div in France and Germany. I've been looking for a magazine like yours for years so that I may better understand new Infantry weapons, tactics, etc.

Saw your magazine in the home of an old buddy and couldn't put it down. So here's a check for \$7.00 for a 2-year subscription.

Brewster Schoch

5437 Bear Road
N. Syracuse, N.Y. 13212

• My check for another year's subscription to *INFANTRY* is enclosed.

A year or so ago, during an economic fit of temper, I dropped my subscription, but it was too late, and I was hooked on your magazine. Thanks for letting me come back into the fold.

It seems strange that when I was on active duty, I could hardly wait to get out of the Army—now, after three years, I find myself more and more interested in some of the things I probably should have been more interested in when I was inside looking out.

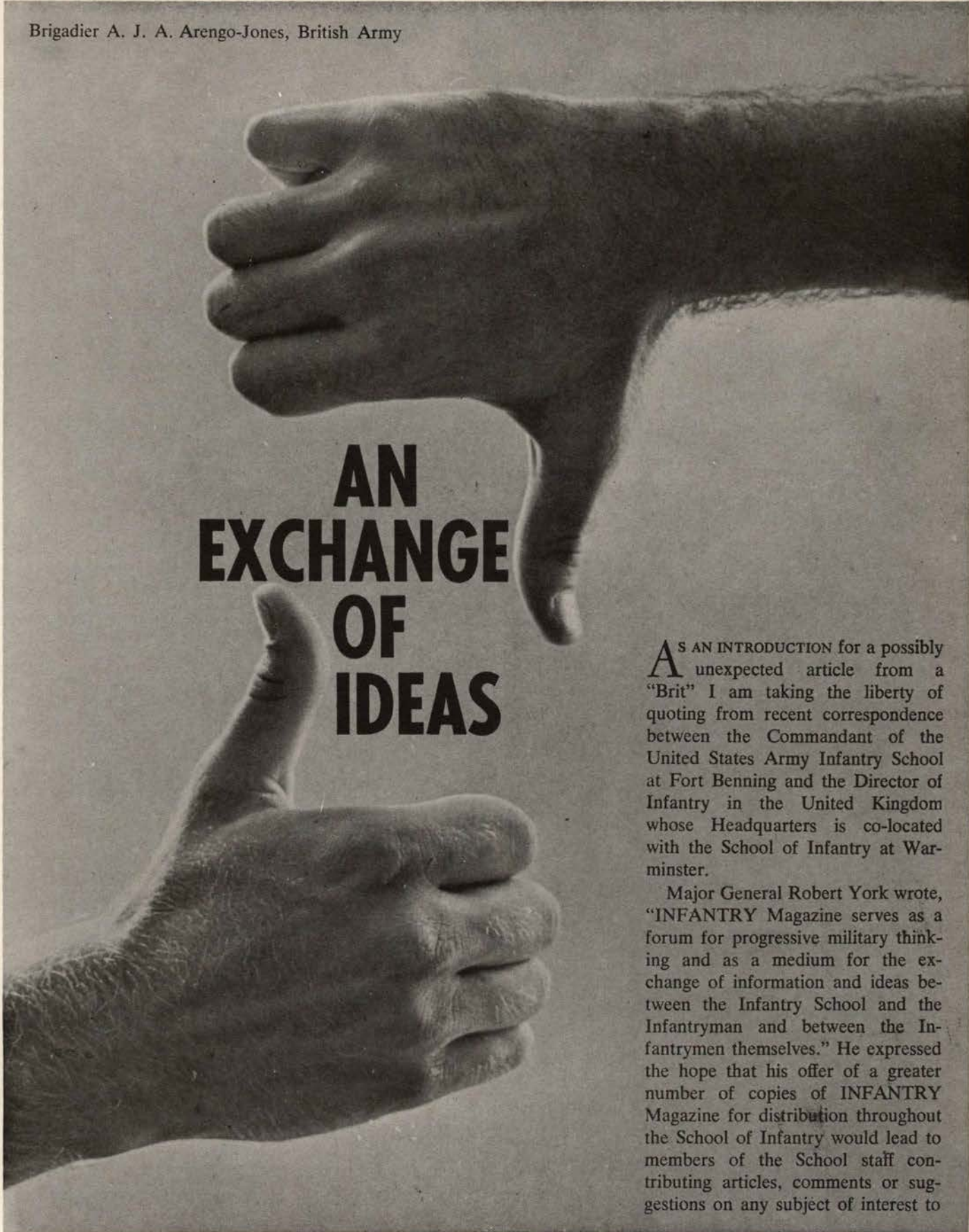
At the risk of flogging a dead horse, I would like to see a full-scale series of articles which examine the Army's seeming failure to properly motivate the younger enlisted men to make a military career.

But then maybe we're not doing too badly. Even though I might have stayed in, the leadership training and maturity I absorbed during my two years have never been forgotten and I know I'm a better, more productive adult because of it.

Keep up the good work.

Barry E. Vinyard

1595 Clay St, Apt 29
San Francisco, Calif. 94109



Brigadier A. J. A. Arengo-Jones, British Army

AN EXCHANGE OF IDEAS

AS AN INTRODUCTION for a possibly unexpected article from a "Brit" I am taking the liberty of quoting from recent correspondence between the Commandant of the United States Army Infantry School at Fort Benning and the Director of Infantry in the United Kingdom whose Headquarters is co-located with the School of Infantry at Warminster.

Major General Robert York wrote, "INFANTRY Magazine serves as a forum for progressive military thinking and as a medium for the exchange of information and ideas between the Infantry School and the Infantryman and between the Infantrymen themselves." He expressed the hope that his offer of a greater number of copies of INFANTRY Magazine for distribution throughout the School of Infantry would lead to members of the School staff contributing articles, comments or suggestions on any subject of interest to



Greater attention will have to be paid to bringing the maximum, accurate fire on enemy positions from as many different directions as possible.

Infantrymen. He went on to say, "When our subscribers respond to these thoughts we will have an effective interchange with the two Schools serving as the contact points between the British and American Infantryman. Such an exchange of ideas should prove interesting, informative and profitable for all concerned."

In his reply Major General Peter Young wrote, "I am in entire agreement with your proposals which I think excellent. An exchange of ideas such as you have in mind through this medium cannot but be of interest and value to the Infantry of both our Armies and I welcome it."

All Infantrymen in both the United States and British Armies must surely support wholeheartedly these sentiments and which have been so clearly expressed by our respective chiefs.

My Director has suggested that I might start the ball rolling in this first article by giving an indication of some of the subjects currently being studied at the School of Infantry, both in the tactical field and on the

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development and weapons side. These may be of interest to your readers—particularly where our respective problems are similar—and although I can only cover each subject briefly, I hope that what I say will be sufficient to stimulate further articles and comment on these and other subjects in future editions of INFANTRY Magazine and perhaps in greater detail.

The subjects I will mention are not arranged in any order of priority—all are equally important—and the first concerns minor tactics.

The frequency with which faulty tactics have been observed during training in the attack has been a matter of concern over the past year—troops relentlessly advancing in extended formation over open country towards their objective while moving quickly and keeping as close as possible to supporting fire. Such a concept is unrealistic in terms of the support likely to be available at the outset of any operations in the future. Instead, Infantry must be trained to attack under the firepower of their own weapons and assisted by no great weight of tank, artillery or air support.

To meet this requirement, we are emphasizing the need for more stress to be laid on minor tactics that are dependent for success, not so much upon indirect supporting fire as upon the high degree of physical fitness, expert fieldcraft, initiative, cunning and skill-at-arms that can be expected of the well-trained professional Infantryman. Given these essential qualities there is little reason to doubt that, particularly in cold and minor limited war operations (the most probable for which we should prepare), there will be scope for apply-

ing more flexible tactics than those normally associated with the set-piece deliberate attack.

For example, commanders at every level up to battalion will be required to pay greater attention to such tactical principles as the need to bring maximum, accurate fire on enemy positions from as many different directions as practicable; bold flanking and infiltration movements undertaken whenever the circumstances are propitious; reducing the risk of casualties by having as few men as possible moving in the attack at any one time, and the employment of deception to conceal the direction from which any final assault is launched.

Such principles can hardly be called new nor will it always be practicable to adopt tactics based on these principles to the fullest extent. But the fact remains that training in their application is being neglected and that this may be due in part to the difficulties experienced in appreciating when and the degree to which they can be applied.

The importance of commanders being able to assess the extent and strength of enemy positions remains as undiminished as ever. Yet we often see an inadequate amount of time allowed during exercises in which the attackers can formulate a realistic enemy picture and use sufficient information fed in by umpires. Similarly, consideration of the ground determines the plan of maneuver for troops in the attack. Yet regrettably, much of our Infantry training in the UK has been conducted over bare and uninteresting terrain, thereby restricting the scope for varying movement plans.

Consideration of both the enemy situation and the terrain will determine the best method of movement. One method in particular, fire and movement by groups of men in the section (squad) organized into three such groups to facilitate this, is more difficult to apply than others, yet may be the most effective under the proper circumstances. Using this method, one group dashes forward using zig-zag movements while the other groups



Night fighting operations is a subject kept under constant review.



A question we must answer is: will we fight from our APCs, or dismounted?

give covering fire; no man in each group should be closer than 10 meters to another nor should any remain on their feet more than a few seconds; having hit the deck, men roll or crawl to firing positions.

Movement in this fashion will confuse the enemy and, at the same time, make it difficult for him to bring effective fire to bear. It is a form of movement that makes control more difficult; it is slow; it certainly requires a high standard of physical fitness and training; it can be more costly in small arms ammunition; if it is not controlled and co-ordinated, it can lead to small groups of men arriving on the objective to the advantage of the defenders and the assault will have no impetus and may risk defeat in detail. Nevertheless, in spite of these apparent disadvantages, the mastering of this method of movement is fundamental since it may well prove the key to successful application of the tactics under discussion.

Night fighting operations is a subject we keep under constant review in order to take full advantage of new aids that come into use. Conclusions from our studies to date can be summarized as follows:

- Operating procedures must be simple and easily understood by all concerned; they must not overload communications; and must be flexible enough to switch from a fairly tight control when the enemy is some way off to a much tighter control when in close contact.

- Procedures must provide for collation and evaluation of information received; recognition and identification of targets; and passage of orders once a decision on the action required has been taken.

- Procedures must also enable a battalion comman-

der to decide which are important targets and to allocate priorities; to ensure that only suitable weapons are used; and to co-ordinate the entire system on his front.

- Within a battalion, control and co-ordination overall should remain at Battalion Headquarters but problems of communications, need for simplicity, and the time factor may necessitate delegating command to company or even lower level.

- White Light is still the most valuable seeing aid. It covers large areas effectively; permits the pin-pointing and identifying of targets; provides an ability for all weapons to engage; and it can be tied in with the primary surveillance aid—radar.

- In defense, tanks must be sited at ranges out to 1,000 meters; movement within battalion and company areas of responsibility must be strictly controlled; all covered approaches into the area must be patrolled; bad weather may suddenly clamp down thereby reducing effectiveness of the aids, and this emphasizes the importance of retaining flexibility.

- In the attack, navigation will be easier and quicker; maximum use will be made of covered approaches; weather conditions will play an important part; infiltration and diversions will be facilitated.

- Introduction of these aids emphasizes the need for sustained, rigorous and realistic night training.

Another problem which has engaged us involves the armored personnel carrier (APC). We are currently considering the successor to our current APC—the FV 432. This vehicle was designed primarily to provide the Infantryman with good cross country mobility, flexibility and protection which he lacks when operating on foot.

At the time it was designed, it was not envisioned as a vehicle from which the Infantry might be required to fight. However, in common with many other armies, we have felt for some time the need to reconsider this point of view. It would take too long to develop all the arguments for doing so in this article, and so again I will summarize briefly the main lines along which we are thinking.

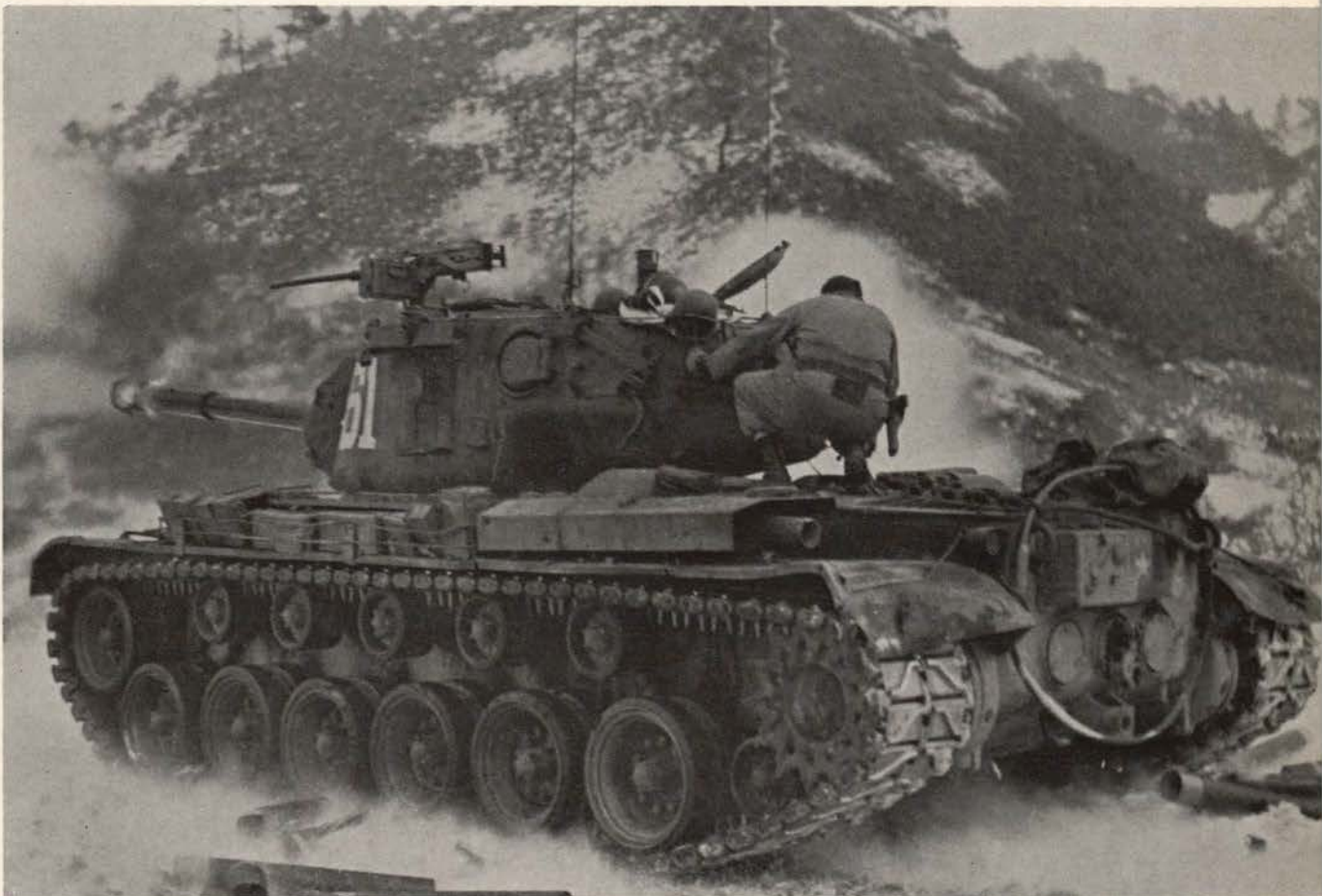
The threat that faces the Allies in Europe is well known. Suffice to say that it is one of considerable strength and will be predominantly armored. Thus, our primary overall requirements are for an extensive anti-armor capability, adequate protection and first-class mobility. The two latter requirements, from the Infantry point of view, are met with the present APC, but it does not help meet the first requirement; yet, the Infantry must be expected to play a positive part in the defeat of armor, both tanks and APCs, particularly during the early stages. To enable us to do so would require a substantial increase of our anti-armor firepower.

At present in our Infantry brigades, armor is still the framework of the antitank defense. The tendency is—

and indeed there is little alternative—to split the tank squadron into troops to assist Infantry companies to secure and hold ground. But we have now the additional problem of dealing with enemy APCs in great numbers, and until the enemy Infantry are forced to dismount from their APCs they represent in fact an armored target; but as of today we have no specific anti-APC weapon system.

There are two alternatives for remedying this state of affairs. Either we should be equipped with a special weapon for the engaging of APCs or these should be treated as armored targets and engaged by both tank and Infantry antitank weapons. Is it necessarily logical to adopt the first of these alternatives and make the selected weapon APC turret-mounted?

Will we fight from our APCs, or dismounted? The answer cannot be a straightforward yes or no—indeed it would be wrong to lay down any hard and fast rules: the decision is one for the commander on the spot. When the enemy is disorganized and the situation confused, it would be justifiable to take considerable risks in the handling of APCs. When, however, the opposite situa-



At present, armor still provides the framework of the antitank defense.

tion prevails, it clearly would not be possible to drive onto an objective.

Do we need to provide facilities for as many of the crew as possible to see out of the closed down APC and to fire their personal weapons from a protected position inside? On balance this would seem desirable provided that it be done without adding unduly to the complexity of design or cost. Other important points being examined include the size of crew to be carried; improved cross country speed capability; NBC protection; storage capacity (five days?); noise; armored protection required and demands this may make on the weight of the vehicle.

Although time has been spent evolving new concepts for the employment of the APC, problems peculiar to the Infantryman's load have also engaged us. In dealing with this problem, we have followed your example in making a detailed study in this area. There is much to be done and it will take time but, as a first step, an Infantry Equipment Steering Committee has been formed to ensure that the particular needs of the Infantry are given more emphasis in the design of equipment of every sort; that the carriage aspect of new equipment is considered early in development; and that recommendations are made which will reduce the load of the fighting soldier. It is imperative we restore mobility to the soldier on his feet if we want him to be able to fight really aggressively.

That something tangible can be achieved, we feel certain, but we cannot have our cake and eat it. It will require the acceptance of new ideas and the abandonment of some of the shibboleths dear to many officers young and old. For instance, we can achieve a substantial reduction in weight with the introduction of 5.56mm in lieu of 7.62mm ammunition. But, we run up against those who insist on the better lethality of 7.62mm at the longer ranges for the personal weapon as well as the light machine gun. Does a bayonet weighing one pound justify its existence? People can argue about this for hours. These are the sort of problems we and, no doubt, you also face.

On the matter of light area weapons, we have re-examined and confirmed our requirement for a light mortar with an HE capability for limited war and counterinsurgency. We want an increased range from our two-inch mortar extending it out to 700 meters, and a lighter bomb with greater accuracy and lethality. And we note the importance attached by the United States Marine Corps to the use of the 60mm mortar on operations in South Vietnam.

In the area of target detection during periods of limited visibility, we are continuing trials on an infra-red fence, an early warning device. The equipment consists basically of a transmitter, with a power source in the 10-15 volt range, which emits a narrow beam of infra-

red radiation along any desired line onto a miniature receiver. An input unit (one or more of which can be associated with an alarm unit) uses the signal from the receiver to provide an intrusion alarm capability. The alarm unit contains a warning light for each fence and thus alerts the operator to the position of the intrusion.

Incorporated in the alarm unit is a mechanical counter which records the number of times the infra-red beam is broken and, through a headphone attached to the alarm unit, an audio signal is also produced when the alarm is activated. In addition, the alarm unit has a re-set button which stops the audio signal and re-sets all alarm lights in the input units to the non-alarm state. The equipment can be designed to take up to 10 separate fences. Total weight of transmitter, including power pack, receiver, input and alarm units for four fences, is about 6¾ pounds, to which must be added the battery weight of two pounds. It is altogether an ingenious and promising piece of equipment.

In response to the changing nature of warfare over the last few years, we have invested energy in the development of ambush communication equipment (ACE). This is a small and useful piece of equipment on which we have recently carried out trials in the Far East. The present methods of inter-communication within an ambush position involves the pulling of a cord, line or wire attached to the wrist of the ambush commander. This is a crude warning system, and one of its many disadvantages is the noise and movement of leaves and branches its use creates.

The ACE is a short-range, line-signalling device designed for use between a maximum of six stations spread over a distance of approximately 100 meters, although this could easily be extended. Each station consists of a buzzer unit and miniature earphone which, together with a small battery, need be no more than eight ounces. Signalling is by means of an audio tone transmitter by any one of the buzzer units and heard in all the earphones simultaneously. We believe this equipment will be a valuable expedient until a walkie-talkie radio of sufficient robustness and reliability is available to replace it.

Other major subjects we are studying include the roles, organization and equipment of the Infantry battalion reconnaissance platoon in the time-frame 1965-75, and the firepower requirements of the Infantry non-APC and APC battalions in the time-frame 1970-77. To these I must add the almost continuous and intriguing day-to-day studies that are conducted in the guerrilla warfare field, on heliborne operations (albeit on a modest scale), and all equipment associated with surveillance.

Finally, I can only hope that this short and somewhat sketchy article goes some way toward helping to meet the admirable aim that General York has in mind. ■

TRACERS



UNEXPLOITED COMBAT POWER

Captain Donald A. Price, Infantry

TRACER AMMUNITION is too often regarded as special purpose. Combat experiences and testing of this much-maligned ammo reveal numerous advantages when it is employed in larger volume. Among the advantages of tracers are: increased hit probability; encouragement of the firer; illumination of targets; and the demoralizing and confusing of opposing troops. Tracers can also facilitate the quick and easy designation of targets.

Development

The development of tracer ammunition was centered around anti-aircraft weapons, both aircraft-mounted and ground-to-air. The first tracer round was produced during the early stages of World War I. From that time almost every ball round produced was closely followed by its corresponding tracer round. Production of tracers varied through the years prior to World War II, due, in part, to doubts raised as to their value. Encouraged by the results that the British were having with tracers, the Ordnance Depart-

ment perfected the tracer round and began work to give it armor-piercing and incendiary capabilities before the United States became a belligerent in the war. A peak of accomplishment in tracer design was reached with the development, prior to the end of the war, of an armor-piercing incendiary tracer.

The earliest tracer rounds had to be used in combination with other more lethal rounds, for their penetrating power was generally unsatisfactory against aircraft. This idea of using tracers in combination with other rounds was apparently carried over from aircraft-mounted weapons to all ground forces weapons. This combination proved satisfactory for adjusting the rounds fired against ground targets from an automatic weapon and was never changed to all tracer.

Characteristics

Small-arms tracer rounds are said to have certain unfavorable characteristics, including lack of stability, lack of penetrating power, a bright trace that initiates at the muzzle,

and a "drop-away" tracer element. In most cases these accusations have little basis in fact.

There is little difference between the tracer round and its corresponding ball round. The tracer bullet is a ball bullet with a recess in the rear for a chemical composition that gives off the trace. As the chemical composition burns out, the weight of the bullet decreases; this weight loss results in a slight change in trajectory. Thus when firing a mixture of ball and tracer ammunition each has its own beaten zone, separated by a distance directly proportional to the range they have traveled. At 300 meters the difference between centers of impact is approximately one meter.

The tracer round is less stable than the ball round. But to the rifleman firing the rounds, this relative lack of stability is insignificant. Lack of stability is actually an advantage; the round causes a more complicated wound by yawing or breaking up on impact. (The chemical composition of the tracer also causes wound complications.)

as if it were coming right at you,"

The bullets of the tracer round for the 5.56mm and 7.62mm cartridges are about 16 percent longer and 3.8 percent lighter than their corresponding ball rounds. Their penetrating power is approximately 3.8 percent less than that of their corresponding ball rounds. For ranges at which combat targets are engaged, this difference is not significant.

Tracer ammunition is no more damaging to a weapon than ball ammunition. The 5.56mm and the 7.62mm rounds do not ignite until they are 35 to 70 meters from the muzzle. Therefore the tracer round affects the weapon essentially the same as ball ammunition. Care must be taken that defective tracer rounds do not begin burning while in the weapon. In case they should, it is possible for the chemical deposits to catch succeeding rounds in the barrel and cause the weapon to explode.

Though the illumination produced when a large volume of tracer fire is concentrated into one small area hinders night vision, it is unlikely that such a concentration will be produced in a combat situation. When other means of illumination are used simultaneously with tracers, the effect of tracers on night vision is negligible.

Psychological Effects

Combat experience indicates that tracers are very demoralizing to those fired upon and encouraging to those who fire them. The psychological effects were once recognized in an unusual way in the form of a "headlight" tracer. This round was designed to give the impression that it was larger than it actually was.

Those who have been on the receiving end of small-arms tracer fire report that it is terrifying. German prisoners, reportedly veterans of several years of combat, attributed the failure of their attack on Bastogne, 30 December 1944, to the "lavish expenditure of tracer bullets"



The addition of the tracers to other position-disclosing effects is insignificant when compared to the advantage of tracer use.

by the defenders. These prisoners also stated that every tracer "looked adding that this was their most frightening experience. Experiences in Vietnam confirm this. Two accounts from Vietnam are as follows:

"To be the recipient of fire with a high percentage of tracer is rather terrifying. At night, a high percentage of tracer will create the illusion of a greater volume of fire being delivered than actually is so. Personnel observing tracer have the distinct feeling that such rounds are personally seeking them out. The total psychological effect is quite devastating." (Capt Duane E. Zimbrick) "My unit was caught in a night ambush by the VC (We had) the disadvantage of seeing those red streaks coming at (us). It's enough to make you crawl." (Capt Dale E. Shipley)

Control

In training a rifle squad to engage enemy personnel from a defensive position, the major problem is invariably fire control. During periods of good visibility, squad and team leaders use tracers to designate obscure targets, signal the squad to fire, or to shift fire. The use of a high percentage of tracer ammunition by the defending unit also assists in determining and adjusting fire distribution. Tracer use to aid in distribution is particularly helpful at night and during other periods of limited visibility.

Small-arms tracers as an alternate means of marking a target for an

armed helicopter air strike have been used effectively to deceive the Viet Cong, who were prepared to react to the primary signal but did not know or recognize the alternate.

During World War II the British used 40mm tracers on several occasions to indicate direction and mark boundaries for night attacks. Their experience indicated that these rounds should be fired at the rate of one per minute at an interval of about 450 meters. This control technique is most effective when attacking across terrain that lacks landmarks usable for control. Large-caliber tracers are more desirable. However, rifle tracers can be seen clearly if fired in sufficient density.

The most widely proclaimed advantage of tracer ammunition is that it increases accuracy. In training tests conducted at Fort Benning, a squad using solid tracer ammunition in a night defense achieved 200 to 300 percent more target hits than the same squad using ball ammunition. As the degree of visibility increases, the accuracy of fire with ball and tracer becomes more comparable. Tests involving mixtures of ball and tracer were inconclusive, but indicated that the increased accuracy is a result of the illumination provided as well as the adjustment of individual rounds. Officers who have served in Vietnam and have used tracer ammunition agree that this increased accuracy is a significant advantage of tracer ammunition. Since the Vietnamese are not always able to apply our fundamentals of rifle marksmanship due to the size of the weapon, advisers to

There are possibilities that, if all units along a defensive line use tracer ammunition, the gaps in the defense will be evident and, if the enemy personnel observed from the flanks, the use of tracers would give them a fairly exact line of the positions. These possibilities must be considered before using tracers.

No combat example has been found in which the use of tracer ammunition directly produced the results feared by those who refuse to use it at night, while many exist that clearly illustrate the advantages of using tracers. In most cases it is the fear of what tracers *might* do that results in their not being used. The psychological impact and the ability to adjust fire rapidly and accurately when using a high percentage of tracers *prevents* the enemy from taking advantage of the position-disclosing effects.

Position-Disclosing Effects

Tracer ammunition at night adds to the position-disclosing effects of muzzle flash and noise. From the standpoint of locating a position from which tracers are fired, the addition of the trace to muzzle flash and noise is considerable.

However, if a position is well defined or the general location is known by the enemy, the addition of the tracers to other disclosing effects is insignificant when compared to the advantages of tracer ammunition. Referring to the use of tracers in conventional defense, Brigadier General S. L. A. Marshall wrote the following:

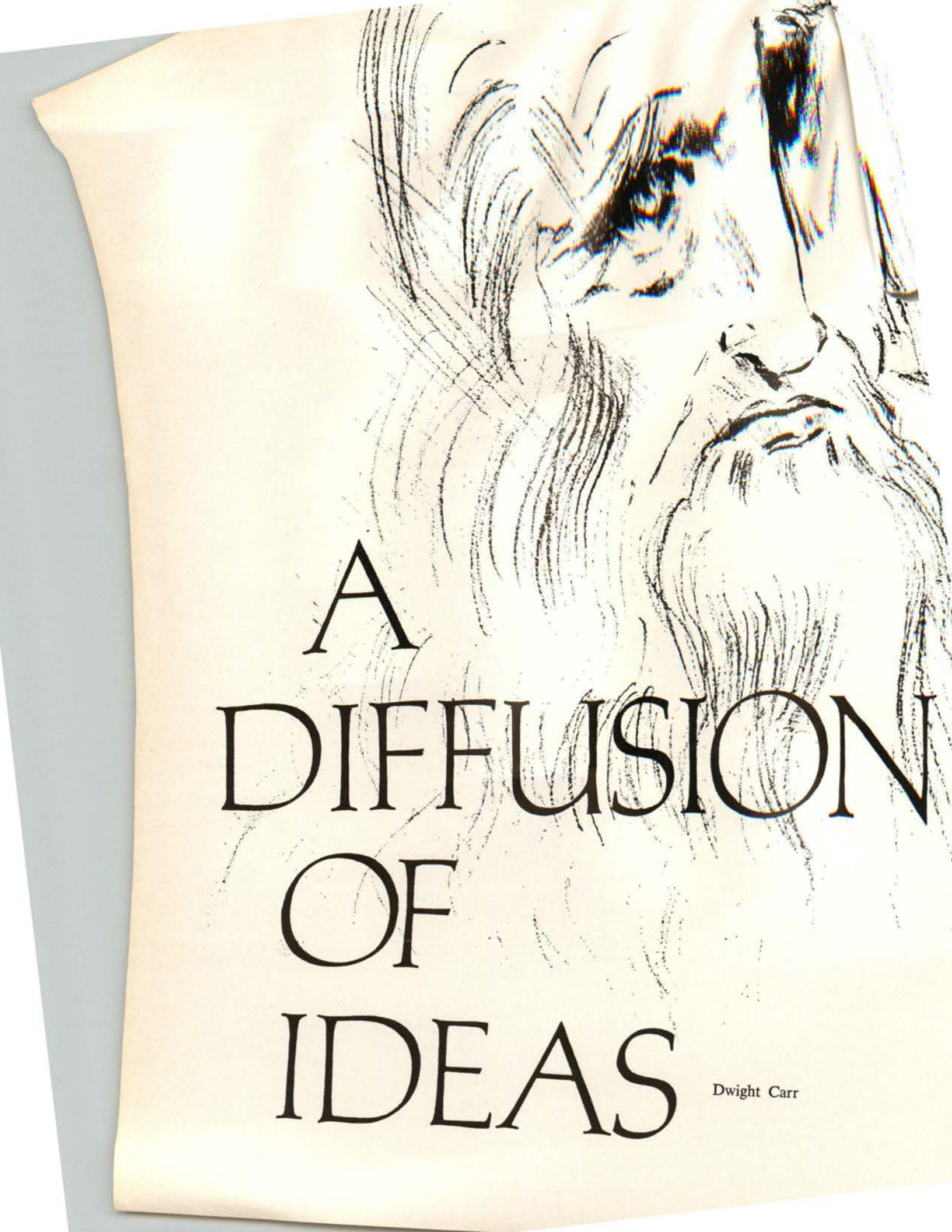
"Without the jeopardy in the use of tracers, as to its revealing the location of a fire line that might otherwise stay concealed, there is a marginal contribution. Still I would not overrate it too heavily. The result is that the other fellow all too soon picks up your location when you open fire with trajectory weapons. Sparks and lights coming directly at Infantry in the attack do not provide a much better beam on the target than does sound."

A Vietnam veteran who used tracers at night stated that they were

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Conclusion

The use of 100 percent tracer ammunition would not result in the loss of potential combat power to the extent that the Infantry is presently losing by not fully exploiting tracer ammunition. However, the most desirable results can not be produced in either case. The use of tracers should approach the extent of the tracer becoming the "standard-use" round and the ball, the "special" round. In order to exploit small-arms tracers fully they should be available in at least the same quantity as ball ammunition so as to give the commander flexibility in choosing the type or mixture that he desires for each situation. ■



A
DIFFUSION
OF
IDEAS

Dwight Carr

THE 1966 WORLD ALMANAC lists some 350 great inventions and scientific discoveries. None of them

is accredited to Leonardo da Vinci. Yet, among the manuscripts of this Italian Renaissance master are three-hundred-year-old blueprints for the helicopter, the bomb, diving suit, carding machine, steam engine, loom, lathe, machine gun, spinning jenny, submarine, telescope, differential transmission, and military tank.

Also in archival Vinciana are plans for canal locks, bridges, earth-moving devices, fin-stabilized projectiles, locomotive wagons, well pumps, drilling rigs, paddlewheels, parachutes, life preservers, roller bearings and other antifriction devices, gunboats, rolling mills, steam engines, and a means for walking on water.

Today, no trace remains of da Vinci's actual machines, or their models—only his incomparable drawings of them. And drawings, they say, are not inventions. From the precision of his detailed sketches, however, the assumption is natural that da Vinci must have designed and actually constructed many more devices than has been supposed by those who believe his activity in the field of invention was "purely an exercise of his prolific fantasy."

Why were his totally rational ideas apparently so neglected? There are hundreds of different answers expressed in the more than 2,000 books on da Vinci published just in the decade preceding his quincentenary in 1952.

Da Vinci himself may have been to blame (if that is the word) because he seldom announced his plans and ideas, being a cautious inventor who made a fetish of secrecy and one who took elaborate precautions against thieves and spies. Perhaps for da Vinci, as for most intellectually independent men, the mere conception of an idea was a sufficient end for genius; the carrying out of ideas was the responsibility of servants. His indifference to the finished product, which seems universally to be a characteristic of a conceptual mind, also means that few of da Vinci's paintings were ever completed by him. It should also be noted that 'progress' had not then been invented. The idea of progress as we think of it—combining ideas to progress other ideas—was not to emerge in European cultures until the middle of the 18th Century, some 200 years after da Vinci's death. From the time of the scientists through the burst of the Renaissance, men generally created their own environments in their own ways, rarely taking the best of the past and improving

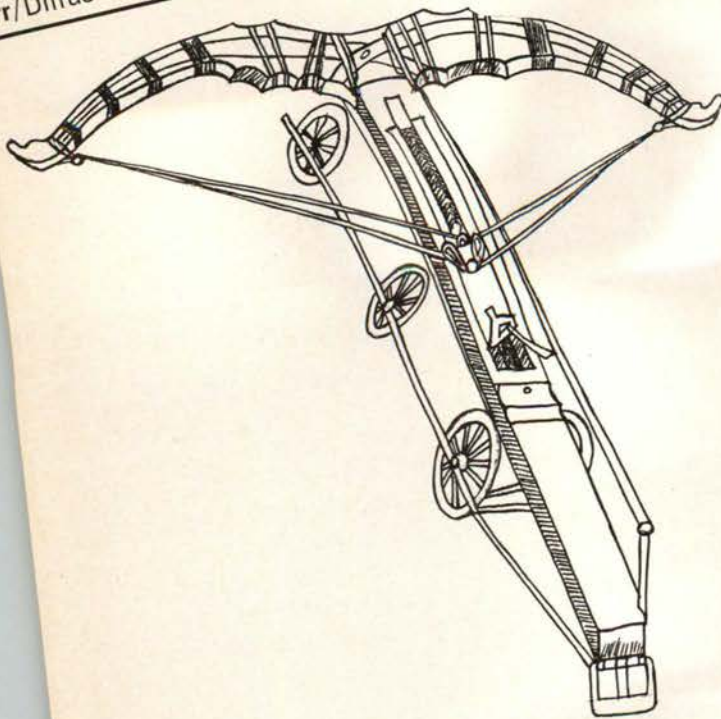
on it, or giving much thought to time beyond their immediate future. Da Vinci's ideas thus became all the more remarkable since he started from scratch, worked in isolation, and yet produced enough thought to support a dozen separate eras or periods.

An increasing number of scholars insist that da Vinci's ideas were very much implemented in his time, that the memory of his inventions and mechanical construction is distinctly echoed in various traditions and in writings. In this century, one writer has said: "We must assume, naturally, that Leonardo's teachings were not all lost. Though many of his works have not survived, though the machines he built were destroyed and not reconstructed, and though the truths he established soon became separated from his name, they did not lack reverberations, and spread abroad in other guises and other names, until evidence drawn directly from his writings in modern times revealed their origination in his mind."

Leonardo da Vinci was born in April 1452 in Anchiano near the village of Cinci in northern Italy. When he was seventeen, his family moved to Florence, the citadel of the Medici, and da Vinci was accepted as an apprentice in the workshop of Verrocchio, one of the great Florentine artists of the time. In Tuscany, da Vinci developed his exceptional artistic ability, especially in drawing and design, until he was confident enough to apply for his first job as a combat developments expert. He sent his application, with a resume of his qualifications, to the Duke of Milan, Ludovico Maria Sforza, known as il Moro. The letter stated:

"Most Illustrious Lord, having now sufficiently seen and considered the proofs of all those who proclaim themselves masters and inventors of instruments of war, and finding that their invention and use of the said instruments does not differ in any respect from common practice, I am emboldened without prejudice to anyone else, to put myself in communication with Your Excellency, in order to acquaint you with my secrets, thereafter offering myself at your pleasure effectually to demonstrate at any convenient time all those matters which are in part briefly noted as follows:

Dwight Carr has been a writer-editor with the U. S. Army Combat Developments Command Infantry since 1963. Prior to this he held a similar position with the Department of Nonresident Instruction. Mr. Carr is also the author of Caveat Lector in the September-October 1962 INFANTRY.



The Giant Ballista.



A primitive howitzer, which fires shrapnel-type projectiles.

"1. I have plans for bridges, very easily, with and suitable to be carried very easily, and for order pursue and at times flee from the enemy, and for order solid and indestructible by fire or assault, easy and convenient to transport and place in position. Also plan for burning and destroying those of the enemy.

"2. When a place is besieged I know how to cut water from the trenches, mantlets, and scaling ladders and other instruments pertaining to the enterprise.

"3. Also, if a place cannot be reduced by the method of bombardment, because of either the height of the glacis or the strength of its position I have plans for destroying every fortress or other which it be founded upon rock.

"4. I have also plans for making a storm of small stones, causing terror and confusion, reason of smoke, and great loss of the enemy.

"5. And if the engagement be at sea I have plans for constructing many engines most convenient for attack and defense, and ships which can resist the heaviest cannon, as well as powder mines and secret winding passages, and great loss of the enemy.

"6. Also, I have ways of arriving at a place without noise, even though it may be necessary to pass underneath trenches or a river.

"7. Also, I can make covered ways, which will be unassailable, which will enter the ramparts with their artillery, and there is no arms so great but they will shatter it. the Infantry will follow quite unharmedly.

"8. Also, if need should arise, I will supply mortars, and light ordnance, of very beautiful shapes, quite different from those in use.

"9. Where it is not possible to enter a place, I can supply catapults, mangonels, trabucos, and other engines of wonderful efficacy not in use. In short, as the variety of the circumstances vary, I can supply an infinite number of engines of attack and defense.

"10. In time of peace I believe that I can give as complete satisfaction as anyone else in the world pertaining to the construction of buildings, public and private, and in conducting water from one place to another. Also, I can execute sculpture in bronze, or clay, likewise painting, in which I will stand comparison with that of anyone else who may be. Moreover, I would undertake to make the bronze horse which is to endure with immortality and eternal honor the auspicious memory of your father and the illustrious house of Spain. If any of the aforesaid things should seem to be impracticable to anyone, I offer myself to make trial of them in your park or in whomever you please.

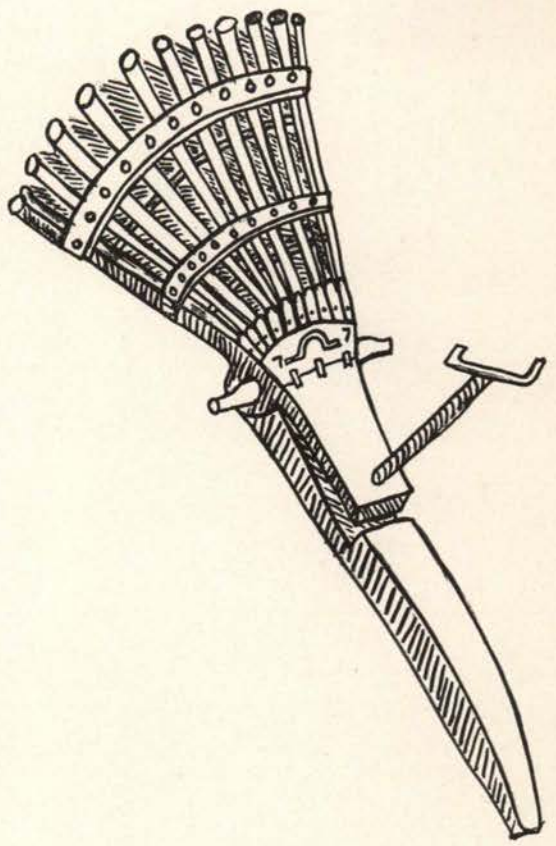
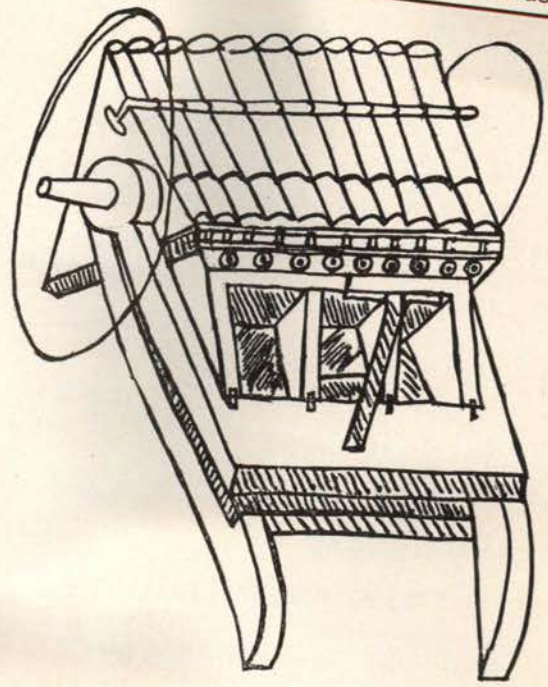
... Please Your Excellency, to whom I commend
 with all possible humility."

particular interest in this famous letter is the fact
 la Vinci touts his engineering and scientific abilities
 excludes stress on his greatly expanding artistic
 s, except for the laconic "likewise painting" in
 10. Anonimo Gaddiano, the earliest biographer
 Vinci, suggests that Leonardo phrased the letter
 rtray himself as a suitable replacement for Bartol-
 Gadio, the ducal military engineer in Milan who
 ust then at the end of his productive period. Also,
 Vinci may have guessed that an application as a
 painter would have little influence on a duke
 dy surrounded by the finest Milanese artists of the
 aissance. In any event, the application was accepted
 da Vinci, in 1482, left Medicean Florence for the
 za and Milan.

Immediately upon his arrival in Lombardy, da Vinci
 an drawings for most of the military devices men-
 ed by him in his letter to the duke. In various
 ections of da Vinci's notes of the period are illus-
 ions of use of high-firing mortars and hand grenades,
 estigations of asphyxiating gases, demonstrations of
 elley-mounted cannon with devices for rapid aiming,
 askets of various caliber, and a kind of machine gun
 mprising several gun barrels on a rotating prism.
 rawings of crossbows with shields, of devices for
 rowing darts, of steam cannon, are mingled with
 er studies of stationary and rotating bridges, designs
 r gunboats which predict the *Monitor* and the *Merri-
 ac*, and plans for the astounding battle cars, those
 omised "chariots, safe and unassailable."

Early drawings made for his patron, il Moro, also in-
 de marine designs and schemes—strange concerns
 the duke in his land-locked Milan. But in 1484, the
 e of the aquatic devices became clear when the King
 Naples and the Duke of Ferrara—both representing
 pe Sixtus IV—joined forces with il Moro to attack
 e Republic of Venice on the Adriatic. One da Vinci
 awing which may relate to this period is a model for
 e automatic ignition of a fuze by means of a flint
 hich could be used under water. Years later, da Vinci
 ould create equally startling things for the Venetians,
 eluding a submarine.

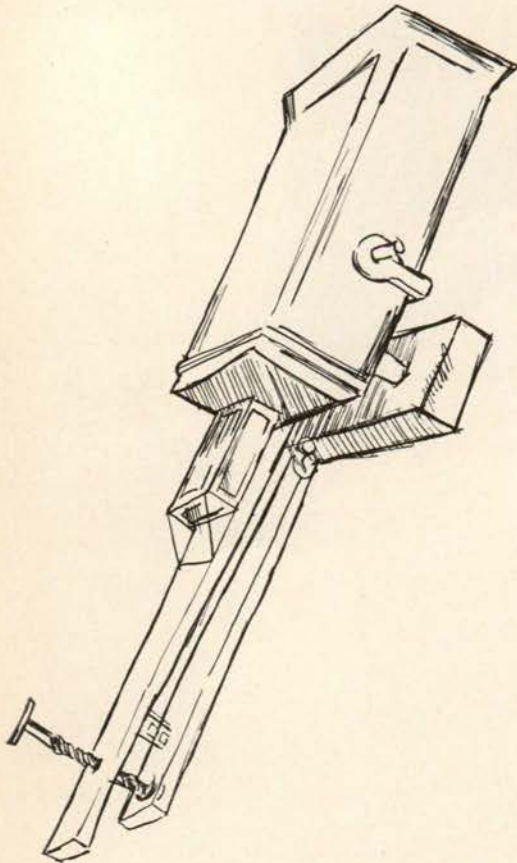
In 1488, this research and development man of the
 aissance resumed his studies of the problems of
 ight, the aeronautics of birds and insects, thoughts
 hich he first recorded while in Florence before he was
 rty. One of these studies is a design for a flying
 vice to be powered by a recumbent man who was to
 ove the rudder with his neck and a wing with each
 n. Da Vinci adds a warning for the test flight: "This
 vice you should try over a lake, and you should wear
 the waist an inflated skin, so that in falling you will
 t drown." In connection with his experimental air



Forerunners of the Gatling gun as designed by da Vinci.



Da Vinci's concept of a helicopter.



One of his many ideas for a mortar.

machines, he was to invent the parachute, a
apertures," as he phrased it.

In April 1498, the throne of France passed to XII, the Duke of Orleans. The new king had long of Milan. As a descendant of Valentinois and the conti, Louis XII was determined to reclaim the of Milan as his right. And he did so in a very war the following year.

Ludovico il Moro fled to Innsbruck, leaving his of artists behind. He was later captured at Novara da Vinci made a note on the occasion: "The Gov has been made prisoner, the Viscount carried off his son killed: the Duke has lost his state and his and his liberty, and none of his works has been fin by him." One of the unfinished works was the b horse which da Vinci had promised sixteen years ea

The liberal Louis entered Milan on 6 October, 1 and expressed only admiration for the renowned a deserted by il Moro. The particular meeting betw the King and da Vinci began a mutual affection w would last—between the genius and France—t da Vinci's death.

On the same day that King Louis entered Milan, Turks of Sultan Bajazet II arrived at the Tagliame River ultimately to descend from Friuli to threat Venice and the state of St. Mark. Da Vinci hurri to Venice to assist in its defense. Now began the ma period for his marine designs and water warfare schem

He initiated plans for an apparatus for breath under water by means of a double tube protruding the surface in floats of cork, but the idea was discar because it would be too readily detected by the ener Da Vinci then designed "a diving suit which covers body from top to toe . . . with a breast plate that c tains an air tank which, by means of an iron semicir is held away from the chest . . ." Every detail of suit is described, including the air tank which was to an animal gut. Years before, da Vinci had inflat ram's gut until it filled an entire room, thus he kr of the elasticity of this material.

Typically, da Vinci considered the defenses wh could be used against divers wearing his suit, such being sighted and trapped: "Take a stout knife v you so that you cannot be caught in a net." Moreo he was aware of the need for military secrecy: "G simple-minded man to do the job and have him the suit for you at home." Finally, also characteris of da Vinci, he indirectly performed a cost-effective study when he estimated what his payment for invention was likely to be.

But, as was often the case with his contrivances, diving suit project seems to have gone no further t the planning stage because, as da Vinci himself wr "Men would use them to sink ships and thus cause

of life to those who sail them." This was a strange reservation for a man who had invented, at least on paper, a vast and formidable arsenal for war. Some writers suggest that the diving suit was intended for use only in shoring up Venetian buildings which were then, as now, sinking into the famous lagoon.

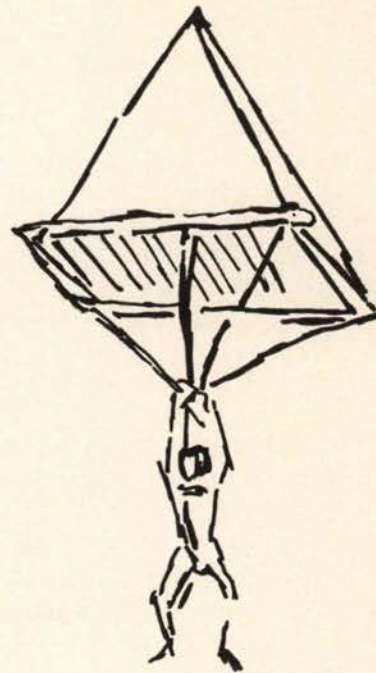
In May 1502, da Vinci went to Piombino to study some ancient forts and to plan for the draining of the Piombino marsh lands. On this trip, he joined Vitelli, one of Cesare Borgia's captains, in time to witness the siege and fall of Arezzo, and he produced several scaled drawings for siege machines for Vitelli and for Borgia. These sketches, plus drawings for il Moro, are the deepest coverage da Vinci gave to strictly military matters.

With regard to fortresses, an almost unbroken idea had obtained from ancient times, from Troy even, through the Roman era to roughly the middle of the 15th Century: a high ratio between the vertical and horizontal dimensions as in the thin "curtain" walls with, as da Vinci saw it, "deficient and unorganized outworks of lists and barbicans from which nothing can be seen or protected except entrances and exits of the main structure."

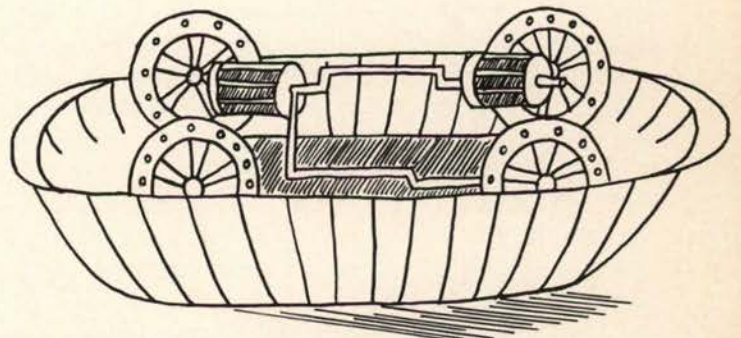
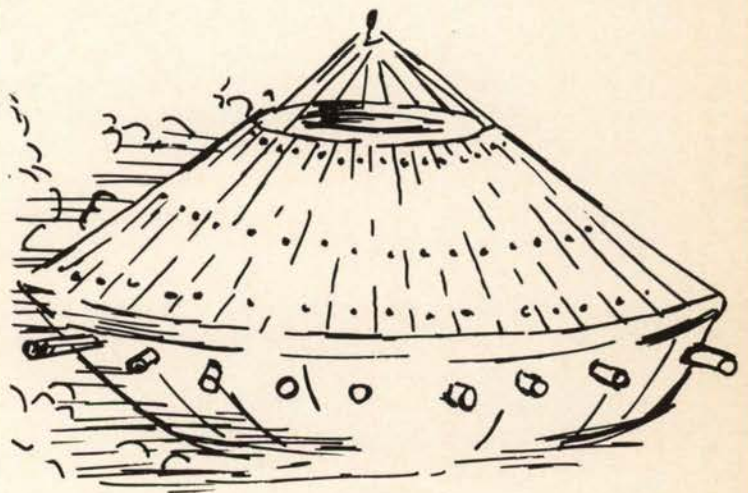
Now, suddenly, the da Vinci drawings disclose an entirely new world of forts and warfare. The idea of total casemating is born in drawings from his Milanese years, drawings which could have served to erect the Maginot, Siegfried, and Schroder lines in modern times. Da Vinci lowered walls and thickened them; he brought defensive cannon down from high parapets to fire directly, and he gave ordnance swivels and joints for angle fire in any direction. He designed pillboxes joined by tunnels, and he provided for crossfire and flanking fire against attackers of his fortifications.

He drew walls with new contours—ogival, slanted—to deflect bombardments, and he made voluminous notes on trajectories and theories of percussion and impact. He designed radiants and all-around defense structures, and he invariably indicated how his own fortifications could best be defeated or neutralized.

One of the most thought-provoking paragraphs in all of da Vinci's published notes is one in which he is thinking of himself and of the fortune which his work might have merited: "If any man could have discovered the utmost powers of the cannon in all its various forms, and have given such a secret to the Romans, how swiftly would they have conquered every country and vanquished every army, and what reward could have been great enough for such a service? Archimedes . . . damaged the Romans in the siege of Syracuse (but) he being found dead, greater lamentation was made for him by the Senate and the people of Rome than if they had lost all their army . . . And after the second destruction of Syracuse, the sepulcher of Archimedes was



The parachute or "tent without apertures."



Counterpart of today's tanks, with four man-driven wheels.

found (and) restored . . ." Such honor, however, was not to surround da Vinci in his tomb.

Da Vinci stayed with Borgia less than a year, and he informs us that he did not acquire a fortune in the Caesar's service. From March 1503 to May 1508, da Vinci was engaged in numerous projects under the patronage of Charles d'Amboise, the French fist in northern Italy. In July 1503, da Vinci was studying methods of diverting the Arno River, to assist the Florentines in their capture of Pisa. He was aided in those particular geographical studies by Machiavelli. The grandiose plan for re-coursing the river never came about, chiefly because the Florentines lacked the necessary funds.

The most likely military action in which da Vinci's arsenal was used was the bloody conflict that stormed over the plains and valleys of the Po River in Lombardy at the end of the first decade of the 16th Century. The League of Cambrai, under Pope Julius II, sought to drive out the French and establish Massimiliano Sforza, son of il Moro, in Milan. Until that period, mercenaries had generally been used to fight the off-and-on skirmishes sponsored by dukes and kings. But now, new machines, new weapons, and new explosives made impossible the bloodless battles fought by *condottieri*. The League of Cambrai employed da Vinci weapons against da Vinci-designed fortifications built by the French; and the French used da Vinci maps in countering League maneuvers also planned by da Vinci. As for da Vinci's playing both ends against the middle, in those times when states were in constant ebb and flow, body-and-soul allegiance to any one ruler was rare; the best that free spirits, such as da Vinci, could do was to be true to themselves and to their art—and to perfect their skill at flattery.

Ultimately, the French were forced to withdraw from the valley of the Po, and da Vinci departed for Rome to stay as guest of Giuliano da Medici, whose brother, Giovanni, had lately become Pope Leo X. In Rome, da Vinci was given rooms in the Belvedere palace of the Vatican, a clear measure of the prestige which his genius had earned for him throughout Italy. He filled his days there with geological studies (such as plans to drain the Pontine marshes) interspersed with studies of cosmography, optics (such as the telescope, which historically was not to be invented for another hundred years), acoustics, mechanics, mathematics, and anatomy. When Leo X was informed of da Vinci's studies on the human body, the Pontiff ordered them stopped. Da Vinci notes, with some worry: "The Pope has found out that I have skinned three corpses." In fact, da Vinci dissected over thirty corpses in producing some of the best anatomical drawings yet in existence.

In July 1516, Francis I, having succeeded Louis XII, marched into Italy, and the army of Leo X was dis-

patched to meet the French. Da Vinci followed the papal army to Piacenza and the battle of Marignano, and continued to Bologna to be present when the Pope and the King shook hands. Francis I, as awed by the genius of the amazing da Vinci as his predecessor had been, begged Leonardo to honor France with his presence. Da Vinci did so six months later, in January 1517. He left Italy, carrying under his arm the *Gioconda* and the *St. John the Baptist*.

In painting as in his combat developments, da Vinci seems to have been more often content to have an idea, record it in a sketch or cartoon, and leave implementation to students—or to servants. There are only nine paintings by him which are agreed upon as being totally his work, and three of these masterpieces are unfinished. The full inventory comprises an *Annunciation* and the *St. Jerome* in the Uffizi Gallery in Milan; an *Annunciation*, the *Madonna of the Rocks*, the *Gioconda* ("Mona Lisa"), and the *St. John the Baptist* in the Louvre; the *Benois Madonna* and the *Adoration of the Magi* in the Hermitage at Leningrad; and the *Last Supper*, a tempera on the altar wall of the Santa Maria delle Grazie in Milan. The unfinished works are the two in Leningrad plus the *St. Jerome* in Milan. Myriad other paintings linked to the name of da Vinci are either not by him alone or are copies. Da Vinci was left-handed; thus, his brush strokes, left to right, are relatively easy to identify, and they are difficult to imitate.

Da Vinci settled in France at Cloux, a small castle on the banks of the Loire in Amboise. At Cloux, he gave himself completely to science and to the study of mechanical, utilitarian applications of science. And there he died on 2 May, 1519.

The Renaissance master and genius was placed in his permanent sepulcher in the cloister of St. Florentin in Amboise. Knowing that two kings of France had sought his presence, and recalling his admiration for the honor given to the sepulcher of Archimedes, it is ironic that, during the Huguenot wars in the second half of the 16th Century, da Vinci's sepulcher was ransacked by Frenchmen—of one persuasion or the other—and his mortal remains were scattered. All searches for them have been unsuccessful. A further tarnish on the earlier French acclaim for him was the vandalism perpetrated on the *Last Supper* in 1796 by French soldiers who used the Santa Maria delle Grazie refectory as a stable.

Leonardo da Vinci willed his papers to Francesco de Melzi, a Milanese patrician who was his companion for many years. Most of the material was stolen shortly after da Vinci's death—stolen not by profiteers or militarists, but by bibliophiles. In the succeeding centuries, the drawings and designs from the mutilated da Vinci folios have spread abroad as far as has the diffusion of the prophetic ideas which they portend. ■



COMMANDANT'S NOTES



**General
York**

IN October 1965, the Infantry School kicked off Project HORIZON—the Infantry School Electives Program. Designed to offer the Career Course officer-student intellectual challenge and academic enrichment, Project HORIZON was elective in every sense. It was offered on a take it or leave it basis. The whip was never applied, but a carrot was offered in addition to the intrinsic value of the program: officer-students who completed one of the seventeen courses offered received a favorable comment to that effect on their academic efficiency reports.

Officer-student response exceeded expectations with 73% of the Career Course students enrolling in such educational pursuits as geographic area studies, effective speaking and writing programs, language studies, college studies, and military correspondence courses.

If enrollment exceeded expectations, then the completion rate was even more astonishing. Seventy-nine percent of the officer-students who enrolled in the program completed Project HORIZON.

Not satisfied with the status quo, the Infantry School has remodeled Project HORIZON for this school year. The major changes consist of a more streamlined administrative organization, and the conduct of both graduate and undergraduate level courses at the end of a six-hour academic day. As an example of the administrative organization, six divisions have been established — International Affairs, Management, Scientific and Technical, Military Arts, Communicative Arts, and General Studies.

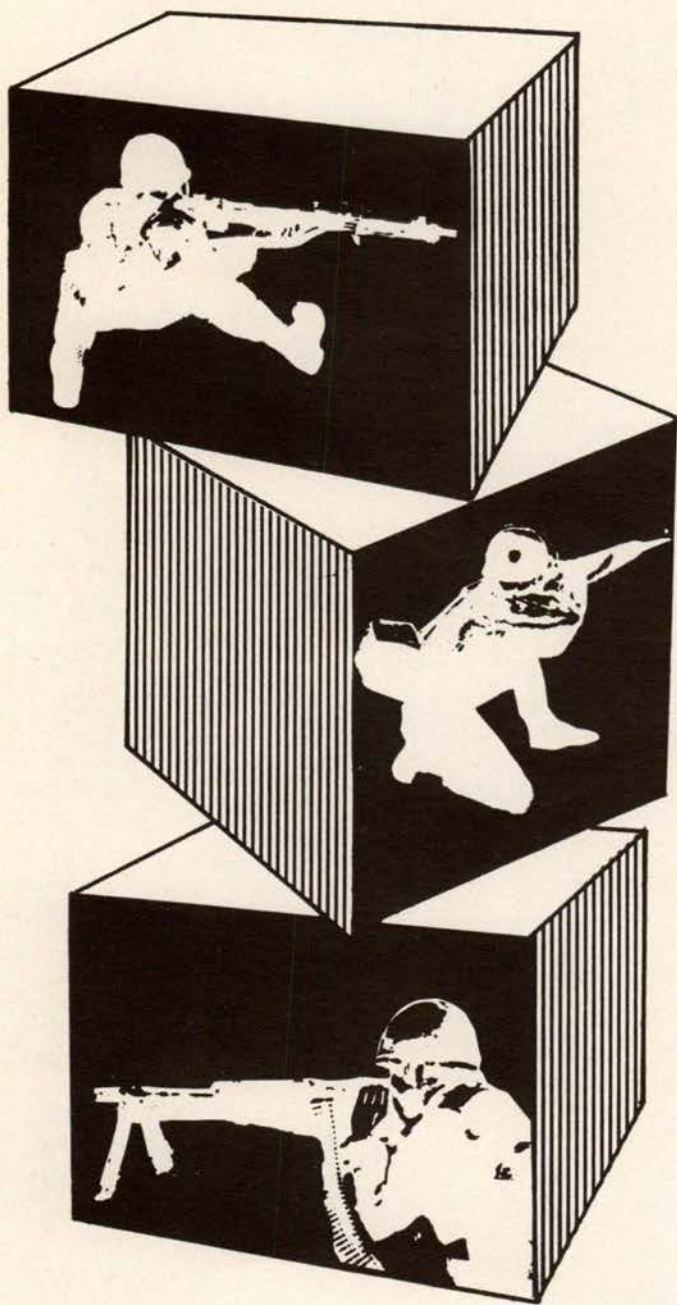
Each division will offer two or more courses. Certain of the courses will be handled by the American University; others by the Post General Education Development Center, the Combat Developments Command Infantry Agency, and by the Human Relations and Research Organization. A few courses will be taught by specially qualified Infantry School Staff and faculty members. Ranging from a college course on automatic data processing to a non-college credit course on speed reading, Project HORIZON offers something of interest to everyone.

The cost of Project HORIZON is surprisingly low. For the School itself, other than for a small sum of money paid for the five language courses, the cost amounts to elbow grease and staff and faculty time. The enrolled officer-students must pay for the college courses, but tuition assistance and the new GI Bill takes care of a large part or all of the fees connected with the courses.

The quiet revolution continues at the home of the Infantry. These educational innovations may seem strange to a few surviving mossbacks, but they fit the Infantry tradition. After all, you have to be front to say — Follow Me!

A handwritten signature in black ink that reads "Robert H. York". The signature is written in a cursive, slightly slanted style.

ROBERT H. YORK
Major General, USA
Commandant



THE SIMPLEST ELEMENTS

This is the first in a series of reprints of articles which originally appeared in one of INFANTRY'S predecessors — the MAILING LIST or the INFANTRY SCHOOL QUARTERLY. Articles in this series will be drawn from issues published at least 15 years ago, and each will contain valid lessons for today's Infantryman. Yesterday's Infantryman was quite a man, too!—Editor.

HOW CAN WE PRODUCE rifle platoons capable of performing the limitless variety of missions which commanders demand that they perform and combat observers demand that they be taught to perform? Consistently, reports from combat areas stress that this is a platoon and squad leader's war. Once the small units are committed to battle, the fate of armies is in their hands, and all the pencil chewing in the world back at headquarters, from the company on up, will not help them fight their all-important little skirmishes.

Let us try to *boil platoon functions down to their simplest elements*, leaving out or submerging all non-essentials and thus simplifying the job of both the leaders and the troops.

A rifle platoon's job in combat is simple, although it is far from easy. A platoon performs no classic evolutions on the battlefield. It does just three things during battle: move, attack, hold. It also observes, reconnoiters, fires, and secures itself against surprise, but it does these things in the normal course of events while performing its three basic operations: to move, to attack, and to hold. Moreover, it always performs each of these functions according to certain rules which never change, regardless of terrain, weather, or time.

A platoon has a very restricted and distinctive viewpoint during combat. It is completely wrapped up in its own little battlefield. Although the platoon starts out with a knowledge of the missions of the company and battalion of which it is a part, after a fire fight has commenced it frequently is only vaguely aware of what the rest of the company is doing and has no idea at all of what the battalion is doing.

The platoon may not know whether the battalion is executing an approach march, a pursuit, or a reconnaissance in force. For the platoon may legitimately be attacking when the battalion is still in the approach march, or it may be only "approaching" after the battalion has launched a coordinated attack.

The point is that, although our field manuals are

necessarily written in general from the viewpoint of the company, battalion, or higher unit, our small-unit training should not be conducted from the same viewpoint. If we are to make the training of a platoon simple, we should not try to inform it how to operate "when the battalion is the advance guard" or "when the battalion is in the approach march." Instead, we should teach it simply to move, attack, and hold under various combat conditions. When it can do those things well, it can take part in the advance guard, approach march, or other larger unit formation, and function efficiently.

Actually the platoon goes through a more or less uniform cycle of events, over and over, hour after hour, day after day, regardless of what other units around it are doing. There are several distinct conditions under which the platoon operates during the cycle. The platoon leader who can recognize and cope with each of these phases as it occurs is a good platoon leader.

PHASE 1: Contact with the Enemy Unlikely.

The platoon leader is reasonably certain of arriving at his immediate objective without meeting serious resistance. Therefore speed is the first consideration. The platoon will march on roads, trails, and on open, firm ground where it can move easily and speedily. But it will take no chances of being surprised by a small enemy group.

The platoon leader provides all-around security by means of scouts, small patrols, and designated observers to the front, flanks and rear. By taking all the men for security missions from a single squad he retains tactical unity, keeping two complete squads intact. He sends out the security patrols as far as possible without losing control of them, keeping them within range of supporting rifle fire as much as possible. He makes his men march in such a dispersed formation as will prevent excessive casualties from a burst of automatic fire. During the march he makes a constant visual reconnaissance ahead, in order to anticipate and be ready to meet any enemy action.

The platoon leader's primary consideration during this phase is to maintain the required marching rate, and security measures must be such that they will not lessen it.

PHASE 2: Contact Expected, but Enemy Location Unknown.

The platoon leader expects to meet the enemy at any time during the march, but he has no immediate indication of the enemy's presence except, perhaps, by encountering long-range machinegun fire or unobserved artillery fire. He is now less concerned with speed than with readiness for combat. So he avoids roads, trails, and open areas. He follows concealed routes wherever possible. He further deploys his squad so they are ready

to maneuver rapidly, to hit hard and fast. This deployment also gives the platoon more dispersion and incidental protection from small arms and artillery fires.

The platoon is now in fighting formation. It avoids exposed danger areas, but pushes on as rapidly as possible, always maintaining concealment and a readiness to fight. The platoon leader does not know whether the enemy is 500 yards or two miles away. It may be an hour before he is encountered at close range. Therefore, the platoon advance is delayed only as much as is necessary to avoid surprise.

PHASE 3: Enemy Presence Known, but Aimed Small-Arms Fire not Encountered.

The platoon leader knows that the enemy is near, probably within effective range of small-arms fire. There is a strong possibility that the platoon will have to fight within the next few hundred yards.

There are various ways in which the platoon leader may know of the enemy's presence: by sight, sound, smell, action of civilians or of animals, or less frequently, through intelligence reports of higher units. Leading elements of the platoon may see enemy equipment, earthworks or personnel. The sound of voices, of men working, of vehicles, or of firing may be heard. Native scouts or war dogs sometimes smell enemy units, and anyone can smell cooking. Civilians scurry for cover when they see trouble approaching. Excited action of animals or birds is an indication of the presence of men. Intelligence reports, however, will seldom be detailed enough to tell the platoon leader exactly when or where he will run into small enemy groups.

At any rate the platoon has as yet encountered no aimed small-arms fire. This may be because the enemy has not discovered the platoon, because he knows of its presence but cannot see it, or merely because he is waiting for it to advance closer.

At this point the platoon does not know the enemy's precise location. Even if an enemy group has been seen or heard, there may be other, closer groups which are more dangerous to the platoon mission. The platoon needs additional information before it can intelligently maneuver and attack.

There is only one thing for the platoon leader to do, and that is to continue to move toward his objective, using the most covered route available until the leading elements can locate the enemy—not just any enemy, but the particular group which is blocking the approach to the platoon objective. When this enemy group has been located accurately enough to engage with effective small-arms fire on the area which it occupies, the platoon will be in a position to make a coordinated attack using fire and maneuver; and not before then.

The platoon approaches as secretly as possible. The enemy may not be aware of its presence. Even though

gaged by Schmidt's flanking force. Shortly, all enemy elements had either been destroyed, captured, or driven across the river. Schmidt sent the tanks and one rifle platoon to secure the bridge while the remainder of the company reorganized on HILL 289. The remnants of the Russian force retreated north along Route A. After reorganizing, the Germans set up defensive positions around the bridge, which they held until the withdrawing German regiment crossed that evening.

As a result of this action the German commander had accomplished his mission although faced by a superior force occupying good defensive terrain. Three Russian tanks were destroyed and a sizeable number of enemy troops were killed or captured. The Germans lost one tank and suffered considerably fewer casualties.

outstanding application

The success of this action can be attributed largely to the outstanding application by the German commander of the principles of war. To begin with, the principle of the *objective* was kept uppermost in his mind. Throughout the engagement all the German efforts were focused on the end sought—to seize and secure the bridge. The objective of the attack itself was to drive the enemy forces off HILL 289, a necessary action in order to secure the ultimate objective of the bridge which was dominated by HILL 289. Another example of the application of this principle was that Schmidt did not pursue the retreating enemy since it would have left the bridge unguarded.

The principle of *surprise* was applied by attacking the enemy when and where he was not prepared. Seeing that the Russians were preparing for an attack from the front along the two main avenues of approach provided by routes A and B, and that they were concentrating their forces to meet threats from these two directions, Schmidt realized that to be successful he would have to hit them from an unexpected direction. In that the Russian commander evidently felt that the thick forest on his right flank would act as a barrier to any armored force which might threaten his tanks and Infantry, and so had neglected to provide for its security, Schmidt was able to gain surprise by attacking from this direction.

The principle of *maneuver* was applied by moving the main force to a more advantageous position with respect to the enemy. In this case, Schmidt enveloped the Russian right flank by maneuvering his forces through the woods. Had it not been for this maneuver, it is very doubtful if the Germans would have been successful.

Schmidt provided for the *security* of his force by sending out a reconnaissance patrol to insure that the trail through the woods, where his force would be most vulnerable, was not covered or blocked by enemy forces.

By putting detachments on HILLS 275 and 270 he was able to insure that the Russians would not occupy them and thus gain close ground observation of his movements. Also, he gained a degree of security by his quick movement through the woods and by the concealment afforded by HILLS 275, 270, and the woods.

Mass was applied by concentrating the bulk of his force—all of his tanks and two of his rifle platoons—at the decisive time and place. By massing his combat power at a vulnerable point he was able to achieve success. A lesser force than that used would probably have been too weak.

As the German plan was to focus the enemy's attention to the front and then conduct a supporting attack from this direction, the commander had to allocate a portion of his combat power to this secondary task. But in order not to detract from the strength of his main attack, he used the minimum necessary force—one rifle platoon and the bridge-guarding detachment—to accomplish the mission. In this way he applied the principle of *economy of force*.

a decisive victory

Even though the original mission given Schmidt, that of securing a bridge thought already to be in German hands, was defensive, the principle of the *offensive* had to be applied. The necessity for taking offensive action was perforce thrust upon him, but he applied it skilfully to achieve a decisive victory.

Though the German envelopment and attack on converging axes was not simple, neither was it so complicated that it couldn't be executed properly. Because the Germans were evidently well-trained and, through combat experience, able to coordinate their movements within their company, the principle of *simplicity* was facily implemented and no doubt contributed to the mission's success.

The principle of *unity of command* was also applied. While the detachment guarding the bridge was not a part of Schmidt's company, he took control of it and utilized the men as his own. This singleness of authority contributed to the accomplishment of the mission by requiring that all efforts be directed toward the attainment of the common goal.

This little-known engagement between two company-size units is an excellent example of the proper application of the principles of war. The campaigns of Alexander, Napoleon, Lee, Rommel, and others are often cited to demonstrate the use of these principles and there is certainly much to be learned from these great commanders. But it must not be forgotten that, as the German commander so skilfully demonstrated, these same principles are just as relevant to the leader of a small unit as they are to the highest levels of command. ■



DOUBLE JEOPARDY

Captain Thomas M. Johnson, USA

SOMEWHERE IN THE MIDWEST, a bird dog “freezes” on a point and appears to be transformed into a marble statue. To the dog’s rear, a hunter slowly advances, shotgun at the ready. Flushed, a covey of quail take wing. The shotgun swings, fires; a quail crumples in the pattern of deadly pellets. Again the shotgun oscillates, blasts, and another quail finds itself earthbound.

Halfway around the world, a soldier peers over the parapet of his foxhole, squinting in an attempt to make out a moving object to his front. The young soldier is fully aware of the fact that his life and the lives of his comrades are in immediate danger. He catches another glimpse of the fleeting object through the rear sight aperture of his rifle. Black pajamas! A demolition satchel! A safety is released and a trigger pressed. The rifle fires, but the VC, unharmed, continues to disappear into the foliage.

How do these two hypothetical situations differ? The

real key rests in the 463 additional projectiles of #8 shot found in a 12-gauge shotgun shell. Exchange weapons? Needless to say, the shorter range of the shotgun precludes the practicality of this as a solution.

The shot pattern of a shotgun is well-known for its excellent hit probability—one shot, many deadly pellets. Conversely, the limited hit probability of small-arms fire is acknowledged. In an attempt to rectify this serious limitation, the Army initiated in 1951 a research project, known as Project SALVO, with the express purpose of developing techniques and materials which would enable the soldier to get more hits in battle. On 7 May 1964, one of numerous items tested became standardized: the Ball, Duplex, NATO, M198. The development of this new cartridge was accomplished by Winchester-Western under contract (ord. 2672) to the U. S. Army.

The duplex cartridge (civilian designation is .308 Winchester) utilizes two 83-grain, pointed, full-jacketed



A cross-section of the Duplex M198 shows the cant of the rear bullet which causes its dispersion.

bullets. The tip or nose of the rear bullet fits into a hollow cavity machined into the base of the first bullet. To give the second bullet dispersion, its base is intentionally angled at $4\frac{1}{2}$ degrees to the long axis. With these two exceptions, the cavity of the first bullet and the slanted base of the second, both bullets are of conventional design.

Upon firing, the first bullet, with a muzzle velocity of 2,800 feet per second, follows a conventional trajectory to the target and, providing the weapon is properly zeroed, should hit the point of aim. However, the slanted base of the second bullet causes it to be deflected slightly at the end to follow a different trajectory to the target. Since this slant in the base causes the high side of the base to exit the barrel before the low side, some gas escapes there. This action causes the point of the bullet to yaw (tip) away from the escaping gases and follow a different flight path. The muzzle velocity of the second bullet is reduced to 2,600 feet per second. A detailed mathematical description of the exact effect a slanting base has on a projectile is available in *The Bullet's Flight—The Ballistics of Small Arms*. (Standard Printing & Publishing Co. 1942) by Dr. Franklin W. Mann, page 357.

Needless to say, the two bullets will have two different points of impact, allowing a rifleman or machine gunner

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Specifications — Duplex

Designation:	Cartridge, 7.62mm, Duplex Ball, M198.
Markings:	Point of front bullet painted dark green.
Case:	Standard for 7.62mm NATO.
Primer:	Standard, modified, commercial 120M.
Powder:	WC740 rolled ball, 45.5 gr.
Front bullet:	83 gr. pointed, flat base, .308" diameter, copper-plated steel jacket, cannelured.
Rear bullet:	83 gr. base slanted $4\frac{1}{2}$ degrees, .308" diameter, copper-plated steel jacket, cannelured.
Muzzle velocity:	2,800 fps front bullet, 2,600 fps rear bullet.

to place two bullets into his target area with each round fired. The duplex cartridge has been designed so that the second bullet will strike somewhere within a 10-inch radius of the point of impact of the first bullet at a range of 100 yards. The dispersion pattern increases as the range to the target increases, and the significant increase in hit probability diminishes rapidly as the two bullets become more widely separated.

In general terms, the accuracy of the first bullet is close to that of the conventional ball cartridge, while the



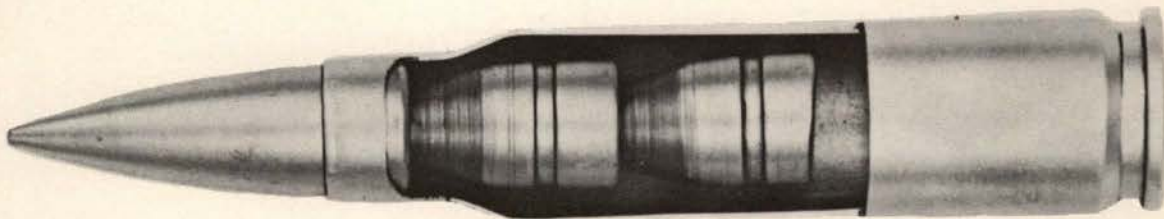
The M80 cartridge is similar to the M198. Both cases are standard for 7.62mm NATO.

second bullet spreads approximately six times as much as the first bullet. Although the extent of the dispersion can be controlled by the slant on the base, the exact strike of the second projectile cannot be controlled. This means that the second bullet may strike the target in any direction from the strike of the first bullet. Duplex ammunition test results indicate from 25 to 100 percent increase in hits under various situations.

One test was conducted by the Small Arms Committee of the Weapons Department at the United States Army Infantry School to observe the approximate dispersion ratio of the two bullets of duplex ammunition

marked by white KD spotters. Black spotters were utilized to mark the rear bullets. SFC Tolbert fired all rounds from the foxhole firing position. A summary of the test results indicated:

<i>Range (Meters)</i>	<i>No. of rds. fired</i>	<i>No. of hits anywhere on target sheet</i>
100	10	front — 10 rear — 9
200	20	front — 20 rear — 19
300	17	front — 16 rear — 5



The proposed Triplex cartridge contains three bullets: the front one, 83 grains; the middle and rear bullets, 60 grains.

at ranges varying from 100 to 300 meters. The firer selected for the test was SFC Robert B. Tolbert, a well-trained rifleman of the Committee's Rifle Marksmanship Team. After properly zeroing his M14 rifle, SFC Tolbert engaged three separate "B" type KD (known-distance) targets located at ranges of 100, 200, and 300 meters with 10, 20, and 17 rounds respectively.

The accompanying photographs illustrate the results of the firing.

The front bullets were color-coded for identification purposes, and their strikes on the target sheets were

The M198 cartridge may be used in any U. S. or foreign 7.62mm NATO weapon without modification. It does not replace any of the existing standard cartridges, but rather supplements them.

Is a *triple*-bullet cartridge possible? Quite! Winchester-Western has already produced a proposed cal 7.62mm Triplex round for military evaluation. This experimental cartridge features one 83-grain copper-plated steel front bullet and two 60-grain copper-plated steel middle and rear bullets. Anyone for shotguns?? ■

ZIP CODE

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THE WORLD'S IMAGE of the Viet Cong and the North Vietnamese Army as "rag-tag" forces, equipped with only crudely manufactured arms, may have been altered by recent commitment of tough, well-armed and highly-trained North Vietnamese forces against units of Field Force Vietnam in the central battle sector.

"Force Victor's" 1st Air Cavalry Division, which was in almost constant contact with the enemy from 27 October to 19 November in the "Plei Me Campaign" near the Cambodian border, has held NVA units in high regard for some time, but only in recent combat has the full extent of Communist Chinese arms support become openly apparent.

During and since the campaign, which ranged from light, small-unit contact to heavy, set-piece, conventional battles involving several NVA regiments, an ever-increasing number of Chicom arms have fallen into American hands. Increases in both the quality as well as quantity of NVA arms leads one to believe that the increase in Chicom arms support displays Peking confidence and determination to continue to support the NVA units which have infiltrated south.

The majority of the arsenal consists of Chicom copies

of post World War II and Korean War Soviet designs. U.S. troops in the II Corps area are also being fired on by captured or Chinese-copied American weapons such as the 57mm and 75mm recoilless rifles, 60mm and 81mm mortars, and the .50-caliber machine gun. The accelerated firepower, coupled with the increase of highly trained NVA and VC hard core units, seems to have influenced a change in Communist tactics.

During the period of 1962 to late 1963, the local Viet Cong didn't possess the weapons, ammunition, or troops to engage in long, heavy fire fights. Conservation of ammunition was a must. In the early days of the insurgency, each attack was considered not only for its military objective, but also for its political and psychological impact.

Those were the days of the first and second stages of



RAG-TAG



NO MORE

Captain Larry R. Lubenow, USA

General Vo Nguyen Giap's blueprint for protracted conflict. The North Vietnamese general employed his infiltrated soldiers mainly as cadres, and NVA regiments were unheard of in the south. Large numbers of the Viet Cong guerrillas were armed only with locally manufactured rifles of the single shot, 7.5mm variety, made of water pipe. Their accuracy was questionable past 100 meters. This arsenal was supplemented with captured American arms and leftovers from the fight against the French.

The weapons captured by the U.S. Army's "Sky Soldiers" in the Plei Me area are in stark contrast to those austere VC beginnings. Modern 7.62mm Chicom assault rifles, together with light and heavy machine guns were gathered by the Cavalry troopers. Cavalry reports of a preponderance of automatic assault type weapons at Plei Me are certainly an indication that Communist military tactics have changed from guerrilla hit-and-run actions to conventional, all-out battle, less air and heavy artillery support, of course.

Throughout the Plei Me siege and the subsequent Cavalry operations westward to the shadow of the Cambodian border, NVA battalions and regiments elected to fight bitter, lengthy engagements with the

Americans and Vietnamese. One of the latest and perhaps best examples of the enemy's willingness to utilize his increased firepower and trained troops took place between 14 and 18 November in the rugged foothills of Chu Phong mountain, half-way between the Special Forces camp at Plei Me and the Cambodian border, a distance of some six miles. There, in the thick, chest-high elephant grass, a NVA force estimated at more than two regiments locked horns with the Air Cav and conducted a wide range of combat actions which were certainly not the tactics of a guerrilla.

Fighting almost as if they had a scenario from Fort Benning's *Aggressor Handbook*, the NVA commander defended, counterattacked, probed, attempted encirclement, assaulted in echelon, and even attempted a "classic" penetration over an eight-day period. But meantime, American firepower, covering the full spectrum of tac air, conventional 105mm howitzer fire, helicopter rockets, and strategic B-52 bombers, hammered and thinned his ranks.

His casualties at Chu Phong were staggering to the American imagination: more than 1,200 dead by body count. But the fact remains, without a modern family of automatic weapons and a logistical system which could

keep them firing, the enemy couldn't have joined the battle in the magnitude he did. With his machine guns dug in and firing interlocking fire, the terrain was to the NVA commander's advantage, and the Air Cav was forced to fight upward toward commanding high ground to obtain its objectives.

If he had elected to, he could have easily broken contact and pulled his favorite "vanishing" act. As the old saying goes, "he came to play" and did so in a professional manner. American casualties were moderate, but the battle certainly wasn't without cost.

The full extent of Chinese assistance to the Viet Cong is difficult to determine. The toll of Red weapons lost in battles in the Plei Me area was impressive. Certainly the effect of these losses must be felt by the North Vietnamese force. A partial box score of what was picked up in the area after the attack on the camp looks like this:

Chinese copies of individual weapons, including	
AK assault rifle	903
Chinese 12.7mm heavy machine guns	23
Chinese crew-served automatic weapons, including Degyarev 7.62mm LMG; model 58, 7.62mm LMG	52
82mm mortars	10
57mm and 75mm recoilless rifles	13
Chinese 40mm rocket launchers	3
7.62mm ammunition (rounds)	120,000
82mm mortar ammunition (rounds)	59
40mm rocket ammunition (rounds)	54
12.7mm heavy machine gun ammunition (rounds)	1,200

In addition, large amounts of arms and ammunition were destroyed by Americans when the tactical situation prevented their evacuation.

Personnel with Field Force Vietnam were impressed with the condition of both weapons and ammunition. Although some of the 7.62mm rounds were identified as being manufactured as long ago as 1954, they were clean and in top-notch shape. This can be attributed either to excellent maintenance or to the probability that they had only recently been introduced into the country. The same holds true for maintenance of automatic weapons.

The Chicom assault rifle could be termed a "first class weapon." Highly regarded by weapons enthusiasts, this

copy of the post World War II Soviet Kalashnikov (AK) rifle can deliver 100 rounds per minute at its "practical" rate of fire, with a cyclic rate of 600 rounds per minute. It weighs in at nine and one-half pounds and carries an elliptical 30-round magazine. U.S. references carry it as accurate to 400 meters. Plei Me combat veterans report numerous NVA riflemen equipped with the AK copy.

Although NVA and Viet Cong organization for combat is flexible and may change from battle to battle, the general guidelines confirmed by the Plei Me action show three rifle battalions and occasionally a weapons battalion in a NVA or main-force regiment. Battalions are normally composed of three rifle companies and a heavy-weapons company, containing either 57mm and/or 75mm recoilless rifles and 82mm or 81mm mortars. All of these crew-served weapons are capable of firing American ammunition.

At Plei Me, U.S. Army forces also captured Chicom copies of the Russian Goryunov SG 43, 7.62mm heavy machine gun. Utilized in the NVA heavy-weapons company, it was produced by the Soviets toward the end of World War II. The SG 43 could be considered one of the enemy's mainline anti-aircraft weapons. With a practical rate of fire of 250 to 300 rounds per minute and a maximum output of 700 rounds per minute, it is a formidable weapon out to 1,000 meters against ground targets and 504 meters when engaging aircraft.

At the rifle company level, there are three rifle platoons and a weapons platoon equipped with the 7.62mm light machine gun and 60mm mortars. NVA platoons are organized into three rifle squads consisting of a squad leader and three three-man cells. Perhaps the three-man cell was purposely devised for political purposes, so that a watchful eye can be kept on soldiers felt to be unreliable. The cell must stay together both on and off duty.

One major consideration that stood out in every battle was the preponderance of automatic weapons with assault troops. In the Plei Me area during the battle, I understand, a large number of first and second NVA attack echelon soldiers were armed with the K50 Chicom submachine gun, better known to Americans as the



CHICOM 7.62mm Sub Machine Gun, Type 56; copy of Soviet Assault Rifle Kalashnikov.



CHICOM 7.62mm LMG, Type 58; copy of Russian 7.62mm RP46 LMG.

“burp gun.” A tremendous volume of fire can be achieved with this weapon; it has a cyclic rate of fire between 700 and 750 rounds per minute.

The overall, long-range effect of the improved quality of weapons and ammunition, in addition to the increased numbers of infiltrated North Vietnamese main-force units, naturally cannot be predicted. In the highlands area of Field Force Vietnam, where NVA and hard core units are known to be operating, the pattern of less and less employment of guerrilla tactics is becoming evident. Battalions and regiments now maneuver where once platoons and companies staged raids and ambushes.

No one expects the Viet Cong to abandon completely his guerrilla tactics. His local forces are well suited to this valuable political and psychological type of warfare. I suspect district and provincial headquarters, outposts, lines of communication, small villages, and other vulnerable areas will continue to be prime targets.

It seems the NVA commanders are beginning to maneuver as if they are well into the third stage of General Giap's version of protracted conflict.

Whether NVA commanders will continue to operate in large force and run the risk of being subjected to the superior American firepower is a question no one can answer at this time. I believe it depends on total NVA strength in the II Corps zone, the infiltration rate, how badly he desires an opportunity to achieve a propaganda victory, and to what extent his losses have hurt him.

Due to the nature of the conflict, it is extremely difficult to pinpoint VC units until they have come in contact with the Army of Vietnam or Free World forces. The infiltration rate is also of a complex nature and not a true indicator. One evidence of its magnitude comes from Secretary of Defense Robert S. McNamara's December press conference, in which he fixed the rate as three regiments, 4,500 troops a month.

NVA losses during combat with the 1st Cav in the

Plei Me area between 27 Oct. and 18 Nov. stood at more than 1,500 dead, by U.S. body count. Undoubtedly many more had been killed and carried away by comrades, and others wounded.

In the months to come, answers to these questions will hopefully become easier to achieve. But one thing is clear: We may reasonably expect Plei Me type actions to be more frequent and not the exception from here on in. With the armament they possess, the NVA commanders are likely to continue to employ them in a most effective manner.

Any discussion of the Communists' new capabilities and tactics must consider the enemy's vulnerabilities, and the North Vietnamese regular is certainly not without them. The fact that he has chosen, in recent engagements, to maneuver in regimental size in itself presents him with what is perhaps his biggest weakness. The enemy guerrilla could break his units into small groups and hide from retaliation from American airpower and artillery bombardment, but this will become increasingly difficult for regimental-size units.

The NVA force seems highly inflexible to changes which occur during the progress of a battle. North Vietnamese troops are highly rehearsed for each particular engagement, to include the most minute details. Once the presence or maneuver of friendly forces fails to fall into the Communist scenario, his commanders and troops appear unable to adjust to the new situation. This observation is borne out by the fact that when ARVN troops reacted swiftly to a NVA ambush while heading from Pleiku to relieve Plei Me defenders, the enemy appeared confused by the new chain of events.

In addition, several other vulnerabilities appear pertinent. First, there are strong indications that large numbers of NVA troops were infected with malaria. One captured Communist said that as much as 30 percent of his unit had the jungle disease. Secondly, although the intensity of the fighting may have prevented large numbers of NVA soldiers from surrendering, 1st Cavalry soldiers reported finding U.S. propaganda leaflets on a large number of the enemy dead.

So while the North Vietnamese soldier is respected and highly regarded by Americans and allied forces in Vietnam, the Communist is certainly not 10 feet tall.

Plei Me statistics proved it. ■

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**DISTANCE/INTERVAL: DEPENDENT UPON TERRAIN AND
COMMANDER'S JUDGMENT
SKETCH 4. REAR ELEMENT**

mines, as the mud-filled holes hardened into natural contours during dry periods.

Another favorite trick employed by the Viet Cong involved the concealment of wires in canals or streams running along side of the road; yet another saw them cutting oblique slits in the earth with the blade of a knife to cover concealed wires.

The Viet Cong usually used an excessive amount of explosives in preparing a charge. They were partial to

the use of a 105mm round as a main charge, with hand grenades surrounding it in the immediate area. Usually they would emplace mines and booby traps together in a complementary: when one charge would be detonated and inflict casualties, second or third charges were designed to explode in the presence of rescue parties or personnel viewing the accident.

Although I found that it was almost impossible to discover all the mines and booby traps set by the Viet Cong, I also learned that the practicing of certain techniques can enable a commander to carry out a mission with a minimum of casualties. In road-clearing operations, it is important to learn the habits of the enemy, to learn the way in which he operates, to become familiar with his pattern of behavior. Such learning enabled us to reduce casualties during these operations, for in the eight months during which I served as an advisor, and the above procedures were used, we were never ambushed by the Viet Cong while on a road-clearing mission. ■

TIPS FOR THE DELTA ADVISOR

Captain Michael McNamara, USA
Advisor, 7th Infantry Division (ARVN)

IT HAS often been written, and quite accurately so, that the terrain in Vietnam produces different problems in different areas. The war in the Central Highlands or the rain forest jungle differs in many respects from that fought in the swamps and rice paddies of the Mekong Delta.

The following tips are based on personal experience in the Delta. Some reflect solutions to the problems found in that area; others may be applied to any combat zone.

In most areas of the Delta, terrain contours cannot be used as an aid to land navigation. There are no mountains, valleys or ridgelines. Rivers and canals, with

their accompanying treelines, are the principal landmarks. These can be plotted with reasonable accuracy on the current issue 1:50,000 scale maps. When available, aerial photos can and should be used as supplements to update the most current maps. Roads and other man-made features are less permanent navigational aids than in other countries, especially where they appear in areas controlled by the Viet Cong. A road may be little more than a trail; or it may now be converted into a canal.

At times, the complexity of canal systems will present a confusing set of references to the advisor, especially where new canals have been dug and old ones diverted.

In any circumstance, Army or Air Force light aircraft can be used to determine unit locations. On field operations, these aircraft usually are overhead continuously to provide forward air control, reconnaissance, artillery adjustment, or radio relay.

Panels rather than smoke are best employed to mark unit locations when there is little or no overhead canopy. Aircraft may then be contacted by the advisor's AN/PRC-25 radio. If the aircraft is visible but unable to locate the ground forces, it may be vectored into a position where identification of the ground unit can be made.

Navigation at night can be assisted by flares dropped over a predetermined point by aircraft or artillery. An exact fix of the unit location is readily obtained by Mohawk aircraft using Side Looking Airborne Radar (SLAR).

The average division-size operation in the Delta will call for employing helicopters to transport troops rapidly from one point to another. Terrain becomes a decisive factor in a helicopter operation; for where roads exist, they may be difficult to secure and easily interdicted at critical points and streams are invariably tidal in nature and may not always be navigable for troop-carrying boats.

a key individual

The advisor is a key individual in the successful lift of a Vietnamese unit, and as such he must be familiar with airmobile techniques. Whether from a secured airfield or from an operational area, the advisor must insure that the correct number of personnel load each helicopter. Under usual conditions a UH1B helicopter will carry eight combat-loaded ARVN soldiers; a UH1D will lift ten. Sticks designating the correct number of men will usually be placed in columns 30 meters apart, facing the helicopter landing area. Where possible, the line of sticks should coincide with the direction of the wind to facilitate take-off and landing.

The advisor will be in communication with the lead helicopter of the lift and the gunships that invariably accompany it. He will then mark the lead stick with smoke or panels. Either he or other members of his advisory team should be the last to lift off. Prior to loading, the advisors should insure that troops clear weapons; that long antennas are removed; that troops have loose gear tied down or securely fastened to prevent damage to rotor blades and other equipment; and that the troops approach the helicopters from the front so they may be seen by the pilot. If the unit is to load on both sides, the soldiers must move around the front of the ship, since it is easy for a man to walk into the rear rotor, an accident that may also jeopardize the ship and its occupants.

While airborne and prior to landing, the advisor must

monitor his radio, so that he can be informed of any last minute changes in LZ location, or the enemy situation and activity. A short antenna cocked outside the open doorway of the ship will provide adequate reception. Gunships that accompany the lift can be used to strike known or suspected enemy locations close to the LZ.

Three minutes out from the landing zone (LZ), the crew chief or pilot will give the troops an alert. A check of the helicopter compass, easily seen from the rear of the ship, will orient the advisor before he leaves the aircraft. On touchdown, troops exit both sides of the aircraft, move out 20 meters and assume the prone or kneeling position. When choppers are again airborne, the troops clear the LZ rapidly and continue with the mission.

helicopter support

Armed helicopters, or gunships, provide an extension of fire support that is both mobile and flexible. Since the Viet Cong habitually move and live within treelines bordering on canals and streams, they present linear targets well suited to attack by helicopters.

When this support is requested, the advisor will generally be in communication with the lead gunship, and he can direct and shift fires to support the ground forces. His chief concern will be to provide a rapid and accurate means of target identification and location to the armed ships. Because of this, he must be in a position to observe the target area and maintain communication with his counterpart so as to secure necessary approval and requests for this fire support.

There are several methods the advisor can use to direct armed helicopters to their targets:

- Using his location as a reference point, marked with panels or smoke, the advisor gives the gunships' azimuth and distance to the target via radio. He adjusts subsequent passes as required.

The advisor may have the target area marked by rifle smoke grenades fired by the ground troops, by marking rockets from light aircraft, or by smoke grenades dropped from the gunships themselves. If required, azimuth and distance may be given from this reference point. If available, a prominent terrain feature, either natural or man-made, can be used as a reference.

Tracer rounds can be used to direct the strikes if the advisor's location is known, and marked with panels or smoke. This is a rapid means of locating targets using a minimum number of radio transmissions.

When helicopter strikes are called in, the advisor may request a specific direction of attack. Ideally, helicopter passes should be made perpendicular to the advance of friendly troops and on the enemy flank. This forces the enemy to fight in two directions and reduces the possibility of helicopter ordnance falling on friendly forces.

Combat Notes

Armed helicopters are particularly good in covering the exposed flank of a maneuver unit when a large canal or similar obstacle prevents the placement of ground security to the flank. Reconnaissance may be conducted visually or by fire.

equipment

The equipment carried and worn by advisory personnel is subject to individual preferences. There are, however, some standards that apply to most persons:

- Ground operations in the Delta will find the advisor in water much of the time. Whether fording streams, swimming canals, or moving through flooded paddies, his chief concern for certain items is water damage. First aid packets and SOIs should be wrapped in the plastic coverings of radio batteries or other waterproof containers. Weapons and magazines must be oiled several times daily.

- Leeches are present in many areas of the Delta, and a check should be made for them after water crossings. If they are attached to the skin, a dab of the issue insect repellent or saliva will cause them to drop off. The burning end of a cigarette will also do the job, but in many areas smoking is impractical.

- The current issue jungle boot, with its mesh vents on the side, will drain off water after a few steps. Cushion sole socks tend to ball up within the boot and retain moisture, softening the feet even when out of water. If socks must be worn, those of nylon fiber should be used, for they dry rapidly, are comfortable, and rarely slip.

- Issue jungle fatigues dry well, even in a humid climate. If the blouse is worn without an undershirt, evaporation of perspiration can take place rapidly, and the possibilities of heat injury are lessened. Undershorts should be worn to reduce chafing in the groin and buttocks that invariably results in a persistent fungus infection.

- In most areas, a complete nylon hammock weighing a few ounces may be purchased on the local market. The cost is generally less than four dollars. Where sleep is possible on field operations, the hammock can be slung between trees well above water and mud. A thin sheet of plastic can also be purchased in most towns. It folds easily, weighs less than the hammock and can be carried in a pocket or within the hammock itself. This can be used to replace the poncho as a ground cloth or hammock rain cover.

- Drinking water rarely presents a problem in the Delta. Because of the dense population, a good source of potable water is available in every hamlet or village. Most Vietnamese catch rainfall in large jars. Additionally, cisterns or wells are found in some areas. It is good policy to ask the local people if you can fill your

canteen. In VC areas insure that some locals take a drink before you fill up. Poisoning of water is a rare occurrence in the Delta, but the possibility always exists. One or two iodine tablets will render virtually any water potable. Canal or stream water may taste badly, but if treated properly is acceptable.

- Salt and iodine tablets should always be carried in the field. A plastic wide-top bottle can be obtained from most medical teams. If tablets are carried in this, water damage will be minimized.

- Except for extended operations, a pack is unnecessary. The need to travel light is usually realized after the first operation. Most items can be carried in the pocket or on the web gear, although C rations are an exception. When carried in a pocket, they are bulky and awkward. In most division areas, however, PX depots will sell many items in flat cans. These, in addition to cooked rice, will provide adequate rations in the field. The Delta countryside provides many varieties of fruits that supplement the daily diet and reduce the load carried. Coconuts, bananas, papayas, watermelons and citrus fruits can be bought from the people of any village. A few piasters will buy an evening meal. These same few piasters will also insure that you fulfill your civic action responsibilities and set the example for the South Vietnamese soldier.

- Headgear worn in the field varies from unit to unit. General policy has been for the advisor to wear the same uniform as his counterpart and troops. This serves to make the advisor less conspicuous in the field and less of a target to sniper fire. (Personnel 5'10" and above, however, will argue this point.) If the unit wears steel helmets, the advisor has little choice; but if a variety of jungle hats or caps are worn by the troops, his choice is a wide one. A light nylon hat with a broad brim is ideally suited for general field use. Again, this item can be purchased locally, and will keep the sun off the neck and face while reducing much of the glare from sun and water. If a steel helmet must be worn, an olive drab or green cloth can be used to cover the neck. In any case, a large porous cloth is useful for removing perspiration and mud, or as a tourniquet or compress.

- Most commercial map cases sold in the United States are bulky and must be carried in the hand. Since 1:50,000 maps are invariably used, and the operational area rarely exceeds more than 15 square kilometers in size, a map case not much larger than this page may be carried. The size of the case allows it to be slipped into the blouse. If carried in the hand, it reflects sunlight, marks the bearer as an officer and invites sniper fire. Cases can be locally purchased in most large towns.

- The advisor will have an overlay for most operations. Ideally, this should be in pencil or ballpoint pen

and stapled or pinned to his map. If a grease pencil is used on the map case, water and perspiration will soon erase the markings.

- The lensatic compass is one of the advisor's major items of equipment. Land navigation, azimuth to targets, azimuth of approach for helicopter pickup—all of these rely on the accuracy of his compass. It may be checked by comparing it to others in the unit. If it shows similar readings, with 90% of the others, it may be considered usable. The best method, of course, is to use a survey or trig station. These, however, are hard to find in Vietnam.

The basic weapon issued to the advisor is usually his choice of the caliber .45 pistol or the M2 carbine. While a Swedish K or AR 16 may be had with a little scrounging, these are not the standard issue, and the field advisor will usually choose the carbine over the .45—for obvious reasons. If possible, he should obtain an M-5 flash hider for this weapon, not so much for its basic purpose but as a means of keeping mud and debris from the bore. A clogged weapon is difficult to clean under field conditions; the flash hider can be removed, cleaned and replaced in a few seconds.

The carbine bayonet is a handy knife to carry and will serve as well as any civilian knife for most tasks. Naturally, it has an additional capability of being used as a bayonet on the carbine—where the civilian knife is valueless.

a second weapon

While a pistol provides a second weapon, it also doubles the maintenance required in the field. If one is carried, it should be wrapped in a plastic bag within its holster and checked periodically for rust from condensation. The waterproof pistol cover, issue item found in survival kits, is ideal for this purpose.

Grenades are best carried within an ammunition pouch. The numberless slips and falls taken by a Delta advisor make dangerous the hanging of grenades from web gear. Taping of grenades to the harness will secure them but prevent rapid employment. Twice, when I carried grenades on the outside of the ammo pouch, the handle snapped off the slot provided. The grenade was left dangling by its ring from the securing strap.

It is difficult to move a kilometer in many areas of the Delta without crossing a sizeable stream or canal. While crossing may often be made by sampan or monkey bridges, these are not always available. Nylon rope in 25-30 foot lengths can be easily carried by several men and used to assist the many non-swimmers present in most South Vietnamese units. Without this means

of rapid crossing, much time is lost in constructing rafts, bridges or searching for sampans along the banks.

The advisor who does not have a fluent command of the Vietnamese language finds himself hard pressed for information at a critical moment—when contact is established with the Viet Cong. While the Vietnamese commander may be able to give fragmentary information from time to time, he is concerned primarily with commanding his unit. Yet, to give sound advice and assistance, the advisor must have a working knowledge of the situation. An interpreter with the command group can translate messages received and orders issued during these critical times. The advisor then has his information and the commander has not wasted time in lengthy explanations.

travel by boat

Travel by boat to and from objective areas is a part of the daily routine in the Delta. LCM8s, 6s, OCVPs, and SSBs (engineer assault boats) with outboard motors are most commonly used. Whatever the boat, a constant hazard to the unit aboard is the Viet Cong water mine. The number of casualties can be decreased by insuring that the troops enroute to an objective remove their web gear and packs. Chin straps on the helmets should not be secured. If a mine detonates then, the men thrown into the water can swim and stay afloat with less difficulty than if field gear is worn. If they are unconscious from concussion, they will stand a greater chance of survival without their gear. Of course, prior to landing the equipment must be rapidly slipped on.

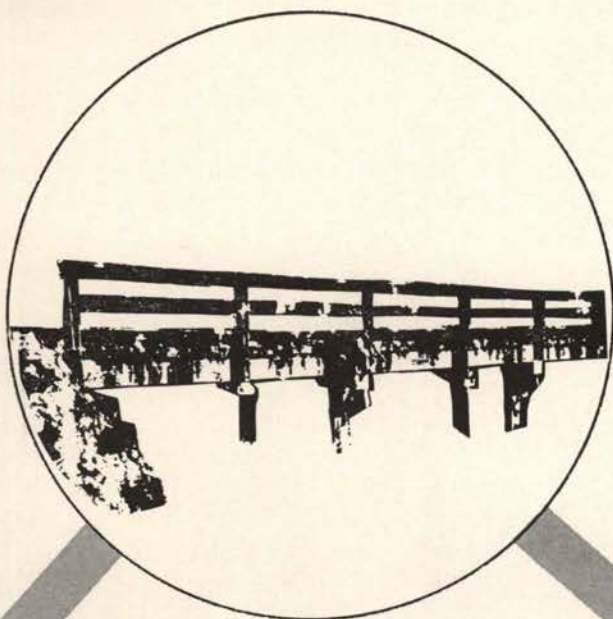
When possible, regional or popular force squads should accompany an Army unit. These personnel are intimately familiar with the terrain and civilian population of their home areas, and they can often predict where the Viet Cong are or where they may go. They can tell who the genuine farmers are or who does not belong in a hamlet or village. In short, they may be used as guides or scouts, a utilization that will often materially influence the outcome of the mission.

Despite the wide-sweeping technological advances that gradually change the face of war in our time, many old techniques are still valid and may never be replaced. One of the most important of these in the Delta is tracking. Bent grasses, muddied water, footprints in the mud or dust of trails are all important signs that the advisors must look for. Just as direction and numbers of the enemy may be read by ground signs, estimated casualties and effectiveness of friendly fires are shown in blood trails and the flesh and bone fragments found in the objective area. ■

JUNGLE REACTION COURSE

Captain David R. Livingston, USA





DURING EXTENSIVE TRAINING in the jungles of the Canal Zone, the 3d Battalion (Abn), 508th Infantry used a jungle reaction course to test and evaluate the unit's preparedness for jungle combat operations. Initially, only the rifle platoons ran the course. However, because of the training value and experience gained, all combat elements of the battalion subsequently underwent the test. With the current emphasis on units being jungle-oriented and jungle-trained, this course provided an excellent gauge of the combat effectiveness of both the individual and unit.

Although the course was only 5,000 meters long, its requirements, combined with the reactions of the platoons, provided a great deal of information concerning our ability to conduct combat operations in jungle terrain. Field exercises conducted by airborne units, mechanized Infantry units, or units that use helicopters as their primary means of delivery are readily adaptable to this type reaction course. Specific layout and operation of the area will, of course, be dictated by the availability of jungle or jungle-like terrain, but the basic idea remains unchanged: to allow unit commanders to train their units for jungle combat operations and to evaluate preparedness before the fact!

For a better understanding of the over-all conduct of the course, let's consider the administrative aspects of support requirements and grader personnel.



The combat patrol was used as the basic teaching vehicle and the general mission was to search and destroy. To maintain a standard level of grading and critiques, the same two Ranger-qualified officers accompanied all of the tested units. These two officers presented all orders to the platoon leaders, insuring that each received the same instructions. In some cases instructions or situations were presented prior to reaching the actual objective; in others no instructions were given, allowing the platoon leader to react on his own. The lane graders accompanying the platoon never interfered with the actions or decisions of the leader, and never assisted him in any way. The only job of the

grader was to present situations and evaluate the platoon upon completion of the course.

Other support personnel required are shown below:

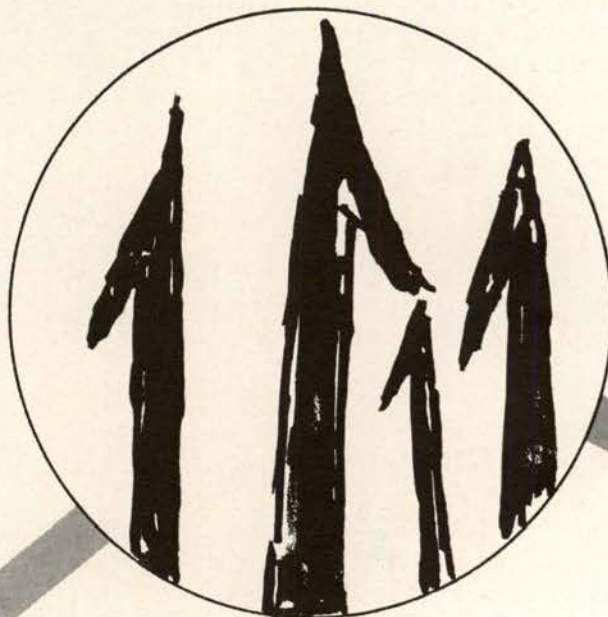
1 NCOIC to act as aggressor leader (maintains radio contact with lane graders and is responsible for placement of aggressors); three EM to act as bridge guards; one EM to act as partisan; eight EM at initial ambush site; four EM at roadblock; eight EM at base camp objective; three EM at sniper location; five EM to act as members of aggressor work party; two EM to act as snipers at helicopter LZ; two EM to act as snipers at river crossing.

The total shows two officers, one NCOIC, and 36 enlisted men. However, only half of the EM were needed to support the entire operation. Aggressor personnel were moved as the tested unit progressed through a given objective.

To insure that all support personnel knew and understood the demands of the training, they were required to run the course themselves. This gave us a better understanding of the over-all objective and enabled us to adjust any last minute preparations.

On the evening prior to running the course, the leader of the platoon was issued a warning order. He was given ample time to prepare for the operation and told to be at the starting point at 0500 hrs on the next day. In the warning order, the platoon leader was told only what the general nature of his mission would be and that he would be operating in jungle terrain. In the morning, prior to allowing that platoon to begin, all

equipment was inspected to ascertain unit preparedness and completeness of equipment. After the inspection, the platoon operations order was issued to the platoon leader and selected members of the platoon (personnel present for the order were designated by the platoon leader). Sufficient time was then allowed to formulate and issue an order that would send the unit on a reconnaissance of a bridge and on to a partisan contact point.



In this phase, the platoon received training in route selection, movement through jungle terrain, reconnaissance techniques, and contact with a friendly partisan. During reconnaissance of the bridge the platoon leader was to ascertain all of the essential elements of information concerning bridge classification. Items such as general construction, clearance, width, length, and the number and type of abutments would all be required in his report.

After the bridge reconnaissance the platoon moved over a route of its own selection to the contact point

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where information concerning an enemy roadblock was relayed. The partisan, having informed the platoon leader of an enemy roadblock, offered to guide the unit. While moving over a jungle trail the unit was ambushed by the enemy. It was during this phase of the course that the platoon's counter-ambush techniques were evaluated. During the ambush, the partisan guide was "killed" and the platoon was required to continue on its own. Those platoon leaders who had extracted sufficient information from the partisan were able to continue quite easily; others didn't fare so well.

From the ambush site the platoon moved to the roadblock, again over a route of its own selection. Here, additional reconnaissance and a raid on the position itself were conducted, allowing the graders to evaluate the employment of the squads as fire support, security, and assault elements.

Upon destroying the roadblock, the platoon was



made to move to and conduct an attack on an enemy base camp. The basic point illustrated during this phase of the training was that the conventional attack of an objective will normally not work in jungle terrain. It proved virtually impossible to deploy a platoon on line and overrun an objective while moving up hill in the thickly tangled jungle. Most of the units learned this well.

As soon as the platoon had secured the base camp area, another situation was introduced. Supposedly the battalion had just called for an air strike from close

ground support aircraft, not knowing that the platoon had secured the objective. Thus, the platoon leader was forced to hurry his unit down the only trail leading from the base camp. While moving down the trail the unit was again hit by the enemy, this time by a team of three snipers. As the platoon moved down the trail, the point man fell into a punji pit, signalling the snipers to begin their firing. The immediate reaction of most members of the platoon was to rush toward the snipers, even though they could not be seen. As soon as the men moved from the trail they began falling into punji pits, which normally would have claimed five to ten members of the platoon. At this ambush site, in addition to the pits, other weapons commonly used in jungle warfare were employed. Snares and bamboo whips served to emphasize the need for deliberate movement and caution in the jungle. During this phase of the course platoons were trained primarily in movement, with emphasis placed on security during movement and techniques used against snipers.

From this site the platoon moved across the road and up a long ridge where they made chance contact with the "enemy." A small group of enemy personnel, a work party judging from the equipment carried, was encountered in the vicinity of the center of the hilltop. Here the platoon was tested on its ability to conduct hasty ambush operations and on the reactions of individuals when searching enemy dead. All equipment carried by the work party was normally taken by the platoon and put to good use during rappelling operations.



The enemy dead provided the unit with snap links, climbing ropes, cling ropes and gloves. Thus the platoon leader could move his men down the open face of the hill and continue on to the next phase of the course. During rappelling operations, we were able to evaluate our unit's proficiency in this valuable technique.

From the quarry the platoon was required to move to a large stream and cross using rope bridges constructed by the members of the unit. The platoon had to practice security measures against snipers in the area.

Upon completion of the river crossing the platoon leader was told to move to an area designated by battalion headquarters as a helicopter landing zone. The platoon was to establish and secure the LZ and await air evacuation. This was the final phase of the course and enabled us to critique the performance of our leaders with respect to LZ selection, establishment, and security.

The time normally required for a unit to negotiate the course varied from 10 to 12 hours, but because of the layout, construction, and operation of the course we were able to evaluate and train the combat elements of the battalion for future jungle operations. Everyone learned from the course, both leader and subordinate alike.

We also learned other things:

(1) The American fighting man can adapt to any situation and to any terrain if properly trained.

(2) When preparing for operations in the jungle, equipment and men must be selected carefully.

(3) Loose equipment must be secured when moving in the jungle or it will be lost.

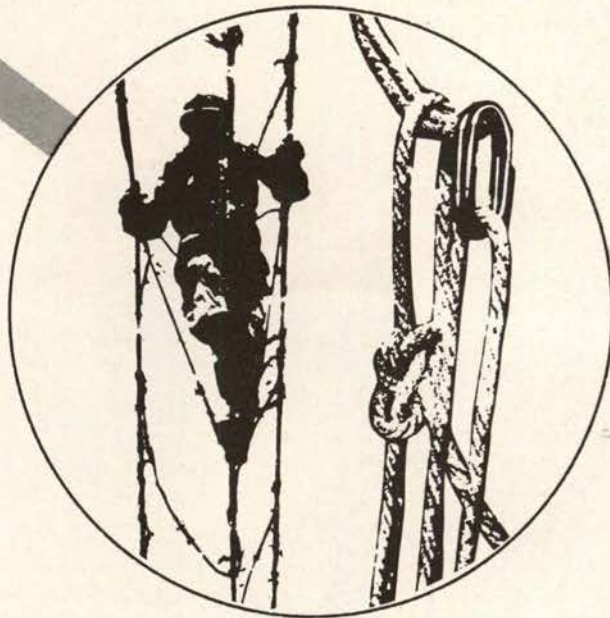
(4) Route selection and movement in the jungle must be deliberate and careful.

(5) Security sacrificed for speed will often be quite costly.

(6) Care must be taken to protect special equipment such as radios, batteries, demolitions, etc., from the wetness of the jungle.

(7) Troops tire easily in the hot, humid jungle unless conditioned properly.

(8) The conventional techniques for attack and assault have to be modified to suit the jungle terrain.



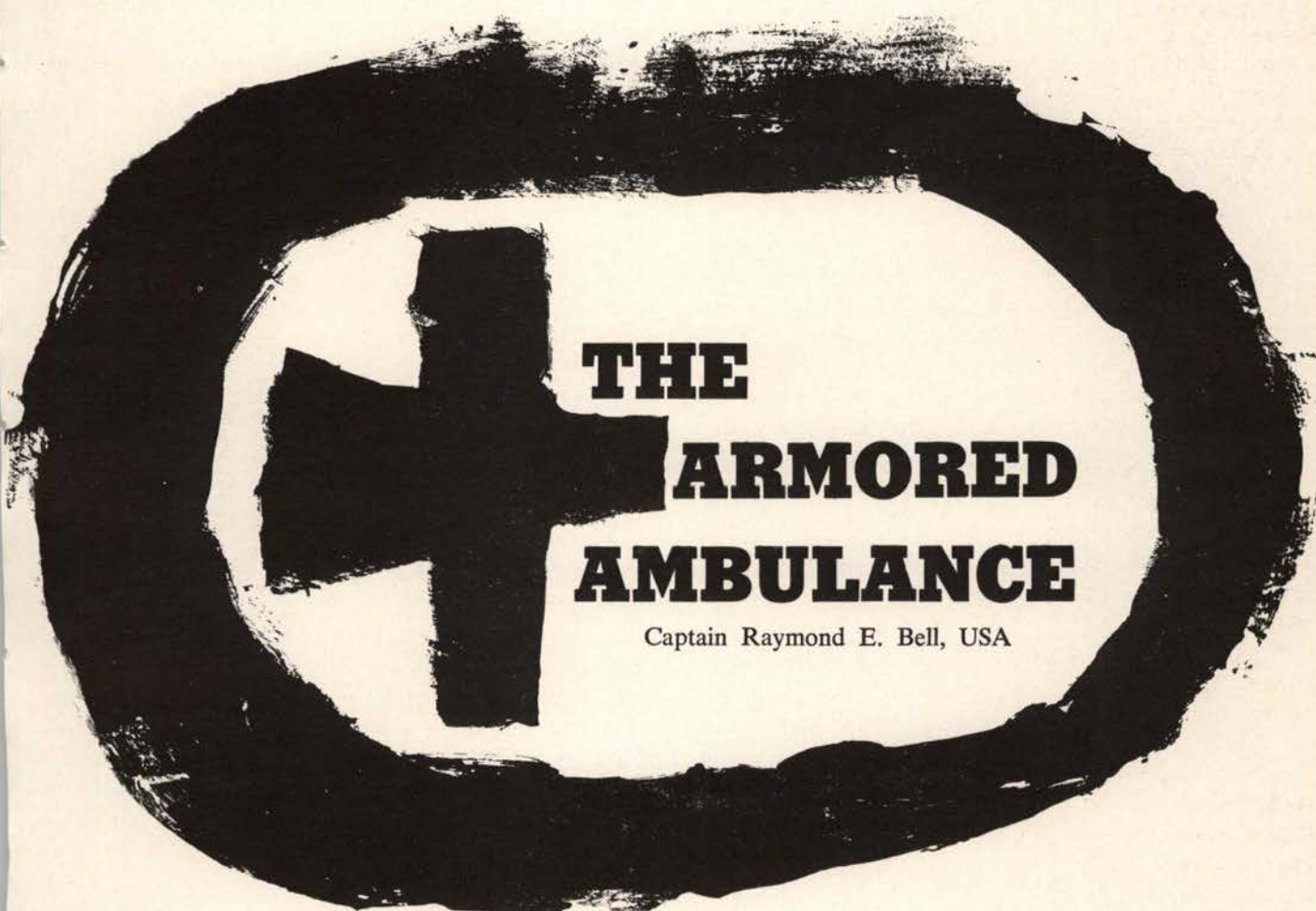
(9) Automatic weapons used to augment the TOE of the unit are often desirable.

(10) Special equipment, such as ropes, snap links, waterproof bags, and packboards, is normally necessary in jungle operations.

(11) Area fire is often better than aimed fire on initial contact with the enemy.

(12) Additional training is needed in some specialized skills when operating in the jungle—knot tying, bridge building, rappelling, LZ and DZ selection.

(13) Logistics support in the jungle is critical for sustained operations, probably more critical than in any other type of terrain. ■



THE ARMORED AMBULANCE

Captain Raymond E. Bell, USA

IN THE UNITED STATES, the search for a more efficient means of medical evacuation in times of battle has been an unending one. Since the early years of the Civil War, when the wounded were often left to suffer or even die on battlefields, the methods of medical evacuation have improved with startling rapidity.

Those were the days when the wounded were moved to rear areas in railroad boxcars or horse-drawn wagons over often treacherous terrain. The war was only half over for the "Reb" or "Yank" soldier wounded at Fredricksburg in 1862—for these littered wounded

there was still the interminable wait at deserted rail junctions, the suffocating stops in oil-lighted rooms.

Almost 100 years and several wars later, during the battle for Pork Chop Hill in Korea in 1953, medical evacuation was an operation more humanely conceived and executed. From one isolated outpost, accessible only by the traversing of slopes, an artery of supply was successfully opened to a rear area. Food, water, ammunition, and replacements flowed constantly into the outpost, even though the area was under incessant enemy bombardment. Wounded personnel were evacu-

ated to first aid stations safely and expeditiously. The solution to the problem of medical evacuation from this outpost was a far-cry from anything ever dreamed of at Fredricksburg, for it involved the M75 armored personnel carrier, the retired grandfather of the current model M113.

While the use of the M113 as a medical evacuation vehicle is generally recognized, the advantages of employing it in this role are not as generally understood. Yet, especially for the mechanized Infantry leader, the need for such an understanding is imperative to a full realization of its capabilities during combat.

Although the capacity of the armored ambulance is flexible, depending entirely upon the way in which it is loaded, the medical evacuation team of two men remains unchanged. Unlike the frontline ambulance, in which the aidman must relinquish his seat so that a litter can be carried, the M113's driver and aidman each have a seat which need not be considered part of the vehicle's casualty-carrying capacity.

Under normal conditions, the M113 as an ambulance can transport the driver, an aidman, and four litter patients. If necessary, the litters can be stored and 11 lightly-wounded troops can be evacuated in sitting positions. Of course, there are alternatives to these basic loads, the choosing of which is properly dictated by the situation. In the event that only two litter patients need evacuation, they can be loaded on one side of the vehicle and six sitting-wounded can occupy the seats on the other side. In emergency situations, four litters can be carried to fill both sides and two lightly-wounded can sit on the floor.

Set against the standard truck, the M113 also has an advantage in the use of communications. In traveling to an area in which casualties have been reported, the M113 can maintain communications with, and hence be guided by, the unit at the location where the casualties are waiting for pick-up. Additionally, its ability to communicate allows the driver to move to areas of priority, and so to evacuate the most severely wounded personnel. In fast-changing situations, where the demands of rapid evacuation are most pressing, the radios of the armored ambulance allow it to keep abreast of the situation while moving.

As the M113's ability to communicate en route serves to enhance its role as an evacuation vehicle, its armor protection provides its passengers a safer journey to

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the rear than the standard medical truck. Moreover, it can operate in situations in which the canvas-topped truck is vulnerable: almost immune from small arms fire and shell fragments, the M113 provides protection against mortar and light artillery rounds; and whereas the canvas-topped truck itself becomes a casualty if hit by small arms or indirect fire, the M113 has a greater chance to remain operative during combat and so carry out its evacuation missions.

Such protection also has inherent advantages on a nuclear battlefield, for it has been established that armored vehicles can endure through a nuclear attack. The enclosed occupants of the carrier will suffer measurably less from the effects of a nuclear detonation. Also, armored carriers can enter contaminated areas sooner than trucks, evacuate casualties quicker and, meanwhile, bring support troops forward in the event of enemy engagement following the nuclear detonation.

In mechanized operations, the mobility factor of the armored ambulance is especially important because it can move over terrain consistent with the movement of the combat units. That is, if a mechanized unit moves into a battle area and engages the enemy, it is possible that it has moved into that battle area over terrain which cannot be negotiated by truck. A medical evacuation vehicle with the same mobility capabilities as the combat units it supports is imperative; indeed, even straight-legged Infantry units, with men covering terrain on foot which is otherwise inaccessible to truck vehicles, are often within the negotiable limits of the M113.

Trucks are usually bound to travel over roads or wide trails, and in this way they are confined in the extent to which they can reach areas of battle; in regions such as Korea and Vietnam, where roads are often washed away and creeks lace the countryside, the truck is helpless—yet the M113, having a waterborne ability, is able to get to the wounded for evacuation. In Alaska, where trucks remain snow-bound, the carrier's tracks provide a means whereby the otherwise inaccessible casualty becomes accessible.

In brief, the M113 can move with men in combat. The crew does not fill in ditches; it rides over them. It does not wait at a river's edge for someone to come along and build a bridge; it fords them. It does not hack down trees and bushes; it plows through them.

The advantages inherent in the M113 as an armored ambulance—load-carrying capacity, protection and mobility—should be understood and exploited to their fullest. For although the M113 remains the essential part of forward mobility in mechanized units, it offers something more than just movement forward into combat.

What it offers, in fact, is safe and rapid evacuation of casualties to the rear. ■



"Fanatics do not make good friends for a cause."

—Ernest Hemingway

the gentle assassins

Frank Procopio

ON THE NIGHT of 28 March 1917, at a place called Aba el Naam, about a hundred miles northwest of Medina on the Hejaz railway in Arabia, a legend began to formulate and a singular technique of warfare began to evolve. A young second lieutenant named Thomas Edward Lawrence, a map expert with British General Headquarters (GHQ) in Cairo set out to derail a Turkish supply train with about 30 untested Bedouins. He planned to do it with a Garland mine—consisting of 20 pounds of blasting gelatin—which would be touched off by the weight of the locomotive passing over it. Once the mine was in place the rest of the night was quietly spent cutting telegraph wires, setting up five machine guns, and bringing a mountain gun to bear on a nearby garrison of some 400 Turks. It was apparently a simple task. After the train was derailed Lawrence and his group could concentrate a siege on the garrison. Several hundred more Arabs had promised support in a day or so. What actually resulted, however, was a ridiculous fiasco. The mine exploded, but only weakly. Unruffled, the engineer and his fireman jacked the undamaged engine back on the track in a matter of minutes. The mountain gun shelled the station with considerable accuracy, but the machine guns failed to fire at all, their crews having panicked and fled at the first sound of the mountain gun. Thirty prisoners from two outlying positions was Lawrence's only consolation.

Still determined, Lawrence made a second attempt at Madahrij. This time a compound explosive, set to go off at intervals of 30 yards, was planted after four hours of frustrating labor. A bridge was then torn down and portions of track ripped up so that the Turks would be too busy making repairs to look for hidden mines. When the train appeared at daylight Lawrence was filled with a mixture of horror and disgust. The cars were loaded with refugees, mostly women and children. To his relief the train passed over the charges un-

harmed. Upon close inspection it was discovered that the Martini lock (a trigger device originally used against the British in the Boer War) had sunk far enough into the sand to prevent contact with the track. Reset, the Garland eventually blew up a repair train.

Despite these two initial failures Lawrence saw reason to be optimistic about the Allied cause in the Middle East. Diminutive at 5 feet 6 inches, a loner, and a strange conglomeration of glaring contradictions, he looked upon the Turkish occupation of Arabia as a means of throwing himself into a personal crusade, a crusade whereby he could establish his purposefulness and satisfy an almost insatiable masochistic complex. His superiors, oddly enough, were in no position to argue with him. Great Britain, committed largely to Europe, was far outnumbered throughout the Middle East, and gradually being worn down in spite of possessing almost twice as much firepower. Her generals, refusing adaptable lines of defense for stable ones, dangerously underestimated Turkish fighting ability. Luckily, when the Arab tribes revolted in 1916 there were enough officers who recognized the opportunities of Arab unity.

original imagination

From the beginning, the Arab army (if it could be called such) was in need of an original imagination. They were slugging it out, toe-to-toe, often relying on rifle power alone to overcome Turkish artillery. When Lawrence first met the Arab leader, Emir Feisal, at Hamra, some 65 miles southeast of Medina, the outspoken Englishman quickly asserted himself as just the inspiration the tribes needed.

"How do you like this place?" Feisal inquired.

"Well," Lawrence replied coolly, "it is a long way from Damascus."

Encouragingly, Lawrence found the morale of Feisal's soldiers high. This was primarily because their families were safe and being cared for. He told GHQ they needed supplies, ammunition, and as many machine guns as could be spared. He expressed complete confidence that, when the Arabs realized the Turks weren't some breed of supermen, they would defeat them. He chose to prove this point along the Hejaz railway system, an 820-mile Turkish line of supply and communication that ran through the heart of Arabia—from Damascus to Medina—like a perpetual open wound. Its construction, overseen by German engineers, was initiated in 1900 by the Sultan Abdul Hamid, who duped thousands of pious Moslems into contributing manpower by leading them to believe he was building a route of pilgrimage to Mecca.

Defending the Hejaz were some 15,000 Turks of the 22nd Division—a crack unit—and components of the 21st Division. Well-armed and adequately supplied, they had the advantage of numerous fortified positions.

Being outnumbered four-to-one was of minor consequences, as only a fifth of the Arab forces had rifles. Most of these belonged to the warrior society of the Bedouin, a people set apart.

contrarities

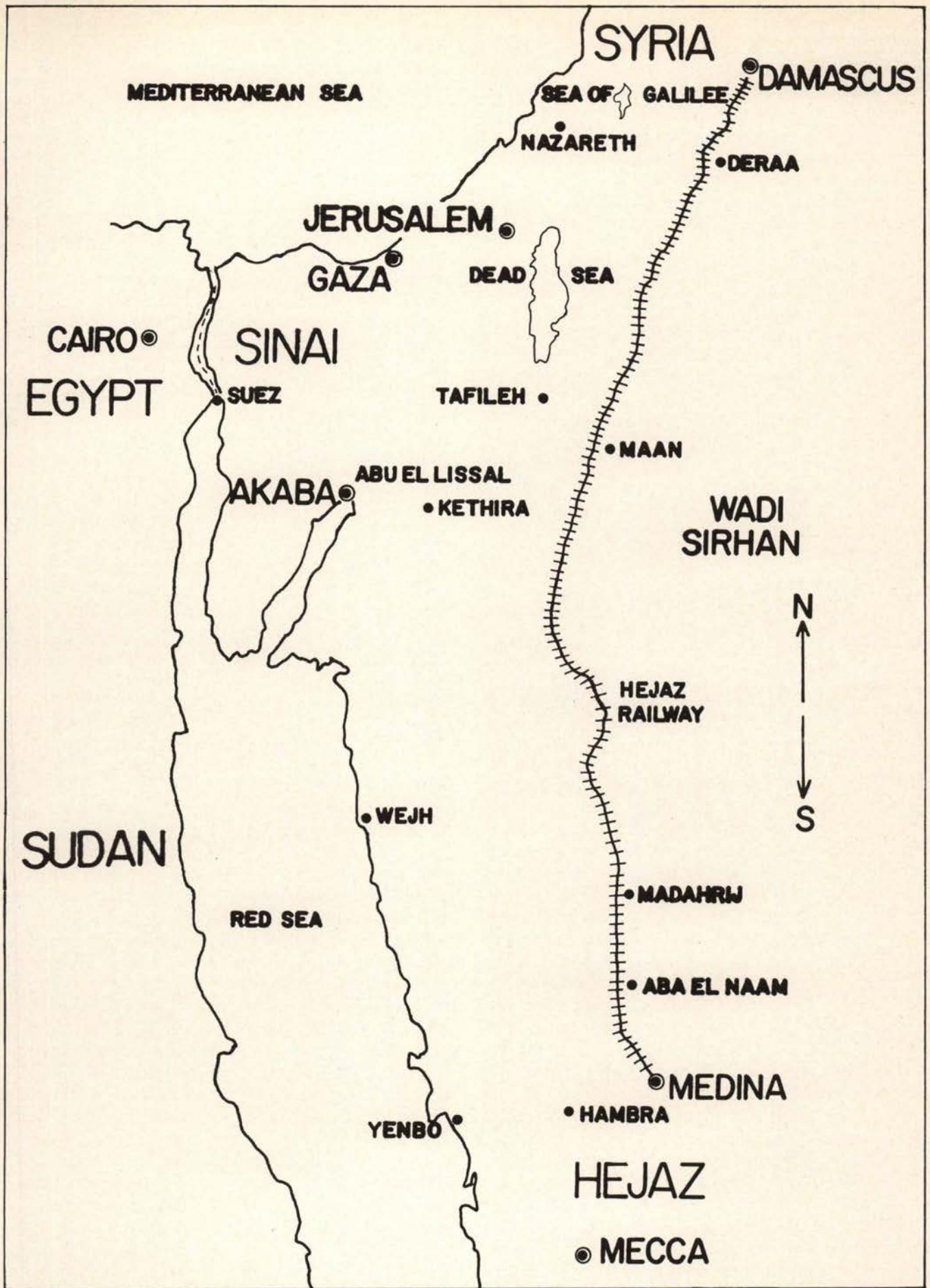
Wandering and undisciplined, the Bedouin, like Lawrence, rejoiced in contrarities. They thought of God in terms of freedom and space. Their philosophy of existence was painlessly simple: they accepted what their senses could perceive and what their impulses demanded. Still, they never tolerated abuses of human dignity. In them Lawrence saw unlimited fighting potential. The job, of course, was to cultivate that potential, and not attempt to reshape it. He would teach them how to wage a pin-pricking, hit-and-run extension of war. He would show them how to appear where and when they were least expected; how to blend into their environment; how to win the confidence of the civilian population, because only then could their task be completed; how to force the human body, with the weapon of the human mind, to go far beyond the limits of its supposed capacity.

In the beginning, he knew there would be mistakes, such as those at Aba el Naam and Madahrij, but even these would be the seeds of ultimate proficiency. Soon the Turks, who had always shown themselves formidable opponents, would come to fear their Arab subjects even more than they themselves were feared.

Theoretically, and often literally, it was a "gentle war." If you could avoid killing, you did so. Killing had no real bearing on the outcome. Communications and supplies were your most potent enemies. So, in a sense, Lawrence's camel-riding Bedouins were "gentle assassins." They carried four or five heavy machine guns, and sometimes an armoured Rolls-Royce accompanied them but, generally, when they killed they did so out of necessity.

"The desert war was unlike other wars," writes biographer Robert Payne assuming the attitude of Lawrence himself. "It had its own laws, its own geometry, its own center and circumferences . . . Killing was pure luxury, unnecessary and expensive. It would be better if the Arab armies poured round the Turks like a gas, stifling them; it would be better to destroy Turkish materials, their guns, railways and strong points, than individual Turks. In Arabia . . . everything was fluid . . . and Arabs are more dangerous as guerrillas than as disciplined troops."

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To this end Lawrence dedicated himself with the enthusiasm of a novice and the persistence of an ascetic. He had a set of rules he strictly adhered to, among which the most interesting were these:

Never do too much with your own hands; it is not directly your war. Better to have the natives do a reasonable job than you do a perfect one. It is their war to win and they must remember how they won it.

Remember that men who cannot be driven are often easily led.

When, on 9 May 1917, Lawrence led his Bedouins on a 600-mile sweep across barren desert to strike the city of Akaba, a Turkish stronghold and glaring obstacle to an Allied landing from the sea, he felt confident and totally identified with the cause of Arab independence. The Hejaz he left to one Captain S. F. Newcombe, who, like Captain Garland before him, was a loner and designing individualist. The sight of these men, loaded down with dynamite, and perhaps leading a party of 50 Bedouin, surely served as inspiration of immeasurable effect upon the spirit of a people whose whole embodiment was freedom.

major transformation

By this time Lawrence had undergone a major transformation in his military thinking, which was why he left the Hejaz to Newcombe even though his raids were becoming more and more successful. He wanted the Turks to feel they could still move; he wanted them to adopt a precarious sense of confidence. Reduce the strikes, he reasoned, and put them into an "absurd position—all flanks and no front." Newcombe, on the other hand, wanted Feisal's entire force to straddle the Hejaz and put a definite end to its usefulness. When Cairo confirmed Newcombe's position, an angry Lawrence withdrew further into himself. The impractical trek to Akaba was part genius, part self-imposed punishment.

Like men possessed they rode from one well to another in the terrible summer heat and under a relentless, white sun, through the Sirhan half-desert where thousands of deadly snakes thrived and, finally—when their number had swelled to about 700—to the outskirts of Akaba itself where several forts barred their way. Abu el Lissal, on the Hejaz northeast of Akaba, defended by some 600 Turks with mountain guns, was attacked immediately.

At first it went badly. The Arabs had the advantage of the surrounding heights, but the day was hotter than anyone could remember and the Turks had a spring of water. The battle dragged on for four hours. Some of the Arab force, including Lawrence himself, began to feel the effects of heat-stroke. Auda abu Tayi, the sheikh of the Howeitat tribe who was already a legendary warrior among the Bedouin, found Lawrence in a

hollow, gasping for breath and sucking dribbles from a trickle of muddy water.

"How is it with the Howeitat?" the sheikh inquired sarcastically. "All talk and no work?"

"By God," Lawrence snapped back, "They shoot a lot and hit a little."

wild charge

Enraged, Auda flung off his headcloth and raced away. In a hollow, 200 yards from the Turks, he assembled his camel-mounted troops. "Come on," he shouted to Lawrence, and led a wild, intoxicated charge straight into the Turkish camp. Momentarily, Lawrence rallied the 400 men of Nasir, Sherif of Medina, and struck the flank. The Turks panicked; what had been a stalemate turned into a massacre. Three hundred Turks were killed and about 175 were captured. Arab casualties were incredibly minimal. The carnage sickened Lawrence; nevertheless, he spent the night personally lining the dead into neat rows.

Turkish forts at Kethira and Ithm held out stubbornly, but the breach to Akaba was wide open. On the morning of 6 July, in a driving sandstorm and after some fierce skirmishing, the city was occupied.

About this time the British High Command in Cairo was revamped, with General Archibald Murray being replaced by General Sir Edmund Allenby, former commander of the Third Army in France. Allenby's first act was to move GHQ to the front, where he eventually met Lawrence who, barefoot and wearing Arab robes, explained how he planned to gather the tribes from the Hauran region and then capture Damascus. In no uncertain terms Lawrence divided the spoils of the Middle East between them. Allenby admired his confidence and informality, and soon shiploads of supplies steamed into the port of Akaba.

The battle for the Hejaz, for all practical purposes, was over; the battle for Palestine and Syria had now begun. The British Army, lumbering slowly and methodically northward, had achieved fresh vigor with Allenby, but its task was still a conventional one: take ground and occupy it. The Arabs, on the other hand, were unimpeded, issuing like the wind far into Turkish territory, roaming about almost at will. Lawrence's purpose was not to push, but to stroke; not to engage in pitched battles, but to raid; not to occupy ground, but to make it unsteady. He intended to raid Turkish positions and blow up supply trains until the Turks could no longer feel safe anywhere, until they grew weary from anxiety.

He never quite succeeded, and for this failure he blamed the Arabs. His art was a delicate one, difficult for the Bedouin mind to fully comprehend. To Lawrence's consternation the "small" raiding parties were often of brigade size, hampering mobility and ultimately resulting in open battles. He also had little control over

the Bedouin thirst for blood-letting. Occasionally they acted like the "gentle assassins" of Aba el Naam, and Lawrence argued the merits of his theories to the point of exhaustion, but attempts to convince the Bedouins of his ideas were usually futile.

coordinate movements

Lawrence's raiding reached such proportion that Allenby finally demanded he coordinate his movements with his own. During one four-month period no less than 17 trains had been wrecked. There were reports of civilians and prisoners having been slain, and Allenby questioned Lawrence's moral peculiarities. But, in the end, he merely shrugged in despair and suggested that Lawrence blow up a bridge in the Yarmuk Valley, which would isolate the Turkish position in Syria for more than a week and sever connections with Palestine.

The raid fizzled when one man dropped his rifle. It clattered down the mountainside, alerting the Turkish garrison. To compensate for the failure another train was blown up. Allenby, however, was decisively more successful. Having feinted an attack on Gaza, and causing the Turks to reinforce that area, he struck a weak point near Beersheba, opening the way to Jerusalem. He entered the Holy City on 11 December.

The Allied tide moved swiftly now. The Germans were sufficiently concerned to send General Liman von Sanders in an attempt to bolster the sagging Turkish defenses. But between Allenby's cool strategy and Lawrence's bewildering guerrilla raids the German wished he were back overseeing the comparative rationality of trench warfare.

Traffic on the Dead Sea was Lawrence's next target. At its southeast corner was the village of Tafileh, 4,000 feet above sea level, which the Turks had been ordered to defend to the last man. About the middle of January, 1918, the Arabs converged on it, trekking through snow from the east, west and south. It fell easily, but the Turks counterattacked on 25 January with three battalions of Infantry, a hundred cavalry, two mountain guns and 27 machine guns. They were led into a trap of concentrated fire and decimated. Of the 1,100 Turkish troops, a mere 50 escaped back to their base;

250 were captured; hundreds of unattended wounded died of exposure in the snow.

Tafileh was again retaken briefly by the Turks in the spring, but the Allies countered the move by striking the railway fortress at Maan. The Bedouins, however, did not distinguish themselves at Maan. Against Lawrence's wishes they joined the fight as regular troops in formation with the British, French, and Egyptian Infantry. A waste, Lawrence thought, of natural talent. Then, when the fortress fell, the Bedouins lapsed into a wild orgy of looting. Sensing ultimate victory, they were becoming increasingly more difficult to control.

death-blow

Throughout the first two months of summer Allenby made his preparations for the death-blow. An interesting part of those preparations was a page taken right from the book of Arab trickery. Dummy positions sprang up all along the front; cigarettes, packed with opium, were parachuted among the Turks. Add the ever increasing portions of the Hejaz being blown up—trains and bridges included—and Allenby's hope that the breach to Damascus would be opened by the end of summer was easily within the realm of realization.

In late September tested veterans of Germany's Asia and Africa Korps, and the Turkish Fourth Army, found themselves completely surrounded at Deraa. The Germans fought but the Turks retreated, leaving in their wake a number of atrocities. The Arabs, thereafter, fought with equal bloodlust. Lawrence had nothing but praise for the conduct of the Germans. They were cool and professional, he relates, and their lines never wavered. At midnight of 27 September Lawrence entered the smoldering ruins of Deraa. Damascus was his for the taking. The war was won.

Lawrence's war was, at best, a gambler's war; it contained almost as much failure as success. But the true gambler is an incurable optimist, and never cowers to the logic of percentages. Lawrence immersed himself in a sea of unconventionality—right up to the day in 1935 when he lost his life in a motorcycle accident—and it was because he was capable of utilizing that intangible factor men call "motivation" that the legend endures. ■

were evacuated by helicopter. During the same period the remainder of the Ranger battalion, carrying 19 wounded, was able to escape the ambush area. On close examination, the success of the evasion effort and the battalion withdrawal can be attributed almost entirely to the nature of the terrain. Limited visibility, poor fields of fire, restrictions to ground movement, and abundant concealment are all a result of dense jungle vegetation and all spell disaster for the commander who persists in the attempt to employ conventional Infantry tactics under such conditions.

Before closing I should like to examine in more detail the 15-hour evasion period described in the Vietnam letter.

One member of the evasion party was wounded and it was necessary to crawl part of the time. Therefore, it is reasonable to assume that the helicopter pick-up point must have been located little more than two kilometers from the point of ambush. Even so, in a jungle two kilometers from the enemy is just as safe as a hundred kilometers.

Mention is made of moving off trail and picking the most difficult terrain possible. Indeed, this was a very wise move; yet the evasion party passed, undetected, within 200 meters of an enemy bivouac site. It would seem the VC can also appreciate the value of the most difficult terrain. And why not? After all, the only conventional enemy troops he might encounter in such areas would be those who are escaping and evading. Enemy

forces that take full advantage of difficult jungle terrain need have no fear of any force larger than a platoon, because conventional units of larger size have no hope of retaining the element of surprise and they move with the speed of a fat cow. Whenever a guerrilla commander finds his area being infested with such forces, he need only deploy a few snipers, while the remainder of his force evacuates the area. In the meantime the guerrilla commander studies the invader and allows himself to be pursued until he is ready to catch the pursuer.

By using the terrain and retaining the element of surprise, it becomes fully possible for an inferior force to attack a superior one at little or no risk. We need only review the record of our own Army-led guerrillas on Mindanao to be made aware of how true this can be.

What I have written is only a surface analysis of the wealth of information contained in the Vietnam letter. I hope that enough has been said to raise in the minds of at least a few the possible damage the evasion party might have inflicted on the VC bivouac, had their mission been different. Given air mobility, tactical air support, communications, and limited additional training, I suggest that Capt Lynch and his seven companions, or any small force of Infantrymen, could cause the VC much greater concern than could any conventional battalion.

For those who may wish to read more of such blasphemy, I refer you to the July 1965 issue of the *Army Aviation Digest*. ■



DOUGHBOY'S SWAP SHOP

ITEM 14

The Problem: To set headspace and timing on the Browning Machinegun, caliber .50 HBM2, by employing field expedient methods.

An Idea: The field expedient method must be used only in a combat situation. To set the headspace by a field expedient method, screw the barrel all the way into the barrel extension, then loosen the barrel two notches (clicks). If the weapon operates sluggishly, loosen one—and never more than one—additional click. Timing may be adjusted by using the issued identification tags as a field expedient. Use one “dog tag” for the fire gage and four tags for the no fire gage. The 25¢—or two-bit—method may also be employed, using a dime for the fire gage and a nickel *and* a dime for the no fire gage.

A Challenge: Have you ever used any other field expedient method by which you performed this operation? Share your methods with other doughboys. Write INFANTRY.

Write Infantry
Box 2005
Fort Benning, Georgia
31905



Infantry NOTES

OCS Flight Applications

Commencing with Officer Candidate Class 11-66, Infantry officer candidates will be authorized to apply for Army Aviation Flight Training while in a candidate status. Arrangements will be made for candidates to take Class I flight physicals while at Fort Benning. Interested candidates should read AR 611-110 to determine eligibility standards and application procedures.

Depending on the availability of quotas, some candidates will be selected for flight training immediately following OCS. Selection of these particular candidates will be on a competitive basis using standard of performance in OCS as selection criteria.

A majority of eligible OCS applicants will be selected for flight training after initial CONUS assignments. Normally these selections will be made after the officer has served at least six months with troops.

Unit Specialists Needed

A worldwide need exists for junior Infantry officers trained in battalion-level communications and maintenance officer skills. These qualifications are essential to success of the Infantryman on today's battlefield as well as being of importance to the balanced career development of the new combat arms officer.

Training of the Organizational Maintenance Officer is accomplished at Fort Knox, Kentucky. The course is 10 weeks long. The Communications Officer Course is 10 weeks long and conducted at Fort Sill, Oklahoma. Both courses are given on a TDY and return-to-home-station basis or in conjunction with a PCS move to a new or first duty station.

Interested Infantry officers should indicate desire for attendance either on their first Preference Statement or by application, through channels, to the Chief, Infantry Branch, OPD, Department of the Army, Washington, D.C. 20315.

Credit for Education Effort

The major source of information available to DA school and promotion selection boards regarding an officer's civilian education achievement is the individual

DA Form 66. With the increasing emphasis on education, each officer is encouraged to insure that his DA Form 66 reflects all completed college-level work. This is especially important in the case of courses completed during off-duty hours. An education effort may not be recognized at DA level unless properly entered in Space 16 of Form 66. Entry will be made if a DA Form 66A (Report of Change) is processed.

Junior ROTC Adds 48 Units

The Army's expanded Junior Reserve Officers' Training Corps program has added 48 high schools for Army ROTC units in Fiscal Year 1967.

The schools, located in 15 states, were selected from a large list of applicants and will be offering Army military training for the first time.

In order to raise its present Junior ROTC quota from 251 to 434, the Army will select 135 more units from military secondary schools and those currently offering the National Defense Cadet Corps program.

Of the 48 high schools, eight are in Texas, seven in Louisiana, with the other 33 scattered throughout the South, Midwest and West Coast.

Ammunition and Fire Control

The long-awaited Aluminum Graphical Firing Scale Fan, with ballistic plates, for determination of firing data for the heavy mortar will reach field units this summer. Production contracts are being let and June 1966 is the anticipated month for issue. The ballistic plates will reflect firing data for the M329 HE and M335 Illuminating rounds at scales of 1:12,500 and 1:25,000. Plates for the A1 series of ammunition are being worked on at this time. The tabular firing table for the A1 series of ammunition (FT 4.2-H-1) was published in February and is now being distributed.

An A2 series of the M335 Illuminating projectile has been designed, tested, and is currently in production. This round represents a vast improvement over the A1 version. The candlepower has been increased to 850,000 and the round will illuminate an area 1,600 meters in diameter.

Information from the field indicates that some units

may be using poor procedure when attaching the charge increments to the extension of the 4.2-inch mortar projectile. The propellant holder is being taken from its groove and pushed forward on the extension or ignition cartridge container to hold the charge increments tightly against the base of the projectile. The result of this procedure is a reduction in muzzle velocity and a subsequent loss in range. The charge increments are packed tightly together, causing a slower burning of the propellant and thus a reduced rate of gas expansion. The propellant holder should always be in the propellant holder groove and the charge increments allowed to move freely on the container or extension. (Reference TM 9-1300-205)

A word of caution to those units that have the 4.2-inch mortar *paper* ballistic plates. They were designed for training purposes *only* and are not Ordnance approved for live fire. Inclement weather can cause an expansion or reduction in the paper and determination of erroneous firing data may result. The paper plates were developed for training with the 105mm howitzer graphical firing table fan until a similar fire control instrument could be developed for a heavy mortar. Such an instrument has been developed and is discussed above.

New Flight Helmets

Army fliers and flight crews in Vietnam will soon be protected by a new helmet designed to give four times the impact protection of present helmets.

The new headgear, developed by the Army Materiel Command's laboratories here, is made of a laminated nylon fabric which will also reduce ballistic fragment penetration by 50 percent.

The helmet's appearance and weight is similar to the glass cloth laminate headgear now worn.

M53 Sight

The United States Army has developed a sight unit which can be used with all Infantry indirect-fire weapons and one by which all sighting procedures can be standardized.

The M53 Sight Unit, a new version of sighting equipment adaptable for Davy Crockett and Infantry mortars, is an extremely versatile piece of equipment which incorporates some of the better features of the M34 series mortar and Davy Crockett sights.

In general, the M53 sight consists of an elbow telescope M109, and a telescope mount M128, both of which are similar in construction to the same two parts on mortar sights as well as the Davy Crockett sight. The telescope is a 4 power scope with a fixed focus instrument incorporating a 10 degree field of vision. A feature which differs from other sights is the locking device found on both the elevation and the deflection

scales which prevents the rotation of these scales due to the shock of firing.

Since the M53 sight unit was desired to be compatible for use with various weapons, an adjustable course elevation scale was provided. For use with the Davy Crockett, the correct positioning of the scale is indicated by BGWS (Battle Group Weapon System) engraved on the scale with an arrow indicating the correct direction of rotation.

This sight unit has now become available for issue to field units and through its use many of the once-difficult sighting procedures can be greatly simplified.

Changes at the University of Omaha

The University of Omaha recently announced that effective 1 September 1966 the designation of the College of Adult Education and the Bachelor of General Education degree awarded in the College will change respectively to the College of Continuing Studies and the Bachelor of General Studies degree. The University indicates that the new designations are in keeping with educational developments and will more accurately reflect the studies pursued.

Infantry officers pursuing off-duty studies to reduce resident requirements to the point where they can apply to participate in the degree completion program are assured by the University that the Bachelor of General Studies degree remains designed for adult students who have acquired a wide educational background. Further, provision is still made for the student to acquire a breadth of experience in general areas, and a depth of experience in three specific departments to assure a well-rounded program.

Counseling Team for Junior Officers

Department of the Army has initiated a test counseling program designed to sell the Army as a career to obligated volunteer (OBV) junior officers. The primary objective of the program is to encourage OBVs to change their categories and thereby give them a chance to evaluate what the Army can offer as a career. Advantages of a Regular Army commission are to be emphasized. For those Reserve lieutenants who are interested in RA commissions, a system of special consideration of their records will be initiated in order to rapidly notify potential applicants of their chances of being accepted in the Regular Army.

The counseling effort is being conducted by a team from the Office of Personnel Operations (OPO) and consists of six officers whose backgrounds qualify them to represent all career branches of the Army. As part of the program, it is planned to ask Army wives at each installation visited to assist the team by presenting the wives' side of Army life.

The OPO team made its initial visits in November

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1965; visits are tentatively scheduled to be made in 1966. It is planned that the team will spend two days at each installation selected.

These visits will be evaluated, and a recommendation concerning the effectiveness of the program will be made to the Chief of Staff in June 1966.

Educational Assistance

The Veterans' Readjustment Benefits Act of 1966, signed into law by the President on 3 March 1966, establishes a permanent program of educational assistance for veterans who have served on active duty for a period of more than 180 days, any part of which was after 31 January 1955, have been discharged or released from active duty under conditions other than dishonorable, or have been discharged or released for a service-connected disability. Active duty personnel with more than two years of service are eligible for the educational benefits as well.

Effective 1 June 1966, monthly allowance rates for full-time study are \$100 for a single veteran, \$125 for a veteran with one dependent, and \$150 for a veteran with two or more dependents. Proportionate rates for part-time training are as follows: three-fourths time—\$75 no dependents, \$95 one dependent, \$115 two or more dependents; half-time—\$50 no dependents, \$65 one dependent, \$75 two or more dependents. Active duty personnel who participate in a less than half-time program will receive an allowance equal to the regular tuition fees or \$100, whichever is less. Active duty service personnel receive no additional allowances for dependents.

Veterans are advised to contact a Veterans' Administration office for further information. Active duty personnel should seek information from their Post or Unit Educational Advisor.

The U.S. Army Infantry Board

The purpose of the Infantry Board is to make sure that the Infantryman receives the best equipment it is possible to give him—either for combat, or for training. Infantrymen, anywhere, are invited to visit Fort Benning and to see the equipment the Board is testing, and to observe the tests.

These are some of the more interesting items recently tested, now undergoing test, or to be tested by the Board:

OVERHEAD ATTACHMENT SYSTEM

The Board will soon be testing an overhead attachment system, developed by the U.S. Army Limited War Laboratory, for rappelling from the UH1B and UH1D helicopters. This system, if found suitable for U.S. Army use, will replace the cargo deck tie-down system for anchoring rappelling ropes to these helicopters.

The system consists of extensible structural members that are fastened to the cabin roof. The extensible booms permit personnel to be lowered from both doors simultaneously and clear the landing struts upon leaving the helicopter. The doors may be closed when the booms are retracted. The booms may also be used to lower cargo. Present design considerations will provide attachment for a maximum of six persons rappelling simultaneously.

BAYONET TRAINING RIFLES

The Board will conduct a service test on bayonet training rifles simulating the standard M14 and XM16E1 rifles. The bayonet training rifles exhibit the



silhouettes of their service counterpart, and accept the respective bayonets. The bayonet training rifles are expected to possess sufficient strength to withstand the repeated abuse they are subjected to in bayonet training. If the rifles are found suitable for U.S. Army use, they are expected to replace the M14 and XM16E1 rifles in bayonet training.

COLLIMATOR GUNSIGHT

The Infantry Board recently conducted a military potential test of a reflex collimator gunsight developed by the Limited War Laboratory at Aberdeen Proving Ground, Maryland. The sight is a small, compact, optical sight which is fitted to the rear sight mounting base of the rifle and replaces both the front and rear iron sights. The reflex collimator sight superimposes a reticle image directly onto the target and is designed to be free from parallax, thereby permitting accurate sighting without requiring the user's eye to be precisely along the center line of the sight. The sight is intended for short and medium range (50 to 200 meters) combat use, particularly in engaging short-time exposure targets. Results of the test are still being analyzed.

CLEANING MATERIALS FOR THE XM16E1

The M11E2 cleaning rod and a modified chamber cleaning brush were developed for the XM16E1 rifle and tested as replacements for the currently issued items. The M11E2 cleaning rod incorporates a change to a tougher steel and an increase in the number of threads per inch at the joints. It also has a swivel-type handle that allows the cleaning rod to rotate in the

barrel and follows the grooves of the rifle. The swivel handle design also includes a feature that allows the handle to be locked on the handle rod section in order to operate the newly-developed chamber cleaning brush in the locking lug area of the rifle. The Board believes the M11E2 constitutes an improvement over the current item.

30-ROUND MAGAZINE

A 30-round magazine for the XM16E1 rifle will be issued as a replacement for the standard 20-round magazines issued with the rifle. This magazine has been tested with other weapons, but has not been evaluated with the XM16E1 rifle. The magazine provided for test will be similar to the original model with an increase in the strength of the magazine lip and the side walls. The new magazines are expected to function with reliability equal to that of the 20-round magazine, be compatible with standard 5.56mm ammunition tactical packaging, and increase the soldier's firepower.

Army Aviation Flight Training

Q—As a Distinguished Military Graduate with ROTC flight training who accepted a Regular Army appointment, must I apply for Army Aviation flight training or is my acceptance automatic?

A—Unless a DMG has previously completed DA Form 2194-R, "Active Duty Preference Statement," while still in college, he must apply for flight training under the provisions of AR 611-110, "Selection and Training of Army Aviation Officers." He is, however, required to pass only a class II rather than a class I flight physical if he is a graduate of ROTC flight training.

Q—What is the waiting period for flight training?

A—There are two categories of applicants to be considered in answering this question. First, the RA officer who, while still in college or the U.S. Military Academy, indicates on his active duty preference statement that he desires flight training and second, the officer who volunteers after entering on active duty or is an ROTC flight training graduate. The RA officer must complete mandatory Ranger or Airborne training and one year of troop duty, exclusive of schooling, before he is eligible. Although the current waiting period for the second category is approximately seven months, this period of delay may fluctuate because of the number of applications, military requirements, and training facilities and equipment available.

Q—Will I get my choice as to the type training I want, i.e., fixed or rotary wing?

A—Your preference will be considered and, if possible, honored. However, most applicants request fixed-

wing training while most of the requirements are in rotary-wing training.

Q—How long will my physical examination remain valid?

A—The flight physical examination is valid for one year and must be current on the course starting date.

In addition to the above questions, two points of interest, not specifically covered by the regulation are:

- The minimum acceptable utilization period of the ROTC flight training graduate as an Army aviator is 18 months. If an applicant will not have 18 months active duty service remaining after graduation from flight school he will be given the option of withdrawing from the program and reverting to a 24 month active duty service obligation or requesting extended active duty for the purpose of attending flight training.

- In the case of those officers who go directly to troop assignments without having attended the branch basic course, the requirement of completion stated in AR 611-110 may be satisfied by constructive credit for completion of 6 months of satisfactory performance of duty in a branch assignment as provided by DA Circular 611-26, dated 17 June 1965.

While the above points have caused the most concern among the applicants for Army Aviation flight training, other questions can be answered by the Professor of Military Science or Unit Personnel Officer and reference to AR 611-110.

Rangers and Jumpers Still Needed

Volunteers for Ranger and Airborne training are needed in ever-increasing numbers by active Army forces. The successful completion of either of these specialized training courses today, as in the past, greatly enhances an Infantryman's potential and opens the door to challenging assignments which are not otherwise available.

In recent months, and directly related to the increased critical overseas commitment of active forces, many applications of qualified personnel have been disapproved or, in some cases, deferred. This action does not reflect a lessening in the importance attached to this training. It is simply a reflection of the overriding importance attached to filling critical assignment requirements within the allowable time frame. Mandatory training of Regular Army officers as outlined in AR 621-109 and of the maximum number of other volunteers will continue. In the case of individual applications received from the field, attempts will be made to schedule the training in conjunction with a permanent change of station.

Prerequisites for application are contained in DA Pamphlet 350-10. Those qualified are strongly encouraged to submit application.

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CONARC Extension Course Program

There is no waiting list in the Extension Course Program offered by U.S. Continental Army Command schools. Wherever you are, you can begin right now. You are as close to the school as your mail box.

The program is designed to provide a means for the individual unable to attend a service school to improve his ability to meet job requirements, acquire increased skills, and achieve promotion. For the Army it provides a greater unit effectiveness through more efficient individual performance.

Courses by mail are offered to members of all components of the Army—active Army as well as active members of the U.S. Army Reserve and the U.S. Army National Guard. This instruction also is available to active members of other U.S. military services, eligible employees of the Federal government, and to allied military personnel, whose official duties require knowledge available through Army Extension Course study.

To furnish instruction comparable to that offered in resident courses, CONARC schools offer extension courses to officers and noncommissioned officers for career development. In addition, courses are offered to all personnel for MOS-type and specialized training. Some of these courses are in such fields as automatic data processing, safety management, nuclear weapons employment, and military pay and allowances.

An extension course consists of a number of subcourses organized to furnish special instruction in a specific subject area. Successful completion of an extension course depends upon passing each of its subcourses.

There are approximately 1,250 individual subcourses prepared by 21 CONARC service schools. Subcourses may be selected on an individual basis to acquire knowledge in a particular area such as maintenance, map and aerial photograph reading, methods of instruction, etc.

A subcourse is basic material that covers a single phase of instruction and may contain one or more lessons and an examination. It consists of instructional material in the form of a compact lesson text, and a sufficient number of practical exercises to teach the subject.

Individuals may either enroll in an extension course and receive a diploma, or enroll in a subcourse and receive a certificate of completion.

Eligibility and enrollment requirements are published in DA Pamphlet 350-60, which also lists the extension courses and subcourses available at each CONARC service school. Enrollment is voluntary and no fee is charged for materials or instruction.

SMC-AMC Merger

The Army Materiel Command has assumed direct control this month of the field installations and activities formerly under the Supply and Maintenance Command.

General Frank S. Besson, Jr., AMC commanding general, said the merger "clarifies command responsibilities, expedites the decision-making process, and provides a more cohesive and responsive organization."

Reorganization of the two Washington-based commands will result in a reduction of approximately 30 authorized personnel spaces.

WRAIR Lauds Malaria Drug

Army medical researchers say a new anti-malaria drug now being authorized for U.S. troops in the Republic of Vietnam can cut in half the number of men stricken by the disease.

Recent field tests conducted in Vietnam by the Walter Reed Army Institute of Research (WRAIR) show that DDS (diaminodiphenylsulfone), a drug long used in treating leprosy, will combat a severe form of malaria which has resisted usual treatment.

Troops will be given one 25 milligram pill each day and will continue to take the pills for one month after leaving Southeast Asia.

Soldiers receiving the drug who still contract malaria should now be able to return to duty in two or three weeks instead of six to eight weeks, as before. Chances of a relapse, according to WRAIR, are expected to be cut from 40 percent to four percent.

In 1965, malaria caused a loss of 63,035 man days from duty in Vietnam.

The Army Malaria Research Program of WRAIR conducted its tests from December 1965 until May 1966. More than 100 university teams, private firms and military research units have been brought together for the malaria research program at WRAIR in Washington and in the field.

Maps

During Operation Nathan Hale the Third Brigade of the 1st Air Cavalry Division used more than 24,750 square feet of maps, with a total weight of 100 pounds.

The brigade used 110 sets of maps, nine sheets to a set, each map sheet being about five feet square, in the operation.

RVN Campaign Medal

DOD has issued instructions to services concerning the Republic of Vietnam Campaign Medal awarded by RVN to U.S. service personnel.

Eligibility date is retroactive to 1 January 1960, with determination left to U.S. authorities for making awards six months' service after the eligibility date is required.

Each service will publish its own regulations governing procedures for administrative processing, awarding and wearing of the medal.

First official award to U.S. service personnel was made by RVN on 24 March 1966. This came after authorization allowing U.S. forces to accept and wear certain decorations RVN confers on its own forces. ■



Infantry REVIEWS

POLITICAL HANDBOOK AND ATLAS OF THE WORLD edited by Walter H. Mallory, Harper and Row, Inc., New York, 1966. 360 pages, including 23 full-color maps. \$8.50

Joseph Nile Peacher

POLITICAL HANDBOOK AND ATLAS OF THE WORLD is a very valuable compilation of the governments, cabinets, national movements, etc. of the various countries of the world.

This 39th edition, assembled through the efforts of Walter Mallory and published for the Council on Foreign Relations is current as of January 1, 1966, and is revised and republished on an annual basis.

This volume can be considered a must for those persons who wish to make their reading more understandable, particularly news items of the world's countries and their day-to-day affairs, and those who wish to bring their historical reading closer to home by updating the information presented in textbooks, etc.

The 32 pages of maps, on which 23 actual maps appear, can be used most effectively in applying the information presented to the exact locale, and thereby broadening the intent of the material.

WIE ES WAR, MAINZER SCHICKSALSJAHRE 1945-48 Gesammelt, geschrieben und herausgegeben von Erich Dombrowski, Emil Schramm. Mainzer Verlag-sanstalt, Mainz, 1965. DM 19.50 (approx. \$4.80)

Dorothea S. Michelman

This book is the first of its kind to undertake an analysis of the problems encountered and accomplishments achieved by the Allied forces of occupation in post-World War II Germany. This perceptive, largely eyewitness account uses the medium-sized city of Mainz to typify what the Western Allies encountered elsewhere in Western Germany during those first years of reconstruction and re-education.

While the American occupation of Mainz lasted only three months, from 21 March to 22 June 1945, at which time the French took over, these initial months were

the most critical for the democratization of the city's population and institutions. Much credit for the considerable success realized in establishing good relations and respect between the victors and the vanquished must go to Colonel Clarence G. Martens, the German-born commander of the American troops, who worked ceaselessly and with great patience, understanding and sympathy for the physical and moral rehabilitation of the native citizenry.

It was first essential to provide the basic requirements of food, shelter, clothing and medical assistance. At the same time, through a carefully organized program of municipal revival, work proceeded to instill democratic principles in a re-created press, educational system, and other cultural and social institutions. Every effort was made to nurture whatever dormant seeds of democratic life still remained and to guide the population, particularly the youth, toward a new and healthier awareness of Germany's national and international responsibilities.

Well documented, this book illustrates with over 100 photographs, reproductions of documents, and eyewitness reports the first three years of the gradual redevelopment process that has transformed Mainz from a ruined shadow of a city 86 per cent destroyed into a flourishing economic and cultural center today.

CONQUEST OF A VALLEY by Marshall M. Brice, The University Press of Virginia, Charlottesville, Va., 1965. 156 pages, including six line-drawn maps. \$4.50.

Joseph Nile Peacher

CONQUEST OF A VALLEY is a brief and highly enlightening account of the Civil War battle of Piedmont, Virginia, in the historical Shenandoah Valley. It is well documented from apparent first-hand studies of the area coupled with other published information stemming from Civil War actions within the general area.

Mr. Marshall M. Brice, professor of English at Mary Baldwin College in Virginia, is a retired colonel (Infantry) of the United States Army, who has been a

REVIEWS

student of the Civil War for a number of years. His purpose in writing this book is to clear up confusion which conflicting accounts may have created about the battle.

The author takes the characters who lead the events within the book and brings them to a level of humanity in keeping with their position and time. His narration, drawing upon his own years in the military, is very readable, understandable, and enjoyable. The interesting manner in which each situation is treated as it develops lends itself to making this a worthwhile segment of history for a student of the period involved.

Mr. Brice writes of the townsfolk and their reactions when their heretofore highly secure Shenandoah Valley village was overrun by the advancing Union forces of General David Hunter. This was the first time that Federal forces won a clear-cut victory from their many skirmishes within the valley. Confederate General William E. Jones lost his life during the encounter, and the Union forces moved to other successes within the valley, which was a primary source of the Confederacy's store of supplies and grains.

The book is quite interesting both from the standpoint of historical value and as general reading. The information presented is documented through various sources from within Virginia, United States official records, and many letters, papers, and historical writings of the era. Several interesting newspaper accounts and editorials are also interwoven into the writing. All of this presents a well-written, highly human thesis on one of the incidents of the four years of national turmoil between 1861 and 1865.

TOTAL RESISTANCE by Major H. von Dach Bern, Swiss Army, Panther Publications, Inc., Boulder, Colo. 1965. 173 pages, 125 illustrations. \$6.50. Introduction by Col Wendell Fertig, USA (Ret), Edited by Capt R. K. Brown, USAR.

M/Sgt B. A. Hartmann-Madsen, RDAF

"Let us assume the following. Switzerland has become a battlefield. Superior enemy forces have invaded the country. Here and there our troops have been overrun. However, many have succeeded in evading the enemy. They are still in possession of their weapons and equipment. They want to fight, resist to the last. But how?"

Many questions are posed in this well-written book and many of the answers are given. Few of the books written about guerrilla warfare and underground operations are so instructive. Eighteen years of military service qualifies Major von Dach Bern (Company and

Battalion Commander and service with Grenadier School, comparable to U.S. Army Rangers) to write his book, and although written only with Swiss conditions in mind, the subjects dealt with could easily be applied to other nations, even if these do not have quite the same terrain conditions. The basic elements of guerrilla warfare are much the same the world over. Only terrain conditions are different.

The author has divided his book into two main parts. Part I is entirely on guerrilla warfare with military units. In four chapters you learn how to build a guerrilla unit and how to organize it. You learn what countermeasures to bring into action when haunted by an enemy with modern innovations such as airborne and airmobile troops, mechanized units, tanks, and trucks. Part II gives guidance for organization and conduct of the civil resistance movement and gives countless examples of how to establish and extend cooperation between military guerrilla units and the civil resistance with the final purpose of making a general uprising against the aggressors.

Guerrilla warfare has almost always been successful, at least at the lower levels. History gives us many examples of this, such as Lawrence of Arabia's operations against the Turks, the Russian Resistance of WW II, the French Resistance Movement of WW II, and Viet Minh operations against the French. No matter that the enemy brings up great manpower and equipment, the guerrilla will always be able to strike whenever and wherever he pleases. He chooses the right time; his unit is smaller; he knows the country well; he often lives among friends; and he is fighting an enemy who is often far from home and at a psychological disadvantage.

Under the motto "Rather death than slavery" you get an indication of how far the Swiss will go in their efforts to maintain freedom and independence today. For example, Switzerland spends about a third of its state income on defense. Freedom cannot be priced too high and there are no doubts that the Swiss will pay the price.

TOTAL RESISTANCE is an objective and comprehensive description of actions normally taken by an aroused populace should an aggressor invade its country. Special attention should be devoted to Chapter II (part II) "Enemy Operations" and its explanation of how the enemy plans to break resistance morale and make the civilian population surrender and cooperate with him, making it impossible for guerrilla units to operate. "Basic Rules of Terror," "State Security Service" (political police), "Struggle for Youth" (!), "Fighting the Church"(!), "Propagation," and "Liquidation" are among the subjects covered in this chapter.

The book has a message for those willing to fight for their country and its freedom, and is recommended highly to all leaders, no matter the level.

"We believe it is better to resist until the last. We believe that every Swiss man and woman must resist. We believe that the enemy cannot be allowed to feel at ease for even one minute in the conquered territory. We believe that we have to inflict damage upon him, fight him whenever and wherever we have the opportunity. By speaking this way we have clearly and explicitly indicated the purpose of this book."

DUTY, HONOR, COUNTRY. A HISTORY OF WEST POINT. By Stephen E. Ambrose. Foreword by Dwight D. Eisenhower. Baltimore: The Johns Hopkins Press, 1966. 357 pages. \$8.00.

The author brings to this volume an extensive knowledge of the military history of the United States, and of the important role the United States Military Academy has played in that history. He tells again of the important roles that Sylvanus Thayer and Douglas MacArthur played in keeping West Point a living institution; of the changes that have taken place in and at the Academy since it was founded; and of the importance of tradition to the cadet of the past, and the cadet of the future. An excellent groupment of photographs at the end of the volume enhances its value.

A definitive history which criticizes when necessary, this volume fills a need which has long existed. It is a fine example of the important product which can result from combining good writing with thorough historical research.

A PASSIONATE PRODIGALITY. By Guy Chapman. New York: Holt, Rinehart and Winston, 1966. 281 pages. \$5.00.

John W. Wells

First published in England in 1933 and now issued for the first time in the United States, this book is the autobiography of a British Subaltern of Infantry (The Royal Fusiliers), and of his battalion and brigade, covering the four full years of 1915-1918 of World War I. It is often referred to as one of the best war books ever written.

Mr. Chapman should be rated as one of the truly fine writers of our times. He is, in the accurate sense of that often misused term, a poet in prose. This is his seventh book, including his biography of Beckford and his work on the Dreyfus case. He has been Professor of Modern History at the University of Leeds, England, and visiting professor of the same subject at the University of Pittsburgh.

The book is filled with Briticisms and there is no

map of the Arras section of France—on the border of Belgium, surprisingly close to the sea. Mr. Chapman also uses many literary allusions and metaphors. Nevertheless, the book, once begun, is difficult to put down for any length of time. This is perhaps because of its surprisingly detailed and perceptive coverage of four years of almost constant combat that took place, appallingly enough, in an area that might be termed a 50-mile square.

Unlike so many war books, this one contains no distortions, no special pleading, no political overtones.

The reader should be warned that Mr. Chapman makes no concessions to the popular, the less literate, or the mechanistic. And he should not expect to find a technical treatment of tactics and strategy. But many soldiers of any war will find in the book the accurate and honest expression of personal reactions and feelings they have long attempted to express.

WE SHALL FIGHT IN THE STREETS. A GUIDE TO STREET FIGHTING. By Captain S. J. Cuthbert, Scots Guards. Illustrated by John G. Walter. Boulder: Panther Publications, 1965. 68 pages. \$4.00.

Now in its seventh printing, this most useful publication has been upgraded by the reprint of an INFANTRY Magazine article on the Soviet view of combat in cities. In addition to chapters which contain material on the use of explosives, training, and arms and equipment for fighting in cities, this volume also contains several important appendices, two of which are the strengthening of a house for defense, and the suppression of civil disturbances.

A fine reference and informational type volume on a little-known but highly important phase of military operations.

THE U. S. INFANTRY: QUEEN OF BATTLE. Edited by Colonel Richard J. Stillman, United States Army, Retired. Foreword by General Harold K. Johnson, Chief of Staff, United States Army. New York: Franklin Watts, Incorporated, 1965. 346 pages. \$5.95.

The Infantryman has been a part of the United States Army from the beginning of that Army's history. The men who have served in that Infantry, and who are serving in it today, have come from all walks of life. Occasionally glorified, more often neglected, the Infantryman has gone about his business of soldiering through good times and bad, losing friends and compatriots to the enemy's bullets, but always closing ranks and moving on.

This is his story, compiled from his own writings (or from writings about him) by a veteran Infantry-

REVIEWS

man, one who has known war, and suffering, and glory. A tribute to the Infantryman, yes, but this book is much more—it is a testament to the faithfulness and tenacity of all American soldiers, and to their willingness to fight, and die if necessary, for the cause of freedom.

RANK AND FILE. THE COMMON SOLDIER AT PEACE AND WAR 1642-1914. Compiled by T. H. McGuffie. New York: St. Martin's Press, 1966. 424 pages. \$8.50.

The compiler, a leading British military historian, draws upon original writings to extract the views

of the common soldier on their lives and careers in the military service of their respective countries. Forty-three separate sources were used, largely British, but there is enough variety in the accounts to permit the student of military affairs to acquire a good feeling for the life and major events of a soldier's career in all parts of the world. A list of the sources used is included at the end of the volume.

Fascinating reading and good historical source material, plus judicious selection by the compiler, combine to offer a worthy addition to the field of military literature, one recommended for reading.

INSTRUCTIONAL MATERIAL

AMPHIBIOUS PLANNING, BASIC DECISIONS (Resident Problem BKC 55) Problem provides amphibious planning, the initiating directive, and the basic decisions made at the highest level of the amphibious task force. Problem also includes the five characteristics of amphibious planning; planning of any echelon subordinate to the landing force; the purpose and contents of an initiating directive; the basic decisions that are made at the amphibious task force and landing force levels. 5¢

CONDUCT OF AN OFFICER (Resident Problem CL[O,G] 30) Problem explains the customs of the service, proper conduct and code of an officer, and the responsibilities and obligations of an officer. Problem also includes the five precepts (duty, honor, loyalty, dignity and integrity) for the code of an officer, and how an officer abides by these precepts. 5¢.

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SOLDIER MANAGEMENT AND MORALE. This 22-page pamphlet written by General Bruce C. Clarke, USA (Ret) covers the simple rules for soldier management and morale from the viewpoint of the company officer. The FORWARD as it was written by General Clarke and as it appears in the pamphlet follows:

"The subject of Leadership is complicated to the theorist. Many and large books have been written on the academic side of the problem of being a good leader. Fortunately, the rules are capable of being reduced to a few simple and practical terms. The two short articles in this little pamphlet were prepared originally to do just that. Soldier Management was an outline which I prepared several years ago for a lecture on leadership to the First (Senior) Class at West Point. Soldier Morale was prepared for a lecture to commanders and staff officers of X Corps in Korea in 1953 when the troops there were faced with the morale problems which usually follow an armistice. Together these two outlines might well be used as closely related leadership check lists which officers and non-commissioned officers can use to an advantage in their units. On looking back upon my experience in the Army serving under many immediate commanders whose ranks have progressed through the years from corporal to that of four-star general, I recall no case where any one of my superiors was able to establish a climate of good leadership in his unit if he violated many of the simple rules given here. Conversely, all who observed well the simple rules were looked upon by their subordinates as good leaders. Many of them were outstanding." 5¢.

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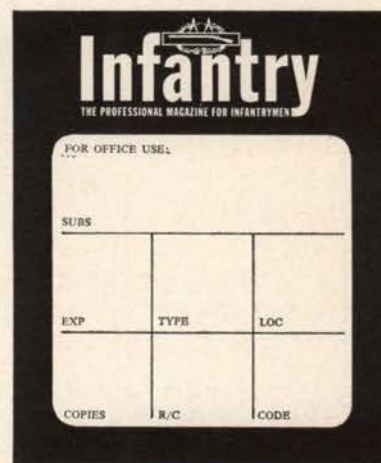
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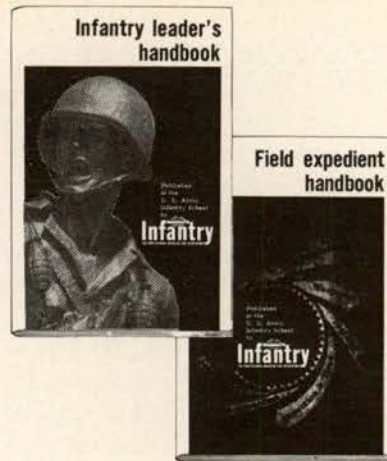
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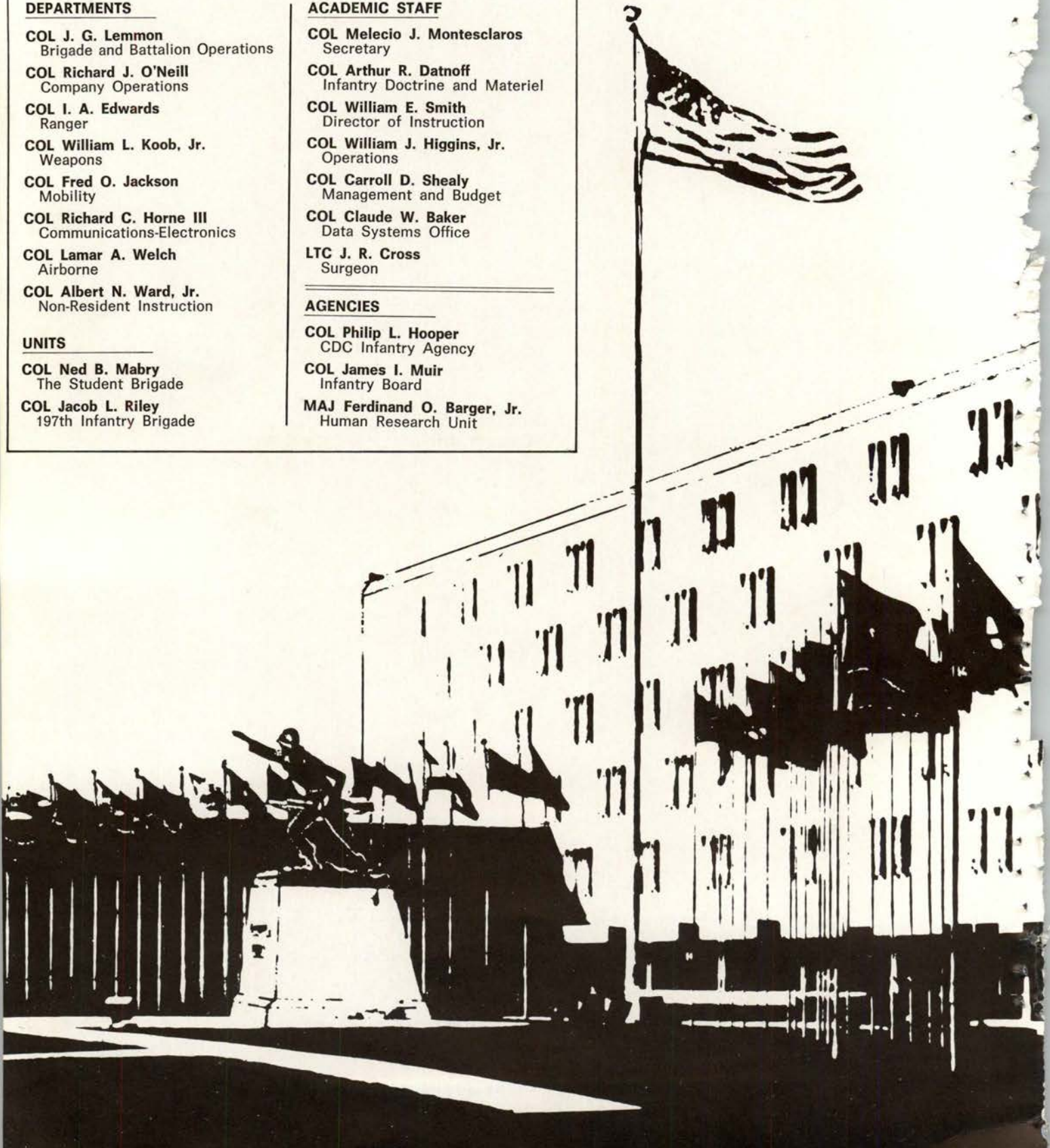
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VIETNAM—a land of jungles, mountains, deltas; of rain and wind and sweltering sun; today, too, a land of war.

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THE PROFESSIONAL MAGAZINE FOR INFANTRYMEN

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Subscription Rates: 1 year, \$4; 2 years, \$7; 3 years, \$10. For bulk orders of ten or more, deduct 10 percent from normal rate. On such bulk orders, remittance must accompany the order. Foreign (non-APO) subscribers add \$8.55 per year postage.

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Correspondence: Address all correspondence to Editor, **INFANTRY** Magazine, Box 2005, Fort Benning, Ga., 31905. Please use full address. Renewal, changes of address, or any correspondence concerning your subscription should be accompanied by an address label or by the number that appears on the label's first line.

Manuscripts: Payment on publication at minimum rate of \$.01 per word. Acknowledged within 30 days. Manuscripts will not be acknowledged or returned unless accompanied by self-addressed, stamped envelope. Queries answered promptly.

Postmaster: Entered as second-class matter 11 June 1948 at Columbus, Georgia.

Infantry LETTERS

AIRMOBILE ASSAULT

• LTC Dexter, in his article "Search and Destroy in Vietnam" which appeared in the July-August issue of *INFANTRY*, states on page 40: "The greatest problem for the Infantry in the airmobile assault is that of initial orientation." Colonel Dexter's way of solving this problem seems to me to leave much to be desired.

First, if the brigade commander decides to look at some other spot on the battlefield, Colonel Dexter's company commander, waiting on the ground for a fix, is out of luck. It also assumes that Colonel Dexter will be able to identify each helicopter serial from the air, even though it might be landing "as much as 1,000 meters away from where we expected it to land." But its most serious shortcoming, it seems to me, is that it takes only the company commander into consideration.

What about the dozens of smaller units scurrying about the battlefield trying to link up with the company so that they can find out where they all are? These link-ups should not rely on radio communications: they are simply not dependable enough.

While claiming neither innovation nor originality, I'd like to suggest a solution used by a unit with which I worked during training exercises. It was based on a schematic map of the landing zone, which was mimeographed and distributed on a basis of one per helicopter landing team. The system worked like this:

As soon as the objective was determined, a schematic map of the proposed landing zone was produced. The map depicted and identified all landing zones and sites that could reasonably be considered for use. All easily identifiable landmarks and reference points were included and the map was scaled to fit on both sides of one sheet of legal-sized paper. The map was distributed to all ground commanders and pilots, including the senior man in each helicopter team.

The helicopter team commander marked the map to show where he was supposed to land and to where he was supposed to proceed after landing. Upon entering the helicopter, the pilot received a copy of the map. Just before landing, the pilot marked

the map with an arrow which showed both the actual point of landing and the direction of approach, and then returned it to the helicopter team commander.

If the landing point was other than planned, the team commander marked a dotted line on the map from the arrow to the new rally point. The map was then passed around the helicopter to inform everyone of the change. Orientation of the map was accomplished by aligning the arrow with the long axis of the helicopter. For security reasons, the map was left with the helicopter crew chief.

CPT Leon Cohan, Jr.
MAD, NATTC, NAS
Jacksonville, Florida

• I have just read LTC Dexter's article "Search and Destroy in Vietnam," which appeared in the July-August 1966 issue, and would like to comment on two points. The first point pertains to airmobile assaults.

The conduct of an airmobile assault . . . is a complex maneuver, but with proper coordination and planning . . . can be conducted easily and professionally . . . The Airmobile Force Commander dictates how the assault will be conducted and he and his staff write all phases of the assault . . . The S2 and the Aviation Officer . . . become his key individuals. They provide all the necessary information to make his operation a success. If these two are consulted and the following points considered, I believe that most of the problems encountered would be eliminated:

• The Airmobile Force Commander dictates what and how everything will be done.

• Landing zones should be designated only after photos of the landing area have been made available. Factors to be considered in selection of zones are the slope of the terrain, obstacles on and around the landing zone, and ease of identification.

• As helicopters always try to land into the wind, the prevailing winds of the area should be made known and considered when making the landing plan.

• Existing wind conditions should be made known to all elements of the force

just prior to movement. As aviators are constantly aware of the wind and will try to land into it, the individuals aboard the helicopters would be better oriented should they know the direction of the wind prior to taking off.

• If the senior individual aboard would watch the helicopter's compass, he would know exactly in what direction he was landing.

My second comment pertains to density altitude, which varies with the temperature. As the temperature rises, so rises the density altitude; and the helicopter can carry less and less as the density altitude rises. Considering this, I would think that your reference to low density altitude was meant to read high density altitude.

CPT Frederick S. Doten, Inf
Officers Student Company
Fort Rucker, Alabama

TRAINING FILMS

• Having at one time been involved in the Training Film business, I read with interest, and a few chuckles, the remarks of Captain Crosby in the letters of the September-October 1966 issue.

When I was first assigned as an instructor at Fort Benning in the fall of 1963, one of my duties was that of being technical advisor on a training film entitled the "Rifle Platoon in Night Attack." The requisition for the making of the film had been filed in 1962 and the film, itself was designed to fill an obvious gap in the tactical film index.

In April and May of 1965, the film was shot at Fort Benning. I left the School in May 1966. To the best of my knowledge, the film was not yet available for viewing. I would suggest to Captain Crosby, therefore, that we be grateful for what we now have, making do with them as best we can. Soldiering is soldiering, and the fundamentals have not really changed.

If movies or training films are used to supplement instruction and not as crutches for inadequacy, old films can still be used quite effectively. I would suggest, however, that the lead time on training films be shortened considerably, and that efforts be made to make them as realistic as possible.

Training films, when used correctly, are a valuable aid to a well developed and well taught class. When used incorrectly, as described by Captain Crosby, they just point up the incompetence of the instructor.

CPT William L. Schwartz, USA.
12401 Braxfield Ct.
Rockville, Md. 20852

LIKED "THE PLOT"

• My compliments to Major Lindsey on his article "The Plot," in the July-August issue of *INFANTRY*.

There is no question that this article is appropriate and timely and deserves the serious consideration of the General Staff.

LT Thomas F. Hughes
Co "A" 1st Bn, 102nd Infantry
New Haven, Conn.

FATIGUE UNIFORM

• The war here in Vietnam has finally brought about some sensible changes in the fatigue uniform. We all know that DA has finally approved green name and US Army tapes and subdued rank insignia in place of those gaudy NCO stripes (at least while the soldier is in a combat zone). I do wonder if stateside commanders will now bend a little and let our fatigue uniform become a true work uniform or whether we will continue to pamper and decorate it more than our Class A's.

Also—since almost every Vietnam returnee possesses at least one serviceable pair of jungle boots, would it not be wise and economical to permit troops in hot areas to wear them in summer? It seems wasteful to throw them away.

Finally, why can't commanders authorize troops to roll up the sleeves on their fatigue jacket during hot weather? It's authorized here and no one thinks we look so sad. Maybe we wouldn't qualify for recruiting posters, but then how many civilians are there on most Army posts that we have to impress? I would be interested in any comments on the above by the people who write the regulations.

1LT Anton G. Blieberger
Advisory Team 99
APO US Forces 96314

GUERRILLA WARFARE TRAINING

• I have just read the letter from Mr. Charles M. Jackson, Jr., May-June 1966 issue, pertaining to LTC Ralph Kinnes' article on "Instant Guerrilla Warfare."

Colonel Kinnes' article contains a very good idea and should be researched by the Infantry School and the Special Warfare School for feasibility and best method of implementation.

I take exception to Mr. Jackson's letter in that he states that Ranger-qualified personnel assigned to TOE units are capable of training other personnel within their units in "instant guerrilla warfare." I have the highest regard for ranger personnel; however, I do not feel that they are qualified to train anyone in guerrilla warfare.

Guerrilla warfare is a highly specialized method of warfare, and if not conducted properly, can do more harm than good. The POI for Ranger training doesn't include guerrilla warfare.

I feel that a course of instruction should be developed jointly between the Infantry School and the Special Warfare School and that selected personnel (Ranger qualified would be a good choice) then be sent to attend this specialized course of instruction.

I would like to offer this suggestion. Why not take Special Forces out of the counterinsurgency role altogether and replace them with conventional units? Conventional units with a few minor changes in TOE could do the job as good and probably better than Special Forces. Then we could put Special Forces back in its role of guerrilla warfare. The Special Forces units could be utilized during the cold war as "instant guerrilla fighters" without additional training and while utilizing their present TOE.

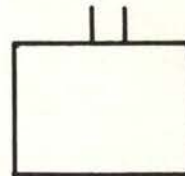
MSG Robert L. Bennett
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MILITARY SYMBOLS

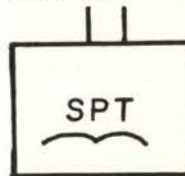
• Until we all get accustomed to the ramifications of the June 1965 version of FM 21-30 (Military Symbols), I think we are going to have confusing combinations of the new and the old designations. For

example, in the May-June 1966 issue of *INFANTRY*, you corrected yourself on the appropriate symbol for the Support Battalion (Airborne) of the 173d Airborne Brigade in Vietnam.

As another reader has pointed out, the symbol used by *INFANTRY* was wrong, but so was the reader's solution. Unless I am mistaken, *INFANTRY*'s "The New Way" is also in error. Even the new way requires that the appropriate size indication be placed on top of the basic symbol. Therefore, since you are seeking to illustrate the symbol for the 173d Support Battalion (Abn) of the 173d Airborne Brigade, you would nevertheless begin with the following:

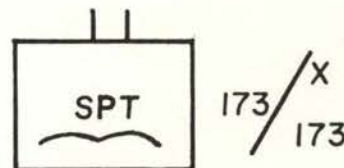


The next step would be to develop the branch of service and duty symbols. This would take the symbol for this unit to:



Next, there is the subject of unit designation. The FM tells us that to the right of the symbol we place the parent unit/higher echelons of command.

By referring to Para 2-24, which covers non-divisional units, it would appear that the completed symbol should be as follows:



MAJ Bruce Jacobs
Hq 50th Armored Division
East Orange, New Jersey

THE VIET CONG SOLDIER



Major Edgar O'Ballance

"Know your enemy . . . and you can fight
a hundred battles without disaster."

Sun Tze

A HAZE of myth and legend swirls around the Viet Cong regular soldier, of whom there are currently at least 67,000 in South Vietnam. As this condition tends to obscure and distort his true character, ability and thoughts, it is often forgotten that the Viet Cong soldier is a human being; as such he has his strengths and weaknesses, his virtues and his vices, his hopes and fears. Despite a false smoke screen of elusive invincibility, *certain* traits stand out and can be commented upon.

We know he is short of stature, gaunt, weak on education, a patient work-horse, taught to carry his house on his back, always ready to move at a moment's notice, and armed with Communist-bloc and captured United States weapons. We know that, if he is a Southerner, which about 40% are, he walked along the Ho Chi Minh Trail to North Vietnam for a period of basic training, and then returned by the same route. If a Northerner, he had a similar period of training before entering South Vietnam by the Ho Chi Minh Trail to help "liberate the South." Be he a Southerner or a Northerner, he spent his youthful, formative years under Communist administration and has been accordingly indoctrinated.

In South Vietnam we know he is a disciplined soldier, serving in one of the 80-odd battalions reserved for the brunt of the battle. When not on operations, he follows a rigid schedule, which consists of about two-thirds military training and about one-third political indoctrination. But what else do we know about him? Let us briefly, but critically, consider his combat ability, military aptitude, his vaunted endurance, his morale, his loyalty, his hopes and his fears.

The first generalization that can be made is that he is a conscript, and like conscripts the world over, usually an unwilling one, reluctant to go to war, not overanxious to kill his fellowmen, not eager to face death on a battlefield and ever impatient to return home. A great deal of persuasion, intimidation and morale pressure is required to produce the required numbers of "volunteer Freedom Fighters" that make up the main force of Viet Cong regulars. Only intense political indoctrination keeps him in the battle line, and the individual Viet Cong soldier will be as glad as any American when there is a cease fire.

At times in battle the Viet Cong soldier has shown extreme bravery, especially when cornered, which causes some to credit him with the fatalistic courage of the Japanese fighting men in World War II. This rather over-praises him, particularly if he is an average soldier, imbued with the habit of guerrilla-like evasion.

The so-called martial traditions of the Vietnamese have only been resurrected by the battle of Dien Bien Phu, undoubtedly an inspiring one by any standards, before which they were inclined to be ancient and rusty. It is curious to note that the French did not rate them very highly as combat soldiers, compared with some of their other colonial peoples.

The lack of fighting spirit and determination to get into the kill once the fight warms up, which is close to the surface at times, may be partly due to his Buddhist background and the Buddhist precepts against violence and taking life. Despite Communist efforts to obliterate these drawbacks, the Viet Cong soldier still has strong

traces of them in his make-up.

Like the cornered rat, when he cannot get away, the Viet Cong soldier can fight and fight well, but he would rather not do so unless conditions are favorable, which means when he is in overwhelming numbers and is certain of victory. Constant political pep talks are necessary to keep him conditioned to stand and fight.

One frequently hears disparaging reports of the poor showing of the South Vietnamese soldiers in battle, but one should always remember that he and the Viet Cong soldier are blood brothers, who basically have the same strengths and weaknesses. Perhaps the weaknesses of the Viet Cong are better concealed.

The seeming evasiveness of the Oriental, as opposed to the natural directness of approach of the Westerner, fits so easily and completely in with Mao Tse-tung's "Four Golden Rules" for guerrilla warfare, which govern both the strategy and tactics of the Viet Cong. While this evasiveness does not automatically mean a lack of resolve, it increases the human problem that exists when troops who are habitually used to avoiding action have to be conditioned to fight a set-piece battle. To the Viet Cong, the escape route is a more important part of the battle plan than the objective.

The ambush, keystone of Viet Cong aggressive tactics, is understood. Peasant cunning, the skill of the hunter and the sharp wits of the hunted, are qualities the average Viet Cong soldier can, and has had to, develop through the sheer economics of survival. Through intensive and continual training the Viet Cong becomes adept at minor guerrilla tactics and night movement, but these skills have been forced upon him. He is in the jungle because he has to be there, not because he wants to be there. The Viet Cong soldier has no special natural aptitude for guerrilla warfare, and man for man, is less efficient and effective than a trained Western soldier who approaches the problem with intelligent reasoning, and not blind, unhappy misadventure.

The war has thrown up a dedicated, efficient officer cadre, skilled in administration, jungle tactics, brainwashing, and politics, who are the instigators, the prime movers, and the manipulators. There is also a class of squad-to-company leaders who have achieved a degree of professional ability and acquired a pride in their responsibilities. But the average Viet Cong soldier, while having faith in his superiors, likes best the rule that there must always be an escape route.

Inherent oriental lack of pity ensures that he has no real rooted objection to shooting men in the back in ambush, setting deadly booby-traps, torturing prisoners, and mutilating captives. Indoctrinated by political cadres for years, he is taught to respect his officers and to carry out their orders instantly; but moral persuasion has to be frequently reinforced by harsh punishment.

Endurance, coupled with fortitude and patience, are qualities the Viet Cong soldier has in good measure. He

was born close to the earth in rural poverty, has always had a hard life, and has had to manage without many elementary comforts. He can endure long hours of back-breaking toil in the fields, of marching through tough country, of carrying heavy loads, and of digging tunnels. He can wait patiently for hours in ambush, or immersed in water or sand up to his neck, to make good his escape. But he would rather not be doing this at all. He would instead like to sit in the sun for a change and watch the world go by. The Viet Cong soldier has never had the luxury of supporting tanks and aircraft, or an efficient, modern transport system, but wishes he had, as they would make life much easier for him.

Although he performs seemingly incredible feats of endurance with his slight, reedy frame, his life span is not all that long. He easily succumbs to diseases, such as malaria, and one suspects that the death roll in Viet Cong formations must be fairly high.

A question of some importance is how loyal is the Viet Cong soldier to Communism; the answer still must be that despite the large numbers of defectors, he is loyal to the cause for which he is fighting. But there may be many qualifications and doubts in his mind that must be concealed carefully from everyone, lest he be betrayed by a Communist do-gooder.

Brought up under Communist administration, Communist dogma and doctrine have been instilled into his mind until they have become a religious faith. He has been convinced that the Communist form of society is the answer to all Vietnam's ills, and he firmly believes his political officers when they tell him that the Americans have replaced the French as colonial imperialists, who are trying to take from him what little he has.

A fighting man must have an ideal and an inspiration to fight for, and the Viet Cong has Communism. To ensure that he has it in full measure and retains it, indoctrination never lets up, lest the Viet Cong soldier is able to use his own mind to think for himself. The usual intertwined vertical and lateral Communist checks operate to ensure that he stays faithful, while drastic and salutary punishments are meted out to the detected, and suspected, unfaithful.

The morale of the Viet Cong soldier fluctuates, dependent upon success, failure, heavy casualties, fatigue and desertion. At times it is high, at others it is low, and occasionally it is very low. He has much to contend with—boring routine, jungle melancholia, home sickness, lack of news of his family, and disillusionment with

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The Viet Cong soldier fears the US fighting man, US fire power, and US aerial might.

Communism. He is never allowed to visit his home village. At first home leave was granted, but so many did not return that this privilege was hastily withdrawn.

The defectors and deserters are a mixture of the intelligent and fed-up. There are at least 1,000 defections a month, which include about 25% officers, to which should be added an unknown figure for deserters.

The morale breaking point is recognized and countered by the carrot and stick method, by exhortation and punishment. The Viet Cong has a hard core of dedicated zealots of all ranks, both political and military, the shock troops used to raise morale, who are moved into units when necessary to restore damaged or falling morale.

Lectures and controlled discussions form the carrot part. These are interspersed with rousing sing-songs, simple concerts, and suitable Communist-type plays put on by special teams of actors to cheer up the despondent Viet Cong soldier. Punishment, which may include execution both to remove a hard case offender and as an example, is the stick.

The Viet Cong soldier is not supposed to have any private thoughts, personal views or feelings. It is certainly unwise for him to express any in public, or even in confidence to his friends, for he is expected to be blindly dedicated, body and mind, to the Communist struggle. But as long as he retains any vestiges of being a human person, he must have secret hopes and fears.

He hopes to be soon re-united with his family; he hopes they are well and have escaped the bombing; he hopes for an early peace and to be left alone; he hopes to marry one day; he hopes to have children.

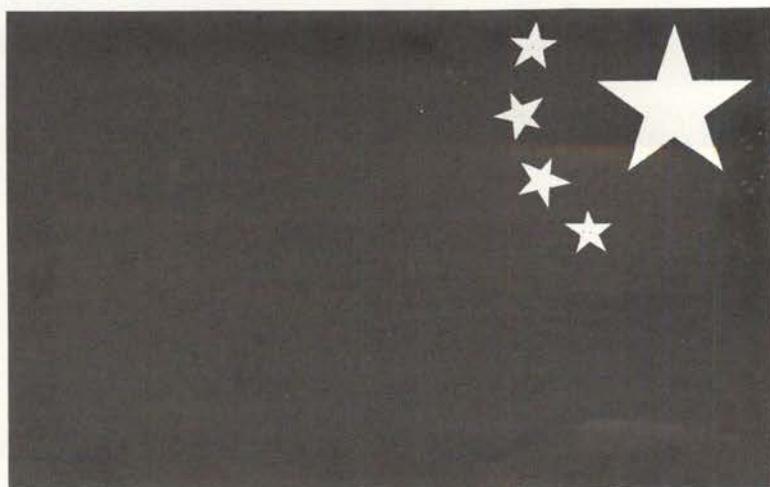
His hopes are many, but they are vague and muddled and tend to merge into dreams. At times he doubts they will ever be even partially fulfilled. His political officers have painted a rosy picture of the future, telling him that when the Americans are driven out—as the French were—the country will belong to the people. Then all will be well, he will have a good job, a good home, plenty to eat and every one will be happy.

But he wonders secretly: Communist cadres have overpromised before, and now they are admitting that the struggle ahead is likely to be a long and hard one.

As well as hopes he had fears, and like all soldiers he fears death in battle, not without cause, as 16,000 Viet Cong were killed in the first four months of 1966. Further, it is estimated that between 1 January 1961 and 31 December 1965, the Viet Cong suffered 104,000 killed and 250,000 wounded.

He fears being badly wounded in battle, in ambush, or by a booby-trap and left behind to die alone in the jungle like a wild animal. He fears being taken prisoner, because he believes he will be tortured or mutilated, and then killed. He fears what may happen to his family if he deserts or defects. He fears the US fighting man, US firepower and US aerial might, which his masters have underrated so badly. He has as many fears as he has hopes.

The Communists play on his qualities, his hopes and his fears, and the cadres try to harness them to the Communist cause. From all of these efforts comes the result that the Viet Cong soldier, although laboring under disadvantages, is a formidable jungle fighter with a lot of fight still left in him. ■



CHINA achieved a high level of civilization and military power more than 2,000 years ago. During the 19th Century, however, European trading nations took over some areas of the country and began dictating to all Chinese governments. In the Boxer Rebellion of 1900, a small international army with modern weapons marched easily anywhere and stormed Peking with only a few casualties.

But then the sleeping giant began to stir. A republic under Sun Yat-sen replaced the old monarchy in 1911. War Lord armies were numerous and the nation was not united. After Sun's death in 1925, Chiang Kai-Shek came into power, but was soon engaged in a war with both the Japanese and the Chinese Communists. During World War II, Chiang's Nationalists and the Communists under Mao Tse-Tung were supposed to be allies, but continued to fight each other intermittently at a low level. After 1945, there was full-scale war; the Communists finally won all the mainland in 1949.

Red China is immense in area, population, and ultimate military power. The population of over 700 million could produce the largest army in the history of the world. But in the immediate future, the economy of the country appears unable to support such a force.

Today, the Chinese Communist (CHICOM) regular army probably numbers about three million men on active duty, with an organized, trained, and armed reserve of about ten times that number. Eight million of these reserves have been in the army for varying periods; the rest are probably below Territorial or National Guard

level in efficiency. Mao claims an additional militia of 250 million, but these are essentially civilian workers with some discipline, not really soldiers.

The regular army units are much improved over those which fought through their long civil war and in Korea, but some materiel deficiencies probably extend right down into Infantry squads. The average Red Chinese soldiers are still poorly armed and equipped by Western standards, though they can be tough, daring, and effective opponents. This ability they demonstrated in Korea, when they adopted a type of offense and defense which lessened their disadvantages and emphasized their strengths.

Recent purges in Mao's China appear to have strengthened the hold of the Communists on the armed forces. Ranking officers are old by world standards and are, in part at least, politicians. The men who are still in charge led the CHICOM armies in a dozen years of guerrilla fighting during the chaotic pre World War II period, in six years of war as the so-called allies of the Chinese Nationalists against the Japanese invaders, and then in a final four years of combat against the Chinese Nationalists. These men have more combat experience than any similar group in the world; some fought almost continuously from 1926 through 1953. The last 14 years of comparative peace have been utilized to improve organization, training, and equipment. But Mao has apparently crushed a movement within the army to create a professional military class separate from the Party.

Throughout their long period of conflict, the Chinese

RED CHINA'S ARMY

weapons and tactics

Jac Weller

Communists fought mostly guerrilla-type actions. Only towards the end of their civil war and for a part of the Korean conflict did they operate as a regular force with solid fronts, lines of communication, and definite objectives. Even today, strategy and tactics are influenced by the guerrilla techniques which the older Red Chinese officers know so well. Some younger men have been formally trained in the Soviet Union or in Soviet-dominated Red Chinese staff colleges, but their influence is not yet great. Of course, much of the Soviet guidance has now been removed.

The organization of Red China's armed forces is, in part, beyond the comprehension of most Western minds. The armed forces blend indistinguishably into the Communist Party. The top military commanders are also the rulers of China. Rank and insignia were established in 1955, but have again been made indefinite. And generals still spend part of each year as enlisted men.

There is no mystery, though, as to actual units, weapons, and the general constitution of those forces. Horse cavalry divisions are still in existence, particularly in Western Manchuria. There are some armored divisions equipped with Chinese-produced armored vehicles, including first-rate copies of Soviet T-54 battle tanks. Artillery and engineering units, come of divisional size, are known to exist. The Soviet organizational influence was strong, but never all-important. Since 1960 it has declined.

The Chinese Communist armed forces include some high performance aircraft and a navy, but the army is

most important. In spite of new tanks and guns, it is still essentially an Infantry force. Real CHICOM power comes from triangular Infantry divisions (17,600 men each), which contain some armor and artillery, but these components are irregular in extent and never strong by Western standards. Each of the three Infantry regiments in a division contain about 4,150 men and now seem to be standardized after a good deal of experimentation following the Korean War. There are three rifle battalions (840 men each) and one weapons battalion (590 men) in each regiment. The weapons battalion consists of an artillery company, a mortar company, a recoilless rifle company, and an antiaircraft company.

The materiel of the artillery company is subject to some question. Until 1960 many of these had 70mm howitzers, weapons which fired 9-pound shells at 675 feet per second at the muzzle. But these have disappeared from all regular Infantry regiments. The 76mm howitzer—a copy of the Soviet World War II weapon—was replacing these, but now appears to be superseded by a 122mm weapon. The mortar company probably has four 120mm and eight 82mm mortars. There are normally six 75mm US-type recoilless rifles in the recoilless rifle company, but these are apparently being replaced with similar Chinese-produced, Soviet-type weapons which are smoothbore and fin stabilized. Many antiaircraft companies still have 12.7mm Soviet heavy machine guns, but some do have the newer quad-mounted Soviet 14.5mm ZPUs.

A Red Chinese regimental headquarters is larger and

contains, in addition to support units, a reconnaissance section and a security company. This latter organization is unusual, and appears to be a development from the guerrilla origin of the Chinese army. It is essentially an elite unit of about 300 well-armed men; its principal function is to protect the regimental commander and appears to be a development from the guerrilla origin of the Chinese army. It is essentially an elite unit of about 300 well-armed men; its principal function is to protect the regimental commander and his immediate military family and also to accomplish critical missions of short duration. While the security company has been downgraded to some extent, it still appears to be fully operational.

Each rifle battalion has a headquarters (55 men), three rifle companies (200 men each), a mortar company (75 men), and an medium machine gun company (110 men). There are supposed to be nine 82mm mortars and nine medium machine guns in the two support companies, but some battalions may still have only four medium mortars and six medium machine guns. The mortars are the simple, reliable type used in all Soviet-bloc armies.

The old water-cooled Maxims, have now disappeared from the regular army, and have been replaced by copies of the fine Soviet Goryunov SG and SGM weapons. These are air-cooled guns, medium heavy (91.5 to 111.8 pounds), and reasonably slow firing (600 rounds per minute). The lighter weight is for the tripod-mounted medium machine gun; the heavier is for the same weapon on a dual-purpose carriage, which has two small wheels.

Each rifle company contains three rifle platoons and a weapons platoon provided with three 60mm mortars and several copies of the Soviet recoilless launcher. The latter is a copy of the Soviet RPG-2, which, in turn, is an adaptation of the German World War II *Panzerfaust*. The projectile—it is not rocket driven—is 82mm in diameter through the warhead, but fits into a 40mm dis-

charger. The old 87mm (3.5-inch) rocket launcher is being phased out and has not been produced since 1954.

Each rifle platoon consists of a light machine gun squad and three rifle squads. The weapons carried in these four squads vary considerably, depending upon availability and theater of operations. We must accept recent proof, though, that the Red Chinese now have a considerable munitions industry. First-line units do not lack either efficient modern weapons or reliable ammunition.

There are three categories of small arms in Red China today. The first includes Japanese, US, British, Soviet, and war lord Chinese weapons of World War II and before. Some of the Mauser rifles are more than 60 years old; many Chinese copies of foreign automatic rifles and sub machine guns, are of poor quality. But these weapons are now in the hands of the reserves and militia only, not in the army proper.

The second most numerous class of small arms is probably those which came from the Soviet Union during the Nationalist and Korean Wars, or are copies of them made in China. These are mainly World War II-type weapons. The Mosin-Nagant carbine (M1944) may still be the most widely issued arm in the Communist Chinese armed forces, but the two Soviet World War II sub machine guns—the M1944 (PPSH), and M1943 (PPS)—are also numerous. The Red Chinese produced these arms in their own arsenals after the Soviets shifted to newer models, but have gradually discontinued most of them. The sub machine guns have not been made since 1955; the production of new M1944 rifles was stopped in 1960.

All these World War II-type weapons fire the old 7.62mm Soviet rimmed rifle ammunition (Red Chinese Type 53) or the 7.62mm Soviet pistol cartridge (Red Chinese Type 50). Ammunition is being made not only for these obsolescent weapons, but also for new light machine guns and medium machine guns and the Red Chinese Type 54 pistol, a copy of the Soviet Tokarev,



Chinese Communist 7.62-mm Type 50 (1950) submachinegun.



Projectile for 40-82 mm launcher.

which is still in production.

Since 1956, the Red Chinese have been rearming with the new Soviet intermediate power cartridge carbines (SKS), assault rifles (AK), and light machine guns (RPD), the third category of small arms. All are presently being produced in Red Chinese factories. Soviet imports have stopped. These arms will soon be standard throughout the entire regular army, if they are not already. As in the forces of the U.S.S.R., however, medium machine guns firing the 7.62 Soviet full power cartridge are still necessary. Some experts also predict that pistol ammunition, particularly the Red Chinese copy of the PPSH—the Red Chinese Type 50—with the straight magazines, will continue in use indefinitely. There is an enormous stock of it on hand.

The Communist Chinese place a high value on hand grenades and have several good ones. Their defensive type is a copy of the Soviet RGD-5 and is the equivalent of the U.S. M26; it weighs about .7 pounds and does not have a potato-masher type of handle. Their fragmentation grenades are copies of the Soviet F-1 and RGD-33. The former is similar to the U.S. Mark 2 of World War I and II and weighs slightly more than 1.5 pounds. The latter has a handle and weighs about 1.25 pounds. There is also an antitank grenade with a shaped-charge effect which weighs 2.5 pounds; it has an effective range of about 15 yards and must be thrown underhand.

The small arms situation in the Red Chinese armed forces appears to be extremely inefficient. We should remember, however, that the Red Chinese are used to much worse weapon handicaps. During the mobile phase of the Korean War, they sent men into action armed with a bag full of grenades only; other men would have only sub machine guns. Other platoons had more conventional rifle and light machine gun distribution.

In the event of a major war in which reserves and militia were used, some Red Chinese soldiers might again be armed in this fashion, or even go into action unarmed intending to pick up the weapons of their own casualties or take them from the enemy. But the regular army initially would have all modern materiel and the organic support arms actually needed for a conventional

war of the Korean type in ample quantity and quality.

The intermediate cartridge arms (SKS, AK, and RPD) are better, according to the US Small Arms Weapons System (SAWS) evaluation program, than the US M14 rifle, assault rifle and the US M60 medium machine gun. The Soviet intermediate cartridge also appears to have advantages over the US 5.56mm round at 300 meters and beyond.

The Communist Chinese have not produced their new small arms as rapidly as they might have done—only about three million in 10 years. The Red Chinese leaders are capable military men with a great deal of actual combat experience; they also rule the country, which now has a considerable productive capacity. They give away millions in the form of international aid and spend even more in trying to develop a nuclear military potential. One would expect individual weapons to come first, but they have not. There are probably several reasons for this, the most important of which is the guerrilla origin of the Red Chinese army itself. The fact that there were more men than small arms did not hurt greatly the efficiency of the old Communist forces.

This austerity in equipment applies also to ammunition for training. Red Chinese soldiers are not good shots, and are still taught to conserve their cartridges. When the Communist Chinese crossed the Yalu River in November 1950, they received 40 rounds per rifle and about 80 rounds per submachine gun. They could expect no resupply for weeks. In a nation that still has relatively poor logistics and an economy which is taxed to the limit to feed the enormous population, this theory has advantages.

Conditions are better now, but Red Chinese small arms thinking appears to be about the same. Personal arms are for short range combat. Even in Korea, the

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Red Chinese medium machine guns had abundant ammunition. This is still true and emphasized—the medium machine guns, and to a certain extent the light machine guns, will do the long range fighting—that over about 150 yards.

In their guerrilla days, the Red Chinese specialized in ambush and surprise, particularly at night. Where possible, they will attack only where they think they are sure of winning and try to exterminate their enemies quickly. Their best defense in their guerrilla days was a fighting withdrawal followed by a disappearance. These tactics are even more apparent in Vietnam and would probably be used by the Red Chinese if they entered the fighting there. Although they now have a regular modern army trained in conventional warfare, most experts believe that in the event of a war against the US on the mainland of Asia, the Communist Chinese would employ guerrilla rather than standard tactics.

Much has been written of Red Chinese human sea assaults in Korea. Grenadiers of poor quality did attack in masses early in the mobile operations period of the war, but even then there were better units taking advantage of these operations to infiltrate US lines and attack rear echelons. Heavy frontal attacks by Red Chinese Infantry variously armed would undoubtedly be encountered by an army invading mainland China, but these would be supplemented by better units with less obvious objectives.

The Red Chinese would continue, as in Korea, to try to take full advantage of surprise. They would strike where least expected and try to overwhelm for total victories, perhaps of a limited size. Their plans would be simple, but well-coordinated. At almost every level, there would be two thrusts rather than one; the one in front would not be as dangerous as that from the flank or rear. Even though they now have a great deal more heavy equipment than in Korea, their Infantry would still have limited organic support by Western standards.

At low level, they would try to get within yards of their opponent's lines undetected and pass through or between fortified positions to attack rear elements, endeavoring to encircle and annihilate, or at least envelop one flank and attack from unexpected angles. Darkness and poor weather would be their allies because these limit enemy tactical air power and conceal friendly movements. They would take full advantage of their closer to nature background to try to terrorize Western enemies. Some soldiers in their elite units could kill opponents during darkness without revealing their own presence. They would probably fight better under primitive conditions than more civilized armies.

Defensively, the Red Chinese in Korea showed two different tendencies. In mobile operations, they left such a wide belt of no man's land that they scarcely held anything at all. They would prepare a kind of ambush

zone in which they were so well concealed that US patrols could move right over them without realizing their presence. The Red Chinese would not disclose one of their ambush positions just to cause a few casualties, but would spring to life when a more profitable target approached unwarily.

In the static phase of the Korean War, the Red Chinese adapted US defensive tactics to their own requirements. They constructed underground fortifications of extreme power, size, and complication. Their mortars were well handled; Soviet guns of medium size and fine accuracy were also used effectively. The latter would be fired a few times from an underground firing position at important targets and would then be pulled back into caves, only to appear an hour later for two more shots from a different opening. The U.S. artillery, however, continued to be more effective.

Infantrywise, the Communist Chinese finally coordinated fire teams of rifles, submachine guns, and automatic rifles, and supported them with medium machine guns and mortars. Defensively, they learned to use their excellent medium machine guns in well-chosen positions with interlocking fields of fire. Their mortars, which were zeroed in for close support, were also extremely effective. They remained deficient in arranging a real concentration by several weapons on a single objective and in manipulating support fire in defensive situations.

No one, not even the Red Chinese themselves, know what the relative change in fighting potential has been between US and Red Chinese units. The latter's progress may have been slowed by non-military labor, purges of able officers, and an extremely high average age for senior commanders. About 95 percent of the present regular army has not heard a shot fired in anger. On the other hand, their individual weapons are probably equal in quality to those of US units.

At present, Red China does not seem to be able to maintain as many soldiers in the field as a Western nation of one-tenth her size; she also lacks a modern logistics system. Red Chinese armies can operate effectively only within walking distance of China. Even the narrow Taiwan Strait has been an effective barrier.

Red Chinese Infantry in combat can move, fight, and communicate, although their strategic moving might be mainly on foot and at night if opposed by US air power. Their fighting qualities are unquestioned; stamina and fatalistic bravery go far to make up for the heavy equipment disadvantages. They have a discipline that conquers the natural fear of death, and their top leaders know combat from long practical experience. Communications and weapons were weak, but are improving. Their type of fighting does not require as much scientific, industrial, and transportation support as in the Western armies.

Certainly, Red China's armed forces have a sobering ultimate potential. ■



COMMANDANT'S NOTES



**General
York**

DURING the past decade, the United States Army's fire support capabilities have become more effective and versatile. One of the latest and most important weapon systems in this increased effectiveness and versatility has been the armed helicopter, introduced into combat in South Vietnam in 1961.

At the Infantry School, we recognize the important role which the armed helicopter can play in assisting an Infantry commander to accomplish his mission, especially in a counter guerrilla environment. Our leader course students all receive instruction in the employment of the armed helicopter in a fire support role, to include calling for and adjusting that fire support. At the same time, the capabilities and limitations of the armed helicopter are carefully explained.

We believe that an airmobile operation requires armed helicopters to provide immediate and accessible fire support throughout the entire operation. Immediately following the lifting of preparatory fires on a landing zone, for example, and just prior to the landing of an Infantry assault force, armed helicopters should conduct an armed reconnaissance of the landing zone to advise the airmobile task force commander and his principal assistants as to the best direction of landing; the condition of the landing zone; the direction of departure, and ground fire.

Other armed helicopters should be with the air column to provide suppressive fires during the initial landing. They deliver their fires ahead of the assault elements as those elements make their first touchdown on the objective. The troop transport helicopters are most vulnerable at the time of landing, discharging troops and take off. It is at this point that the armed helicopter support is needed in the maximum number available. Armed helicopters are also used for reconnaissance, security, and economy of force missions in addition to providing close aerial fire support.

Armed helicopters should be employed in pairs, and to insure continuous support, a minimum of four armed helicopters is required. One fire team of two helicopters can then be over an operational area at all times if needed. The other fire team can be retained in a staging area for refuelling, rearming, maintenance, and crew rest, and on call to replace the first team when required.

Our students are also given an understanding of the close coordination that is required to employ successfully these versatile aircraft, coordination which admittedly is simplified by the ability of the helicopters to land at Infantry command posts for face-to-face coordination. The Infantry commander thus has the closest contact with his aerial support element, and can brief the helicopter crewmen on the enemy situation, ground tactical plans, missions he expects the armed helicopters to perform, friendly unit marking procedures, and communications information. In turn, the helicopter element commander can advise the supported Infantry commander on how he can best contribute to the mission.

To stay as current as possible, we use lesson-type experiences from the field, and are always seeking additional case studies. At present we are using equipment that consists of proven elements (helicopters, machine guns, rockets) that have been joined together during the heat of battle. As equipment is further developed and improved, our ability to accomplish our missions will be greatly enhanced. If you feel you have something to offer in this new, exciting, but still evolving area, we ask that you get in touch with us.

Armed helicopter support is an important and effective means of fire support, and it should be fully exploited by all Infantry commanders. Army aerial fire support units are proud members of the Army team, Infantry oriented and anxious to assist in accomplishing the Infantry mission.

ROBERT H. YORK
Major General, USA
Commandant

ALCANTARA

THE PARATROOPER

James W. Ryan



SHORT STORY

FIFTEEN MINUTES!" the jumpmaster roared in his bull voice. He stood braced at the open door in the rear of the swaying C-119. His stocky body seemed shorter and squattier than usual; two parachutes and various combat gear along with a carbine and a .45 automatic were lashed to it. The blast from the propeller whipped his taut skin into rippling folds at the cheekbone and neck. Framed in the doorway, he peered from under his camouflaged helmet at the frozen brown earth below.

Sergeant John Mahoney watched the jumpmaster, trying, at the same time, not to appear too concerned or interested. Mahoney was fifth man in his stick of 15 paratroopers. That put him fourth man behind the jumpmaster. Across the aisle, facing him, sat another stick of paratroopers, pale-faced and dry-mouthed. Each stick avoided catching the eyes of its opposite number. Most of the men in the two sticks kept glancing at their respective jumpmasters. Secure in their bucket seats, the paratroopers were mostly silent, only their two rows of jump boots constantly shuffling and scraping about on the floor of the aluminum-paneled plane.

Mahoney winced at the jab on his arm, just above his stripes. He looked about, his face showing obvious annoyance.

"What'd he say?" Casey asked.

"Fifteen minutes, Big Boy," Mahoney yelled in reply. "Fifteen minutes. Then you'll be making like a big bird. A gooney bird. The gooks shouldn't have any trouble hitting a big target like you."

Casey, leaning over to hear him above the roar of the two big engines, turned his head to look Mahoney

in the eye. "Very funny! Very funny! And you're not scared, huh?"

Mahoney looked away, deciding not to reply. Casey was all right with the sergeant. They were, in fact, the best of buddies. But right then Johnny Mahoney was in no mood for Hollywood-type banter. For he was scared, really scared. His fear hung in his stomach like a heavy cold stone. And he basted and compounded his fear with an overwhelming sense of despair. He could almost imagine that he smelled his fear. Its odor was more familiar to him than the ever-present ones of aviation fuel, human perspiration and the upchuckings of frightened stomachs.

He leaned forward and looked down the stick toward the front of the C-119. The interior of the aircraft appeared cavernous, foreboding, shadows lurking in the corners of the ceiling, cold and unconcerned, as though anxious to discharge its cargo of twitching humanity. He sought Lieutenant Rory.

The priest still sat quietly engrossed in his missal. Mahoney clenched his lips, breathing audibly through his nostrils. He thought how much he wanted to push himself up from his bucket seat and push his way forward to where the priest sat. He was sure the priest could make it all right for him. He felt the dusty sense of well-being, of relief, of rededication, all of which followed confession. The memories loomed more vivid, more painful. Yet, he had to think far back to his boyhood to recall them.

Sergeant Mahoney recognized his fear and owned up to it. But he wasn't the least bit yellow. Far from it. Fact was, he was real tough as men measure each

other. Tough as they come. Tough as a new bolt just hammered into an oak door. Like the rest of his buddies, he had made his five jumps to qualify for his jump wings. Along with the other members of his platoon, he had made another 30 or so jumps stateside at Campbell before the fighting broke out that sleepy Sunday in Korea.

Mahoney had been the first man in his old platoon to volunteer for combat duty. It was Mahoney who had talked his best buddies—Casey, little Jake-the-Rake, the Whip (their beloved platoon sergeant), and Rising Sun, sometimes known as Chief—into transferring out of the 511th to the 187th when that regiment was formed into an airborne combat team and detached from the 11th Airborne Division for Korean service.

They just didn't come any tougher than John Mahoney. There wasn't a better man to have along when the paratroopers tangled with the straight-leggers or M.P. patrols in Nashville or Clarksville. Right or wrong, Mahoney was always there when his buddies were mixing it up, his huge fists chopping down the opposition. The month before, in September, when the 187th landed at Inchon and hit the gooks along the Han south of Kimpo, he had won the first Silver Star awarded in his company.

first jump

John Mahoney was 23 in that October of 1950 as the air thundered with the roar of scores of C-119s lugging their manifests of paratroopers northward toward their next "moment of truth." In less than ten minutes, he and the hundreds of other troopers in the battalion would be exiting from the beckoning doors at the rear of their aircraft. Upcoming was the first combat jump of the Korean War. Target for the battalion was a non-descript point on the map identified as Sukchon-Sunchon. The sergeant was tall, two inches over six feet, and straight, ramrod straight. His strong shoulders strained at the reinforced seams of his tailored field jacket. His lean face and vein-knotted hands were deeply tanned.

It was his eyes, though, that contrasted sharply with his imposing physical appearance. A deep blue, they failed to sustain his hardened demeanor, reflecting as they did an almost enigmatic gentleness, an innocence almost out of place with his known character. At the same time, his eyes, again so out of line with the rest of his outward bearing, seemed furtive, guarded.

He constantly was looking over his shoulder whenever the combat team was in a rest area. Only when the regiment was committed to combat did his eyes

appear clear of their habitual apprehension. The reason was simple. John Mahoney, paratroop sergeant and decorated Infantryman, was a fugitive from justice. He had been for five years. And his unpaid crime was the main reason for his fear.

Sure, he had the natural fear that came with sharp awareness of approaching danger and possible death. But he knew he could handle that fear with his strong will power, his fine training, and his soldierly sense of duty. And he had, each time he jumped from a C-46 or a C-119, or been engaged in the firefights below the Han and around Kimpo.

That fear he could handle and cope with each time it was necessary. But the other fear and its accompanying despair was something else again. Each time it assumed larger proportions, and now, as the C-119 hurtled toward the drop zone, he was certain it would engulf him.

little time

It would be so easy, he thought. He knew he wasn't yellow. So why didn't he get up? Get up and go back and tell it to the priest. There was only a little time now. He told himself that it wasn't up to the priest to judge him. That this time he might get it. And if he did, there was only one place for him.

The sergeant squirmed in his seat, feeling the straps biting at his shoulders and thighs, the quick release box of his main chute pressed sharply against his chest. He reached up and tugged at the skin over his sharp Adam's apple. He could feel the perspiration gathering in his matted hair beneath the fastened helmet. He pulled back the cuff of his field jacket, twisted his wrist to see the time. Less than five minutes. Now he could sense the other paratroopers stirring within the freight-car dimensions of the C-119, buttressing themselves for the fast-approaching jump.

He pleaded with himself. He didn't want to die in mortal sin. There was just time for a general confession. He wouldn't even have to spell out the details. Then if he made it back, there would always be compensating factors. He was only 18 years old at the time. Sure it had been wrong driving the car for Bill and Hank. But he hadn't meant to cause the watchman's death. He groaned as it came back to him in snatches.

It had been Bill's idea that they break into the warehouse. It would be a breeze, he said. And Bill knew where they could sell all the stuff they grabbed for a good price. It would be a pushover. But it hadn't been a pushover—especially for the watchman. He had surprised them. But he was an old man, and John Mahoney had no difficulty wrestling him out to the freight elevator in the darkened building. Mahoney had opened the gate and pushed the watchman onto the elevator. Only the elevator wasn't there and the old man had screamed,

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and Mahoney had never forgotten that scream as the watchman plunged down the shaft to the basement 10 floors below. Bill had taken the elevator to go up to the 11th floor to look over the merchandise stored there. Bill and Hank later were caught and sent to prison. They never said anyone else was with them. A month later, Mahoney enlisted in the paratroopers.

Casey nudged him. "Almost time to go, Daddy-O."

Mahoney glanced up, aware that the startled look on his face was puzzling Casey.

"Yeh, boy. Just about that time, huh. My guts are all fouled up. How about you?"

too late

Casey didn't hear him above the roar of the engines. Just as well, he thought. There were other things to think about rather than making small talk with Casey. At the time, he knew, half with relief, half with regret, that it was too late to talk with Lieutenant Rory. Even then the jumpmasters were staring back into the aircraft. Any moment now and they would be on their way.

Mahoney prayed silently. Since it was too late for Father Rory to hear his confessions, only prayer could make it right, give him the strength and courage to jump. He made an Act of Contrition. He promised to confess all if he returned from the impending firefight and to turn himself in and take whatever punishment was due him.

The sergeant remembered from Father Rory that God was "just, merciful." He asked God to be just and merciful to him. He repeated that he was truly sorry for all his wrongdoings, especially the death of the watchman.

"Get ready!" the voices of the jumpmasters boomed down the length of the C-119. The sharp command alerted the sergeant. That time again, he thought. How many now? 32? 33? It didn't matter.

"Stand up!" came the second jump command.

Mahoney leaned forward, his seat belt already unfastened, and struggled to stand. He reached with his left hand for the steel cable stretched just below the ceiling of the aircraft. Along the sergeant's stick, Casey, The Rake, Chief and The Whip, and the others, their static lines clutched in their right hands, wavered and pushed themselves to their feet.

The coolness of the steel felt comforting, reassuring, to Mahoney. He slid his fingers back and forth, conscious of its strength. He watched the jumpmaster at the door. The jumpmaster's helmeted head was scanning the ground, searching for the pathfinder's jump panels which marked the drop zone. The flesh on the jumpmaster's ruddy neck was whipped into shivering folds by the prop blast.

The jumpmaster ducked his head back into the air-

plane. He turned, looked along his stick of paratroopers, frowned and yelled, "Hook up!"

Mahoney clutched the anchor line cable above his strained face, again with his left hand. The opposite stick of paratroopers reached for their anchor line cable with their right hands. In Mahoney's stick, 16 tense, shaking hands hooked snap fasteners at the end of their static lines over the cable. Then a hard jerk down, and the snap fasteners, locked shut.

Two cables shook and hummed as the uneven staccato of steel fasteners smashed against them, echoing within the confines of the fuselage. For almost 30 seconds, the inside of the C-119 reverberated with the jangling clash of snap fasteners, pulled tight, pushed and jerked, back and forth, up and down, on the anchor line cables. Each trooper was making sure he was safely hooked up. Each one's life hung on the snap fastener and the attached webbing looped to the canopy of his chute, neatly packed and strapped to his back.

Mahoney carefully inserted a cotter pin through the snap fastener, then bent it over so it couldn't slip out. He was making doubly sure the snap fastener didn't unlock and pull loose from the steel cable. He was conscious that some of the men in the other stick were so nervous that they couldn't insert their cotter pins and had to be helped. He knew the feeling; the cotter pins seemed to expand while the insertion holes appeared to shrink.

check equipment

The jumpmaster looked down his stick of paratroopers. He called out, "Check equipment! Sound off for equipment check! First man shuffle and stand in the door!"

Mahoney saw Nields shuffle forward. Nields had been with him at Fort Benning jump school. Mahoney really had never gotten to know him very well.

The jumpmaster grabbed Nields' reserve chute and gave it a quick tug to see if it was loose. He did the same with Nields' Griswold container and his M-1 rifle container strapped to his right leg. Then he nodded at Nields who threw his static line along the anchor line cable to the rear of the aircraft.

Nields clutched the side of the open door with his left hand and slowly pivoted his body around to stand in the doorway. His right hand grasped the other side of the doorway with his fingers flat against the outside of the fuselage and his thumb locked inside.

Now Mahoney and the rest of the stick checked their equipment. They felt their gear, making sure their reserve chutes were properly fastened along with their combat packs, weapon containers, Griswold containers, canteens, ropes, knives, bayonets, ammunition bandoliers, and first aid packs. Then from the last man at the front of the aircraft to the first they sounded off

in turn; "Number 16, O.K.! Number 15, O.K.! Number 14, O.K.! Number . . ."

Mahoney listened to the sounds of their voices rushing nearer and nearer, heavy, cracked, booming, high-pitched, blending one into the other within the interior of the C-119, rising into a crescendo as they raced toward him; each man screaming out his number in an attempt to lose his fears and tensions.

Mahoney was flooded with a fresh wave of fear as the voices rushed toward him. Yet, he was exultant. He shouted out his own. Dramatically, he told himself that this was it. Along with the rest of the men, he was working himself into a frenzy. All of them were like terrified animals trapped in a burning barn, waiting to be free of their ropes. The sergeant felt his heart pounding, his chest heaving, his mouth was dry. He yelled and screamed with the others: "Let's go! Let's go! . . . Airborne! Airborne, all the way!"

The paratroopers stamped and pounded on the floor of the C-119, their bloodless lips narrow lines between each outburst. Their hands clutched about their static line fasteners. Inch by inch, they crowded against one another, jamming up toward the waiting doorways, melting into two unbroken lines of screaming humanity. Reserve chutes pushed against main chutes, main chutes grating against reserve chutes, they leaned forward, ready to shuffle, the last few men in both sticks set to run to keep up with the others.

The jumpmaster, standing behind Niels, stuck his head out into the slipstream to scan the snow-tipped mountains for the check points. Again the jumpmaster's neck blew up into furrowed fleshy folds in the 120 m.p.h. prop blast outside the door.

Mahoney knew it would be any second now. Small arms fire was coming up hard and fast, reaching for the aluminum-winged aircraft braking down overhead with their bulging loads of shouting paratroopers and supplies. Mahoney could see the tracers criss-crossing the cold blue sky, constantly rising, rising, striving to reach them, trying to knock the planes out of the air, to spill their bulging fuselages of humanity into the sky.

The green light flashed on! Niels went out the door in a blur. Then the next two men in Mahoney's stick. The sergeant shuffled forward. He felt Casey's hard, reassuring slap on his buttock. Boots pounded on the floor. Voices hollered without stop, "Go! Go!" Snap fasteners smashed together at the rear of the C-119 as the paratroopers hurled themselves along the singing,

now sighing, but always swaying cable, pivoted out the doors and swooped away. Empty back packs, torn from main chutes, slapped against the outside of the fuselage. The paratrooper in front of Mahoney stepped out into space.

Mahoney moved up fast. Shuffle, shuffle. Left foot forward. Shuffle, just like he was doing the rhumba. Just like it was a training jump back at Yamato. He kept his right arm up. He couldn't let the static line slip under it. If he did, he'd lose his right arm when the main chute started to open.

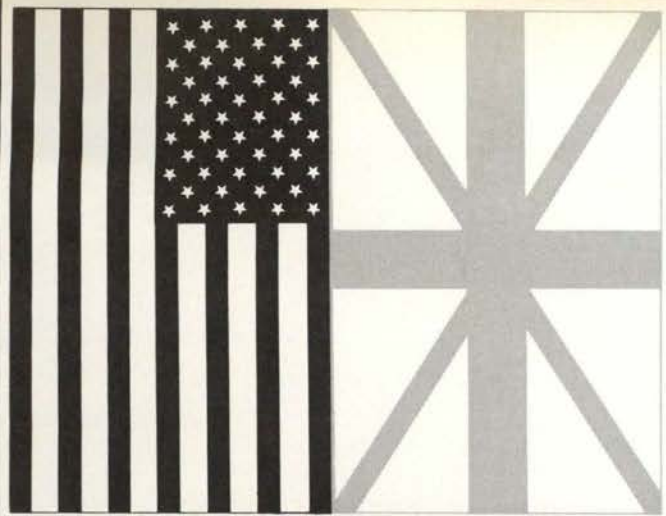
He was at the door. He grabbed for the side of it, throwing his snap fastener along the anchor line cable. He pivoted and wheeled his right foot around, slamming it down hard. His toe was over the edge of the door. He reminded himself to be sure and count.

The door beckoned him. For a split second, he stood framed in the doorway with his arms extended outside of the C-119. He looked down. The C-119 was hurtling across a narrow valley, surrounded by mountains. Squares, big and small, brown and black. The earth appeared to make some sense viewed from the air. The sky seemed splotted with hundreds of throbbing transports, spouting thousands of popping parachutes of myriad colors.

Mahoney leaned back into the plane to gather added impetus, his mind a jumble of conflicting thoughts, each of them striving to be dominant, but only one of them succeeding. And for that one only a hasty second. Be merciful, be just, he prayed, pleaded, then hurtled forward through the beckoning door into the maelstrom of propblast, his body rigid, chin down on his chest, hands clutching the reserve chute, his boots slapped together and extended straight down.

Several hours later, when the firefight was over and the enemy was again in full retreat northward, Casey and Jake-the-Rake sought Sergeant Mahoney. They had to return several miles along the highway to the scarred drop zone before they found him. Neither Casey nor the Rake felt for any sign of life. They knew there couldn't be any as they stood silently looking down at the sergeant's crumpled body.

In their grief, both were solaced somewhat by the knowledge that Mahoney couldn't have suffered at all. The veteran paratroops knew that from the height they left the C-119 it had taken only eight or nine seconds for the sergeant to plummet to the ground when his main and reserve chutes failed to open. ■



AN EXCHANGE OF IDEAS

THOUGHTS AND VIEWS

Major General Robert H. York, USA

IN THE September-October 1966 issue of *INFANTRY* Magazine, Brigadier A. J. A. Arengo-Jones, Commandant of the British School of Infantry, wrote the first of a series of articles which I sincerely hope will foster a profitable exchange of ideas between our two Schools of Infantry. Brigadier Arengo-Jones' article was most informative and instructive, and provides us with an excellent start to our exchange of ideas program.

I would like to expound just a bit on some of the work we are doing on a number of the topics touched on by Brigadier Arengo-Jones. I refer specifically to the Infantryman's load, anti-intrusion systems, night operations, future firepower requirements, and ambush communications equipment.

Some forty years ago, the following statement appeared in an article printed in one of the leading United States military journals:

"The Infantryman of nearly every Army today groans under the pack that is required to be carried in campaigns. To reduce that burden is a matter that should

be a prime consideration of the designers and approving authorities of many arms and equipment and certainly should be foremost in the minds of those who prescribe the articles to be carried on the person of the soldier."

That load problem is still with us and probably always will be. Realistically we know that the soldier is going to load himself down with all the ammunition he can reasonably carry. The best then that we can probably accomplish is to continue to reduce the weight of all items so that the soldier can carry more of those he considers essential under the circumstances.

Our current efforts toward solving this problem center around the findings of a 1964 study which was conducted by the Infantry Agency, the Infantry School, and the Infantry Board. This study determined that 40 pounds is the maximum load which can be carried by the average Infantryman without seriously affecting his ability to fight. The items of individual clothing, equipment, and rations were then examined in detail to see how this goal of 40 pounds could be met.

FIGHTING LOAD

ITEM	WEIGHT (in pounds)
Clothing	
Helmet, with liner	3.00
Trousers and Jacket, Utility	2.56
Underwear (Summer) and Socks63
Boots	4.00
Poncho	2.57
TOTAL	12.76
Equipment	
Rifle, M14, with sling	9.08
5 Magazines with 100 rounds, 7.62	7.85
2 Ammunition Pouches, 7.62, M14	1.50
Filled Canteen with Cup and Carrier	3.60
Belt, M14, with Fire Aid Pouch, Packet, and Suspenders	2.00
Intrenching Tool with Carrier	4.00
Bayonet with Scabbard	1.07
TOTAL	29.10
Rations	
Rations, One Meal	1.67
TOTAL FIGHTING LOAD WEIGHT	43.53

FIGURE 1.

EXISTENCE LOAD

ITEM	WEIGHT (in pounds)
Armor Vest	8.50
Mask, Field, Protective with Carrier and Hood	3.00
Bed Roll with Carrier and Inflatable Pad ..	12.96
Pack with Underwear, Socks, Toothbrush, and Shaving Gear	4.19
TOTAL EXISTENCE LOAD WEIGHT	28.65

FIGURE 2.

Two new terms—the fighting load and the existence load—were first selected to describe the equipment required to sustain the combat Infantryman.

The fighting load was defined as consisting of only those items deemed absolutely necessary to be carried by a soldier at all times during combat to accomplish the immediate mission of his unit. These items and their weights were determined to be those shown in Figure 1.

The existence load consisted of those items of clothing and equipment required to sustain or protect the soldier, and which might be necessary for increased environmental protection. This load would not be habitually carried in combat, but would be readily available

General York is Commandant of the United States Army Infantry School and Commanding General of Fort Benning.

for the soldier's use as needed. The existence load consisted of those items shown in Figure 2. The use of the helicopter or other mechanical means, of course, often helps groups of individuals in carrying the existence load to the place of use.

The combined weights of clothing and equipment items presently available to today's Infantryman in the United States Army exceed the established maximum weight of 40 pounds. Efforts are being made to reduce the weight of those items through redesign, the use of new materials, or by combining several items into one item with increased functionalism. Equipment which has received priority for development and which is being tested in South Vietnam under combat conditions consists of:

- Rations. A new individual subsistence packet of rations which weighs 10 ounces and contains approximately 1,100 calories. The new ration is a reduction of

slightly more than one pound from the present ration.

- **Armored Vest.** A lighter vest which weighs only four pounds is receiving laudatory comments from its users in South Vietnam. This vest is less than one-half the weight of the former one.

- **Sleeping Gear.** The Australian sleeping gear is presently being tested by US units in South Vietnam. In addition, a water repellent treated nylon hammock with a 15-foot long nylon draw cord is in use; together, the kit weighs only 20 ounces.

- **Pack.** A lightweight individual load carry device (rucksack), made of nylon and aluminum, is presently being used by combat troops.

- **Headgear.** A prototype of the Australian bush hat has been modified for tropical combat and is being tested by US troops in South Vietnam.

In the development stage, too, are such items as plastic disposable magazines, a lightweight poncho and waterproof ground cloth, and a lightweight protective

mask and entrenching tool. Perhaps before too much longer, some real breakthroughs will have been made and the Infantryman's load can be reduced to manageable proportions.

In developing anti-intrusion devices, the United States Army is working on a number of seismic, metallic, and other type detectors.

There is, for example, the infrared fence. There is a photo-electric device which employs infrared projectors and photo-electric detectors (eyes) used to fence in an area. When an individual breaks the infrared beam, an alarm sounds which indicates that the beam has been broken and that someone has entered the area. At the moment, the major disadvantages in the system are that line-of-sight is required between the projector and the eyes; the system requires accurate alignment; and the system has several components which are too large and bulky to be moved and used by the Infantry.

Another device under consideration is the break-wire



Ground to air weapon (REDEYE)



Light antitank weapon (THE LAW)

device—a small control box, about the size of two cigarette packages, and a spool of fine wire. The wire is laid out around an area with each end connected to the control box. Since the wire is fine it is not easily detectable and it can be broken easily. When the wire is broken, an electrical circuit is opened and a light or buzzer is activated in the control box.

Various studies and tests are also being made to satisfy the requirement for workable local security alert systems—to provide reliable and timely detection and warning information of the identity, proximity, and strength of enemy personnel under day and night and all-weather conditions; alarm systems—to detect and respond to the presence or intrusion of personnel in a variety of situations, ranging from a battlefield environment to a high security area; border intrusion detectors—to detect guerrilla movements and infiltrations across borders, perimeters, and other selected sites, including areas with extremely dense vegetation; and for a light-weight manpacked chemical personnel detector for use

in combat operations to detect concealed enemy personnel.

We see no drastic changes in the fundamentals required for planning and conducting successful night attacks. Simplified operational and fire support planning, thorough reconnaissance, rehearsal, security, decentralized control, and rested, well-trained troops remain as essential ingredients.

If any one factor has changed, it is in the anticipated frequency of night operations and the substantial numbers and types of new devices that have been or soon will be developed as navigational aids to night vision. We plan to increase the frequency of our night operations because we will be able to “see” better.

With each technological breakthrough we come closer to solving those special problems which complicate night operations. In theory, this means that with proper training on the use of the new devices, when they become available, night operations should become easier to conduct. The question still to be answered—since we do

not have the devices we would like to have—is just how sophisticated the new devices will be, and how much training time and maintenance time they will require.

In the area of future firepower, a number of interesting developments are going on, some of which should assist us materially in fighting in all environments—guerrilla, conventional, and nuclear. In the development of military shoulder weapons, for example, reduction in caliber and weight of projectile and higher muzzle velocity are areas of primary interest. For machine guns, ordnance experts feel that the M60 machine gun will be hard to beat, but they are willing to concede that certain modifications might make the weapon even more efficient and handier to use. Thus, certain such modifica-

tions are now undergoing tests—and major changes can be expected on the barrel and receiver groups. For example, on the test weapons, the bipod has been removed from the barrel and relocated to become a permanently attached part of the receiver; the gas cylinder no longer is part of the barrel group but is a permanently attached part of the receiver; the carrying handle has been relocated and attached to the end of the barrel, and it has been enlarged to aid the gunner during a barrel change; a larger windage and elevating knob has been designed, making it easier in cold climates, for the gunner to make changes without removing his gloves; and the upper portion of the forearm assembly has been removed to accommodate the relocated carrying handle.



Shillelagh weapons system

To defeat enemy armor, we look to a number of weapons which have been added recently to our inventory or which are still under development. Among these are the:

- Light Antitank/Assault Weapon (LAW). A lightweight self-contained antitank weapon system, the LAW consists of a 66mm HEAT rocket packed within its own disposable launcher. This weapon is now in our inventory, and will replace the antitank rifle grenade and, to some extent, the 3.5-inch rocket launcher.

- Medium Antitank/Assault Weapon (MAW). This is a tube-launched, single wire guided missile that is being developed to fill the gap between the LAW and the rifle company's future heavy antitank weapon. The MAW is expected to replace the 3.5-inch rocket launcher and the 90mm recoilless rifle.

- Heavy Antitank/Assault Weapon. Now under development, and known as the TOW (tube-launched, optically tracked, wire command link guided missile), this is to be a lightweight, crew portable weapon, weighing about 160 pounds without ammunition. Manned by a crew of four, it will be fired from the ground or from several wheeled or tracked vehicles. The round will weigh about 50 pounds and will be issued in a packing container, using the "wooden round" concept. It is expected that this weapon system will replace both the ENTAC and the 106mm recoilless rifle at the battalion level.

- Shillelagh. One of the newest members of the armor family, the Shillelagh is an integrated weapon system which permits firing of a missile from a gun tube from which a 152mm conventional round can also be fired. Shillelagh is being phased into production as a lightweight missile for close in support of troops against tanks, and will be deployed on the Sheridan armored vehicle and on a number of M60 tanks. The system can also be mounted on a wide variety of other combat vehicles.

A new weapon system also has been produced for effective use against enemy aircraft. This is the Redeye, a man-portable air defense weapon which is designed to provide forward area protection against low flying aircraft. The Redeye is operated by one man who detects, identifies, aims the weapon, acquires the target, and then fires the missile.

Finally, I would like to touch on the work we are doing to provide a silent means of communication between members of a force in close contact with the enemy where silence is important. This has become particularly important in South Vietnam.

Presently, radio communication is being provided by the AN/PRC-6 radio and the relatively new and much improved AN/PRC-25 portable radio. The adoption of the new squad radio—Transmitter PRT-4 and Receiver PRR-9—will provide our small units with an ideal radio for use within ambush positions. The PRR-9 is equipped with an ear plug, which will give silent, noise-free reception, and the PRT-4 is capable of emitting tone signals as well as voice signals.

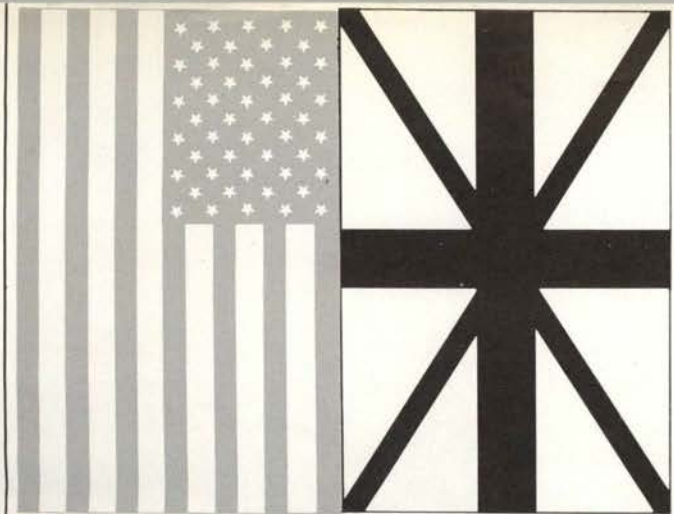
The tone signals so emitted can be adapted to a prearranged code for signalling when voice communication is not feasible. These two characteristics will give a unit the noise-free communications needed for security. Separate receivers only may be issued to as many members of a unit as necessary.

Use of a wire loop within an ambush site or with patrols in a static position is another method of gaining relatively noise-free communications. With the adoption of the telephone cable, WD-36TT, commonly known as Canadian Assault Wire, we now have a field wire that weighs only nine pounds per mile. It has a tensile strength of 25 pounds, which is considered adequate for many uses. When used with the sound powered telephone, we have another noise-free means of communication.

Many, many more thoughts and ideas are being worked on and tested here at Fort Benning and at other posts throughout the United States. In preparing this article, one of our real problems was to cut down to a reasonable number those thoughts and ideas we wanted to include in this issue of INFANTRY Magazine. This, to me, is a happy situation. For it indicates that there are still a number of ideas that ought to be identified and written on, ideas that will be of interest to Infantryman of both the British and United States armies.

As an example of just one of those ideas, the article which follows this one has been prepared at the British School of Infantry and discusses in fine fashion the arguments for and against the retention of the bayonet. Needless to say, this is an Infantryman's subject, and deserves the attention of Infantrymen everywhere. What we at Benning are doing about the bayonet will be the subject of an article which will be printed in the near future.

Thus, you see, the field is wide open. And I, for one, look forward to seeing more of our ideas published in forthcoming issues. ■



AN EXCHANGE OF IDEAS

THE ARTICLE *which follows is another in the continuing series of exchange of ideas which began in our September-October 1966 issue. This article, on an age old and controversial subject, is similar to one that has appeared in the United Kingdom publication of "The Infantryman;" it was written by representatives of the United Kingdom School of Infantry.—Editor*

IN HIS LETTER to the British Army Review of April 1965 under the heading "Infantrymen and Bayonets" the writer suggests that it is time some re-thinking took place on the need for the Infantryman to carry a bayonet.

Briefly, his argument is that, apart from the admitted value of the threat of its use in internal security duties, the bayonet is an obsolete relic of a bygone age and should long since have been removed from the British Infantryman's armory for the following reasons:

- A bullet (the readiness of which, since the introduction of the SLR, should never be in doubt) can do the same job quicker and better.

THE BAYONET

for and against

- The bayonet has seldom in modern times been actually used as taught.
- The threat of "cold steel" will not frighten a resolute enemy.
- The fixing of the bayonet does not, as its advocates claim, promote a more aggressive spirit in the troops using it.
- While the bayonet "might be a nice thing to have," its practical value is not enough to justify the extra weight penalty (15 ounces) it imposes on the soldier.

These arguments carry a good deal of weight and therefore merit serious consideration, though they tend to relate to the use of the bayonet in an offensive role.

Before the 1939-45 War the bayonet was regarded primarily as an offensive weapon, and the relevant Army training manual spoke of teaching the men of the Infantry section to have confidence, as a team, in their own and their comrades' weapons and thereby to become "imbued with a mutual determination to close with the enemy." The bayonet is not now so exclusively



The threat of a number of visible oncoming naked blades may well appeal more vividly to the imagination than that of any number of invisible bullets.

regarded, and the current training pamphlet concerned teaches merely "how to attack and kill the enemy with the bayonet and methods of self-defense."

It is surely in the latter context that the bayonet fills a basic need transcending its comparatively slight weight penalty.

If the Infantry soldier does his job properly against a resolute enemy he will sooner or later have to get to close quarters with him. It would only be paying lip service to the principles of close quarter fighting if the soldier were to be encouraged to hang back at the end of a bullet. Moreover, at close quarters with the enemy both in defense and attack, even the best trained soldier may fail to count the rounds he has fired and run out of ammunition, or his SLR may jam. He must have a further basic weapon, in the use of which he has been trained, on which immediately to fall back in emergency. It is surely quite wrong to deprive the soldier of what may well be his only means of self-preservation when all else has failed.

In Borneo in October 1965 an 11-man Gurkha patrol fought off some 120 Indonesian regular troops for about six hours in one of the fiercest engagements so far in that theatre. A good deal of fighting went on at fairly close quarters—some of the time at as little as 10 yards range—and by last light ammunition was down

to about five rounds per man. The patrol was saved by the onset of darkness, under cover of which they skillfully extracted themselves. Being Gurkhas, the men of this patrol would no doubt have used the kukri if the situation had developed into hand to hand fighting, but it is suggested that any other troops in a similar predicament would have been glad to have their bayonets with them.

It is probably true to say that the cold steel aspect of the bayonet tends to be overstressed by the more conservative among those who are adamant in maintaining that the bayonet must be retained. Nevertheless, the soldier of any nationality, however well trained and experienced, is only human and if he has to face a determined incoming assault after being subjected to a really effective preliminary bombardment there is a good chance that his resolution may be to some extent shaken. In such conditions the threat of a number of visible oncoming naked blades may well appeal more vividly to his imagination than that of any number of invisible, and as yet unfired, bullets. And it may induce him to put up his hands in surrender that much quicker.

Turning to consideration of the weapon itself, it has always been used by the soldier as a useful general-purpose implement, but there is no doubt that it could be

improved in design by lightening it (though not at the expense of durability) and sharpening it, as in the case of the bayonet supplied with the Armalite rifle, to make a serviceable knife. It is also for consideration whether it might be helpful if the bayonet were designed to be folded back along the rifle and spring-operated on the flick-knife principle, on the lines of the Soviet bayonet. Were this to be done, there would still be a requirement for the bayonet to be detachable from the rifle, and it is suggested that it should be regarded as a Commando-type weapon on its own, in the use of which the soldier should be given proper combat training.

In considering the whole question of abolition or retention of the bayonet in the British Army, it should be remembered that no other army has yet done away with the bayonet. The Americans take bayonet training seriously; the Soviets have incorporated a bayonet into their rifle as a matter of course; and the Red Chinese live and fight with their bayonets and indeed, from all accounts, are seldom to be seen without them fixed or unfolded.

The question must surely soon be faced as to whether

or not the bayonet is earning its keep as part of the Infantryman's fighting load. The problem is that the bayonet has become the symbol of the Infantry, an almost mystical aura surrounds it, and it is difficult to judge the weapon's real effectiveness in modern war. All too often it is tradition, superstition and psychological beliefs that sway the issue.

One fact that cannot be argued is that the Infantryman is today grossly overloaded. Currently the fighting load—the minimum equipment the soldier needs to fight with, as opposed to his existence load—of the rifleman is about 67 pounds and others in the platoon carry much more, ending up with the unfortunate signaller who staggers around with over 100 pounds strung about him.

There are many theories as to how the best fighting load should be achieved and this is not the place to discuss them in detail, but it is generally accepted that a weight of between 40-50 pounds may prove to be about the acceptable maximum.

In 1923 Cathcart, Richardson, and Cambell determined by physical testing that the most economical load



If the Infantry soldier does his job properly against a resolute enemy, he will sooner or later have to get to close quarters with him.

for a soldier was 30 per cent of his body weight (this figure is still quoted by current authorities) and that the effective maximum load was 45 per cent of his body weight. The US Quartermaster Corps has stated that the average American soldier is 5 feet 8 inches tall and weighs just under 154 pounds. In this case 30 per cent of body weight represents 46 pounds. Even as long ago as the close of the 19th Century, tests were conducted by the "Institute William Frederick" in Germany to measure the effect on soldiers carrying various loads under various conditions of temperature. From the physical findings alone the Institute concluded that 48 pounds per man was the absolute limit under the stress and fatigue of the battlefield and that beyond a certain weight no amount of practice marching made any change in the soldier's reactions.

The capability of an Infantryman to fight is directly related to the weight he carries, and we have got to take about 20 pounds off his present standard load. This load is not, of course, mandatory and it is theoretically open to commanders to modify it to fit the operation in hand. But how often does one see this done today? Very seldom, mainly because in the dismounted (non-APC) battalion there is no tactically acceptable means of carrying any of the equipment that the soldier may be required to discard. This may seem far from the problem of the bayonet, but if one accepts that the Infantryman should not be required to carry a single item in battle that does not fully earn its keep, retention of the bayonet cannot justifiably be defended.

In his letter to the British Army Review the writer gave good tactical reasons for discarding the bayonet. Two excellent studies, "The Soldier's Load and the Mobility of a Nation" and "Commentary on Infantry Operations and Weapons Usage in Korea" both written by General S. L. A. Marshall (US Army) also confirm that there is no evidence from either World War II or Korea, factual evidence that is, of the value of the bayonet.

Based on his World War II studies, General Marshall stated, "That weapon ceased to have any major tactical value at about the time the inaccurate and short-range musket was displaced by the rifle. But we have stubbornly clung to it—partly because of tradition which makes it inevitable that all military habits die a slow death, but chiefly because of the superstition that the bayonet makes troops fierce and audacious, and therefore, more likely to close with the enemy. I doubt that any officer of the last war below field grade would agree

that this idea has any merit whatever. Their observations are to be trusted more than the most positive opinions of any senior commander who has had no recent experience with in-fighting."

In Korea many nations were represented and fierce bayonet charges were reported. At least four-fifths of those reports were proved false either in whole or in part. In some instances the troops described as engaging in this manner were proved not to have even possessed bayonets! One of the "Allies" was credited with a bloody repulse of the enemy at bayonet point in which scores were skewered. It helped inspire new interest in the weapon. All the attendant circumstances later indicated that the main victims were friendly ROKs trying to fall back after their own position had gone!

General Marshall when writing on Korea said "The Marine Division retained the bayonet . . . the entire Chosen Reservoir operation was fought at close range, with the Chinese repeatedly charging the defensive works in night attacks and occasionally breaking the circle. Even so, the bayonet was used with killing effect in only two instances. Three Chinese were bayoneted, by the same man. Three and possibly four others were either wounded or killed by the bayonet in another assault . . . to attempt to justify Marine retention of the weapon, and the attendant burden, upon what the bayonet has done as a killing weapon in Marine hands during Korean operations is impossible in view of the cold figures."

There have been suggestions that the answer may lie in designing a new lighter-weight bayonet. This is avoiding the real issue. In any case if it is significantly lightened—and to be worthwhile it would need to be—it is likely to lose whatever psychological or killing value can be claimed for it now.

The bullet and the grenade are better than the bayonet anytime. What we need is lighter ammunition (and with it lighter weapons) so that the Infantryman can carry more rounds or less weight, and an updated system of resupply so that he has only to hold his hand out behind him for more ammunition. The use of the light helicopter in this connection is an obvious field for study. With the introduction of the semi-automatic rifle and the present and probable future increased firepower of the rifle section the bayonet has become an anachronism except for Internal Security duties. Nice to have, but to use the current 'OK' phrase—its cost effectiveness excludes it from the modern battlefield. ■

OFFICER EDUCATION

UPDATED

Lieutenant Colonel Stan L. McClellan, USA

RECENT EMPHASIS and publicity notwithstanding, advanced civil education of the United States Army officer is not new. His uniform has been a part of the campus scene for 100 years!

The education and training of Army officers in civilian universities and colleges is the second oldest instructional program of the Department of the Army. Only the United States Military Academy has been in continuous operation for a longer period of time. The concept of officer graduate-level training first emerged after the Civil War, a conflict which had tested military resources to a degree never before experienced. Growing out of that disastrous era was the conviction that existing officer educational standards in certain military fields were outdated and that existing training resources of the Army could not cover the inadequacies.

A first-step solution was reached by a post-War board of surgeons established by the President to study the

casualty and health pattern of the Union Army. As a result of the extensive loss of life during the Civil War due to the shortage of trained surgeons, board effort was concentrated on improving existing programs and training facilities.

In 1866, the board found that many of the problems could be alleviated by improvement in the professional training of medical, dental, and veterinarian officers. The board recommended that this training be accomplished at the university medical school level. The recommendation was approved by the Secretary of War, and, in late 1866, the first military officers were enrolled in civilian universities, colleges, and technical institutions for the advanced study of medicine, surgery, and dental surgery. This initial breakthrough was soon widened to include the study of ballistics and metallurgy. Advanced civil education for the professional officer was thus established as accepted national policy.

The program developed slowly. A half century later, by the beginning of World War I, it had grown to a relatively substantial size. In 1916, the Secretary of War authorized two percent of the officers in the Regular Army to study in civilian institutions at any one time. The Medical Corps, Corps of Engineers, and Ordnance Corps were the first branches to fully utilize their quotas. Civil education of the officer in 1918 included such advanced fields as business administration and engineering science.

The 1919 Baruch-Pershing Board, which reviewed World War I command and management problems, recognized the value of advanced civil education for Army officers and made appropriate updating recommendations to secure its accomplishment. As the result, the National Defense Act of 1920 authorized the Secretary of War—in specific terms—to train officers and enlisted personnel of the Army and its reserve components in those disciplines or skills essential to the accomplishment of the Army's mission in peace or war.

In the succeeding 46 years, the farsighted wisdom of those World War I leaders has been demonstrated repeatedly. Their work was so well done that only minor changes have become necessary to maintain the National Defense Act as the basic program vehicle in the space age.

legislation enacted

In 1948, legislation was enacted which enlarged the Advanced Civil Schools Program. The new law authorized the Secretary of the Army to select up to eight percent of the authorized Regular Army officer strength and eight percent of the total officer strength for advanced educational endeavor. The day-by-day demands of the Army mission have never made possible a close approach to this generous provision which would allow over 9,000 officers to be in school at one time. It is important to note, though, that this legislation as amended and included in United States Code 1958, Title 10, is the present authority for the Army Civil Schools Program.

Although the missions, weapons, organization, and geographical distribution of the Army have changed radically through the years since the inception of the Advanced Civil Schools Program, the reliance on civilian universities and colleges to accomplish the advanced-level training of Army officers has never varied. Several

Colonel McClellan is presently assigned as Chief of the Education Section, Infantry Branch, Officer Personnel Directorate Department of the Army. Commissioned from Infantry OCS in 1947, he has served in Germany, Belgium, and Korea. He is the author of "The Belgian Army Scores a Bullseye" which appeared in the July-August 1962 issue of INFANTRY.

hundred Army officers enter advanced civil schooling each year. Studies are undertaken annually in over 90 civilian educational institutions for periods ranging from one to two years. Additional thousands engage in part-time advanced educational work, particularly in the Washington, D. C., area where five universities offer on-campus credit for off-duty study.

On 1 August 1966, a total of 103 Infantry officers, in the grades of 2d lieutenant through lieutenant colonel were engaged in full-time postgraduate academic study in 19 different disciplines. The trend is upward. Whereas the input for any one fiscal year prior to 1961 had never exceeded 600 Army officers, the programmed input for FY 1968 is 850. Of this number, approximately 200 will be Infantry officers. The latest tally showed ten percent of active duty Infantry officers with a master's degree.

fields of study

The most popular fields of study, each of which are geared to a specific military requirement, include engineering, personnel and business administration, foreign languages, public relations, physics, electronics, comptrollership, journalism, nuclear engineering, operations research and systems analysis. Positions requiring an advanced degree are established by the Army Educational Requirements Board, and number close to 4,000. Satisfactory attainment of the requirements for award of an advanced degree greatly enhance the career contribution of today's military leader as well as adding greater variety to the individual's assignment possibilities. Utilization assignments, a key feature of the program, are normally three years in duration and located at various staff levels from the service school to Department of Defense.

The true significance of the program is often misunderstood. The advanced degree is not a goal to be sought simply to increase one's competitive position. The focal point of endeavor in this area is geared to the needs of the service. It is that simple. In essence, attainment of an advanced degree is simply preparatory training towards qualification to fill a special duty position. In this respect, attainment of a graduate degree can be equated to flight training in preparation for aviation duties. A good officer with an advanced degree becomes a more valuable asset to his country, but a poor officer with an advanced degree changes in value not at all. The Advanced Civil Schools Program is broad in makeup, diversified in content yet specific as to intent: To better prepare the individual to meet the needs of the service.

The program is highly competitive, deliberately selective, and concerned both with past academic success and the officer's study potential. The decision to apply for or to accept the opportunity to pursue an advanced



THE RATTLE of a machine gun shatters the stillness of the foggy evening and the escaping man spins to the ground. He lies motionless. Two hundred glum prisoners, startled by the blast of the firing, turn from their meal of rice gruel to watch their comrade being dragged away, but they quickly resume their eating under the stares of the enemy. They have learned to beware of these men in strange uniforms and berets who speak English in a broken accent.

No, this is not Korea in the '50s or Vietnam in the

'60s, but the United States Army Training Center at Fort Ord, California. The rattle of the machine gun is only blank ammunition and the escaping man is playing an assigned role. The prisoners are American soldiers in their sixth week of Advanced Individual Training at Fort Ord and the enemy "aggressors" are the officers and noncommissioned officers who staff the Survival, Evasion, and Escape Committee (SEE) at the Army installation.

But there is more to SEE than POW camps, tough-



SURVIVAL TRAINING

Lieutenant John H. Hensley, USA

looking guards and gruel. In the time SEE works with the trainee he is taught many useful techniques should he find himself alone or in a small group of men detached from the support of his unit. He learns how to trap and cook wild animals; what plants and insects are edible; the use of field expedients in applying life-saving medicine; improvising hand-made weapons and tools and how to find and extract water from various sources. The idea is to improvise from natural surroundings without the aid of modern tools and conveniences, a

situation many of our soldiers face daily in the jungles of Vietnam.

According to one enlisted man, who returned from Vietnam in April, 1963: "Americans can't live on rice alone over there and if they are in the field they must provide their own supplement to the rice.

"In one case we had a problem which lasted 26 days and naturally we could not pack enough food on our backs to last the complete time—so we survived from the land. We ate snakes, monkeys, birds, fish, and



Trainees learn emergency survival measures such as ice fishing.

many types of plants. If we were in a safe zone we could throw a hand grenade in the water and kill plenty of fish. If we were not in a safe zone we stuck the wires of a hand generator in the water and gave it a few cranks—that always got us several fish.”

From classes on wilderness survival, the trainees move to the prisoner-of-war phase of instruction. The various methods of escaping from enemy guards before being placed in a prisoner-of-war camp are demonstrated by the committee cadre. Trainees are taught to distract guards, enabling other prisoners to slip away unnoticed.

To teach the trainees what actions to take after they manage to escape, a two-mile-long evasion course is run during the hours of darkness. The training company is broken down into groups of two or three men, who are told the safety measures of the problem, the boundaries of the evasion course, and then turned loose for a

rousing night on the rough Fort Ord terrain. During this problem they are constantly harassed by the committee aggressors. To add realism, the trainees are told that their lines have been overrun by the enemy and, in order to return to friendly positions, they must disperse into individual groups and attempt to reach the new positions without being captured. Few are captured, for such a fate means returning to the POW compound.

The compound itself is largely the product of the ideas and experiences of a sergeant who spent 33 months in a Communist POW camp in Korea.

Lieutenant John H. Hensley, Infantry, was the officer-in-charge of the Survival, Evasion and Escape Committee and the Patrolling Committee at Fort Ord. He is presently assigned to the Command Group in Vietnam. Lieutenant Hensley was commissioned through ROTC at Southwest Missouri State College in 1964.

To begin the compound phase the training company is abruptly "captured" by the committee aggressors after the afternoon survival classes and marched to the POW enclosure near the committee headquarters—harassed each step of the way. Upon entering the compound the training leaders are segregated from the rest of the company, as would be done in an actual situation. The company is then separated into two groups. One is searched while the other is hustled into the physical training pit for exercises, then the two groups are switched. When a man gets out of line (like not calling the aggressors "Comrade") he is placed for a few minutes in what is referred to as the "box," a wooden receptacle about the size of a wall locker. This gives him a pretty clear picture, under simulated conditions, of the pressures to expect were he an actual POW.

After the two groups are searched and have spent their turn in the physical training pit, they are assem-

bled in the center of the compound for the commander's orientation, and here they are first subjected to propaganda techniques. The compound commander gives them a brief lecture on the shortcomings of their capitalistic country and then magnifies the glories of his own nation, trying to break down their resistance.

For their first "chow" as prisoners, the trainees are given a canteen cup of rice which, although completely harmless, smells bad, looks horrible, and tastes worse. They are told the bulk of the food must be sent to the front lines to support the aggressor troops who are presently defeating the Americans and their allies.

Immediately after the meal the trainees are again taken to the center of the compound where they hear a tape recorded example of an enemy "study period," a class about the enemy's political philosophy which is designed to convince the captives to sympathize with the aggressor way of life.

Model villages, scaled from actual sites in Vietnam, provide interesting displays.



ployed to seek infiltration routes through the enemy's defensive positions. The reconnaissance phase of training is geared to prepare a dog for employment in just this kind of role: one scout dog squad is placed in ambush position and another is given the mission of infiltrating undetected through that position.

When scout dogs are used on any patrolling operation, it is imperative that the patrol's movement be coordinated with that of adjacent, friendly patrols. The dog, it must be remembered, does not discriminate in scent detection: he alerts to the presence of both friendly and enemy positions. In consequence, patrol routes which allow friendly patrols to pass unwittingly close to each other might conceivably give cause to a firefight. It is also necessary that the inner integrity of the patrol formation be maintained, as a dog will also alert to the presence of fellow patrol members should they lose contact momentarily in thick terrain or drift out of position.

In the manning of an outpost or the participating in an ambush mission, the scout dog's keen sense of smell could again prove to be a vital factor in the conduct of an operation.

One of the most difficult missions for a scout dog to accomplish involves the search of a hamlet. With the variety and intensity of both human and animal smells in the village, the dog is apt to fall into confusion. But there are ways to reduce the possibility of confusion and assist the dog in conducting a search of the hamlet. First, after securing the hamlet, the dog should begin the search down wind, allowing the smells of the village to blow toward him; second, all inhabitants of the village, including the domestic animals, should be taken down wind and placed behind the dog, reducing to a minimum the number of scents which he will have to track and investigate.

The patrol leader should be certain to allow the dog

to check closely all the structures in the hamlet, giving him the opportunity to determine if any enemy or equipment are hidden between the walls. In the conduct of a hamlet search, the dog should also be guided to stream beds, canals, rice paddies, pig stys, cattle pens, and hay stacks in the vicinity of the village.

This type of thoroughness has paid dividends in the past. During one operation in Vietnam, as a patrol approached a village with a scout dog working on a leash, the dog signalled an alert and ran into a pig pen, where he began to growl and dig into the earth. After the handler led the dog away, the patrol members uncovered an underground hideout containing one Viet Cong, three grenades, an ARVN deserter, and valuable documents.

Although the scout dog's innate abilities to detect hostile positions have been employed with great success in the past, developmental projects are currently underway to sharpen these abilities and to make him an even more useful member of the combat team.

For instance, to extend the range at which the scout dog can work alone on patrol, an animal-to-man communications system is being tested by which he can search hundreds of meters in advance of a patrol and relay information to the patrol via a small transistor.

Another series of experiments is developing a method by which a handler can instruct and direct his dog from long distances. And yet another program is designed, through the use of high-gain microphone sensors and amplifiers, to enhance a dog's already keen sensing abilities.

With this increased emphasis on broadening the utility of scout dogs in combat roles, it seems assured that once more the dog has secured a beachhead in the mobile, modern American Army. His value to the combat Infantryman, measured in terms of his mission to save lives, is firmly established, and is as priceless today as it has ever been. ■

OBJECTIVE RICE

Captain Larry R. Lubenow, USA
Information Office, I Field Force, Vietnam

SOLDIERS of three Allied nations, taking part in a unique tactical operation in the Vietnam war, recently put a wide crack in the Communist rice bowl. And they did it in the Viet Cong's own back yard.

In Vietnam, as in the rest of Southeast Asia, rice is not only food—it also symbolizes a great economic commodity. The rich paddy land on which it abundantly grows has become the key terrain of today's counter-insurgency war.

The importance of that land to the Communists has been long realized. Viet Cong guerrillas, main-force units, and the infiltrated regiments of the North Vietnamese Army (NVA) cannot exist in the Republic of Vietnam without their one staple food. It is next to impossible to carry enough rice to feed the vast Red force down the long, winding Ho Chi Minh trail.

In the past, the Viet Cong have been able to live off the land with the willing or forced support of the people of South Vietnam. But since the American build-up, and the increased pressure that US, Allied, and South Vietnamese Army (ARVN) forces have placed on the Viet Cong, the latter have found it increasingly difficult to keep either their knapsacks or their stomachs full. Caches of rice, stored away in better times, are still available to them in the high ground and mountains,

but with increased government control over the lowlands and coastal areas of II Corps, the enemy is finding it more and more difficult to keep his troops well fed.

In order to compound this difficulty, Major General Stanley R. Larsen, commanding general of I Field Force Vietnam, planned and initiated Operation VAN BUREN, an operation that may seem strange to the Army veterans of World War II or Korea. The purpose of the plan was simple: place American, Korean, and Vietnamese troops in the vicinity of the Communist stronghold of Tuy Hoa and protect a rice harvest estimated at more than 30,000 tons.

Allied attempts to deprive the Viet Cong of rice had not been entirely successful in the past. In August 1965, the government had secured only 12,000 tons of rice. Since then, it had been necessary to import more than 600 tons of rice a month to feed the people in the Tuy Hoa area.

General Larsen gave the assignment to the much-traveled "gypsy brigade"—the 1st Brigade, 101st Airborne Division, and the 2d Korean Marine Brigade. The Army of Vietnam assigned their 47th Infantry Regiment to participate in the operation.

Planners at "Eye Force Vee" knew the operation would not be an easy one. US intelligence reports lo-

cated the 95th North Vietnamese Regiment in the rugged, jungle-covered mountains south of Tuy Hoa and the 3rd Viet Cong Main-Force Regiment in the mountains west and north of the fishing town. The rich paddy land surrounding the Song Giang river delta had been under Viet Cong domination for a long time, and the Communists wanted and needed the rice harvest as badly as the government did.

As the Allied forces arrived, efforts were made to move the people away from the insecure areas and take them to refugee centers in Tuy Hoa. Combat offensive actions were initiated to clear away the threat of Viet Cong harassment and attack. By the end of the operation, a total of 672 Viet Cong had been confirmed killed by body count, with another 238 estimated killed.

From the refugee centers in Tuy Hoa, Allied trucks and helicopters daily transported the people to and from the rice fields. Each family was permitted to keep 25 percent of what it had harvested. Fifteen to twenty thousand workers took part in the harvest which lasted until mid-February 1966 and which delivered more than 30,000 tons of rice to government control.

In addition, and to allay civilian fears that the Allied forces would all leave after the harvest, psychological warfare teams entered the area and civic action projects

were begun. Vietnamese government officials stressed that the government was in Tuy Hoa to protect the people and fully intended to remain. A US Army doctor opened a dispensary in Tuy Hoa, the first of its kind in years, and was soon treating 1,000 Vietnamese patients a month. Army engineers repaired bridges, built roads, and repaired cuts in roads which had been made by the Viet Cong to hamper the rice harvest.

After Operation VAN BUREN terminated, the Allied force did remain. Those civilians who had moved into Tuy Hoa were urged to move back to their own farmland under a program called "Return to the Village." Through the cooperation of the Vietnamese and American governments, cement and corrugated metal roofing material were made available to the people to rebuild homes that were inadvertently destroyed or those who wished to improve their living conditions.

But the biggest success of I Field Force Vietnam's operation was this: for the first time, those who had worked under the sweltering Vietnam sun to harvest the rice had been able to keep it. None of the rice would go to fill Communist rice bowls. And the people of Tuy Hoa had been shown that the government did have their best interests in mind, to stand by the people and not abandon them to the Communist threat. ■

VIETNAM'S ANGELS OF MERCY

Lieutenant Clarence Renshaw, USA
Information Office, 1st Logistical Command, Vietnam

A NEW KIND of angel of mercy—dropping from the sky with a roar only a helicopter can make—has curbed the death rate from wounds suffered in combat in Vietnam to less than one per cent. This represents the lowest combat fatality figure in history.

Providing the backbone for this life-saving effort are the two helicopter ambulance companies of the Army's 1st Logistical Command. The nearly 200 members of these companies fly their 50 unarmed helicopters day and night and week after week in an effort that has proved extremely successful. Their helicopters can carry

as many as nine patients from the battlefield at one time, or, if necessary, transport thousands of pounds of urgently needed medical equipment and supplies to ground medical corps personnel.

Helicopter medical evacuation techniques have come a long way since the early days of helicopter ambulances in the Korean War. All that the wounded then received was transportation, the patients being carried on litters externally fastened to small two-seater helicopters.

Today's helicopter ambulances have from 30 to 40 per cent greater speed and 100 per cent more power

than the helicopters of 10 years ago. And this improvement in aircraft has itself been most beneficial. In addition to expanded patient-carrying capabilities, air ambulances in Vietnam and throughout the Army now have room for a co-pilot, crew chief, and medical corpsman. In addition to getting transportation, patients receive medical care enroute to a medical clearing station or

hospital. The ships, in fact, resemble small mobile dispensaries.

The majority of the wounded are flown from the battlefield to a nearby medical clearing station before being airlifted to a hospital. Yet on each mission, the pilot must also assume the role of medical regulator, employing his own medical background experience. He must decide if a man's condition is such that a clearing station cannot help him. In those critical cases, pilots may fly the injured man directly to where he can receive the treatment that he needs.

Combat wounds are divided into seven categories, with the greatest number resulting from gunshots or fragments from exploding mortar rounds, grenades, and mines. Homemade booby-traps and the fishhook-like punju sticks account for about 10 per cent of the casualties.

Aid for all types of wounds is almost immediate. Hospitals and doctors are more mobile than ever, as are the combat units themselves. Ground isolation, while still a discomforting problem, has been—in large measure—overcome by the helicopter. Nearly one-half of all the admissions to the various hospitals scattered throughout South Vietnam are brought in by helicopter. Ground ambulances are used only for short hauls or when it is more convenient, and then almost exclusively for the less seriously wounded who do not require immediate care.

One year ago in Vietnam, there were only 10 helicopter ambulances operating over the jungles and highlands of South Vietnam. The bulk of their 400 patients a month were members of the South Vietnamese armed forces. Today, the 50 helicopters of the 1st Logistical Command transport a peak monthly average of 3,500



patients, including many non-battle cases. The number of missions flown has increased from 185 a year ago to almost 1,800.

While it may once have been called aviation's "ugly duckling," the helicopter in Vietnam often looks like an angel to the wounded soldier. ■

JUNGLE FIRING POSITIONS

Colonel Henry E. Kelly, USA (Ret)
HumRRo Division No. 4 (Infantry)

ONCE AGAIN, in Vietnam, our Infantrymen are re-discovering combat techniques, well-known to their fathers and grandfathers, which have been forgotten between the wars.

The prone firing position, so popular in training, possesses limited value in jungle fighting, except for cover against effective flat trajectory fire. On the other hand, the squatting position, shunned in peacetime training because weak-legged firers consider it unsteady, comes once again into primary importance.

The squat possesses these vital advantages in a fire-fight, particularly in Vietnam jungle terrain:

- a. It alone affords the firer elevation-flexibility essential to minimum exposure of a firer who must lay upon a selected target.
- b. It can be used on any slope with minimum interference from vegetation, reptiles, water, and other contaminants, including punji sticks.
- c. In the jungle, it affords greater body protection than the prone against tree bursts from mortars and artillery.
- d. It is safest to adopt against mines and booby traps.
- e. It favors fast aggressive reaction in close-quarters against close attack or incoming shells.
- f. At night, and under other limited visibility conditions, it furnishes excellent concealment, particularly where vegetation, stumps, or rocks are found.
- g. For close-in work at night, it is far quieter to assume or quit than the prone.
- h. Finally, and very importantly, it promotes a more aggressive attitude than either the prone, sitting, or kneeling positions.

The sitting position is a dangerously unready combat position against close attack or incoming shells. Actually, as originally conceived, it was merely a variant of the

squat intended for use on a forward slope where the squat made ground contact.

The kneeling position is acceptable when the fixed firer elevation is adequate and where ground conditions permit planting the knee.

The leg strength and drive essential for a steady squat can be readily attained through practice. Actually a considerable portion of the earth's population use it as a resting position. The strong legs essential to a steady squat are also important attributes of all Infantry combat, particularly in jungle country where steep, muddy slopes are many and motor transport limited.

It is strange how the combat advantages of the squatting position become obscured in peacetime marksmanship training, where the primary requirement is a steady position on level ground under conditions far unlike those of combat.

Perhaps the demands of the Vietnam fighting will bring back renewed fire-training emphasis upon the valuable squatting position. It is the best firing position for all jungle combat except when maximum time pressure, short-range surprise targets make use of the standing position essential.

Let's not forget realism in our combat training. The means should not obscure the end. It is proposed that:

- a. Increased training emphasis be placed on the most useful of the intermediate firing positions, the squatting.
- b. The sitting position be returned to its basic purpose, the downhill adaptation of the squatting position.
- c. The kneeling position be eliminated or at least reduced in training emphasis.
- d. Physical conditioning training include development of the ability to maintain a steady firing position at all elevations of the squatting position, including development of the leg power essential to a rapid and strong reaction therefrom. ■

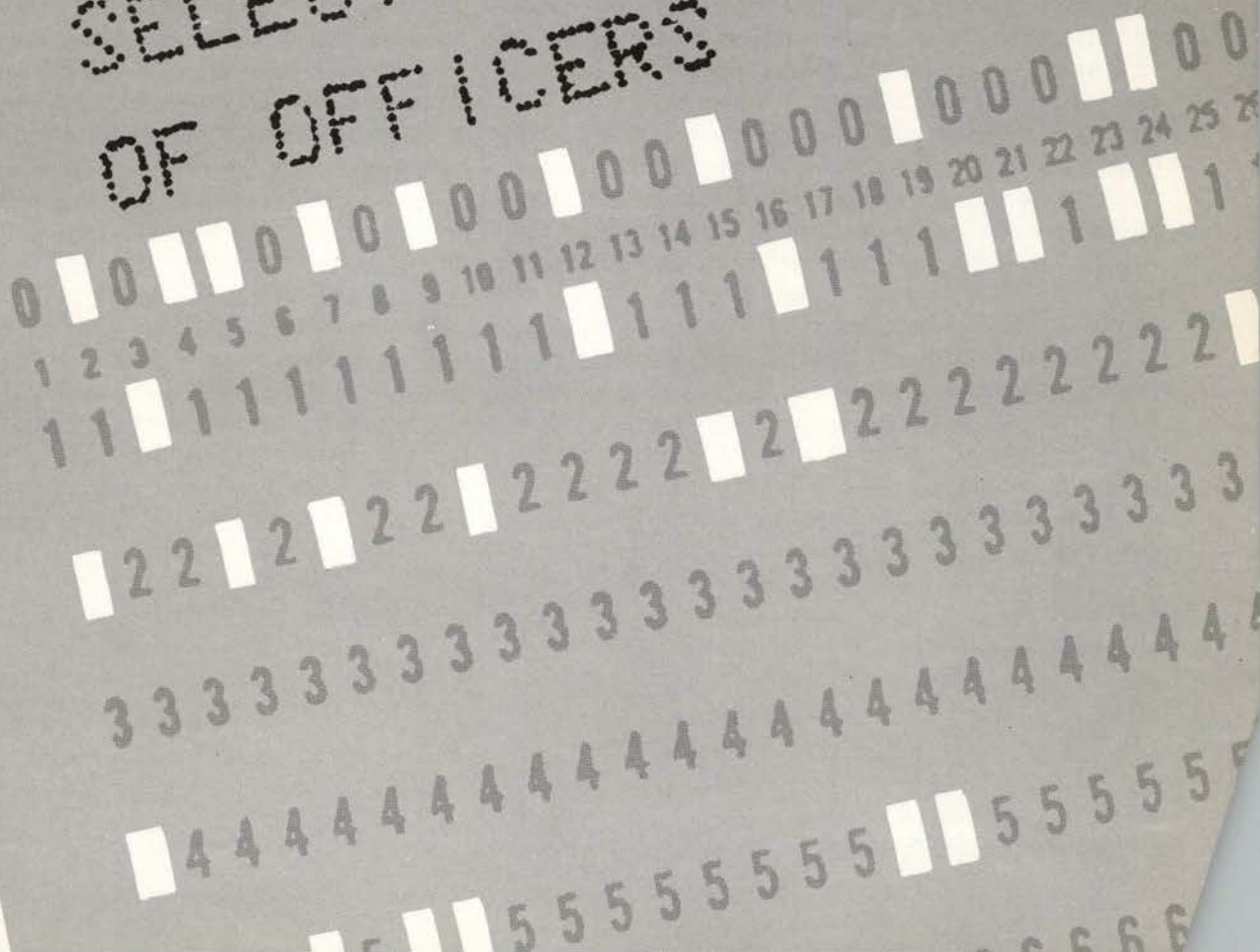
The following article was prepared by the Infantry Branch, Office of Personnel Operations, Headquarters, Department of the Army. It is a timely article on an important subject, and we are pleased to publish it as an INFANTRY Special.—Editor

RECENT EXPERIENCE has indicated a general lack of understanding of the current Army Selective Retention Program. Questions most frequently asked include:

“What is the scope of the program?”; “Why have some officers been released, others retained for only a few months and still others retained for 18 months?”; and “What is the basis of the program?”. A brief explanation may be both enlightening and helpful.

The increase in troop assignments to support the Army’s commitment in Vietnam requires that the Army exercise a program for the selective retention of needed personnel. The program was first announced on 24

SELECTIVE RETENTION OF OFFICERS



September 1965 and was reaffirmed on 4 May 1966. It provides for the retention of selected individuals for a period of not more than 18 months following the release date desired or for which eligible. The scope of the program is limited to officers primarily in the grade of lieutenant, captain, and major, who request retirement, relief from active duty or resignation. The program does not pertain to obligated officers (OBV 2 and OBV 3) whose term of active duty is prescribed by law.

Each officer's application for retirement, resignation or relief from active duty is carefully and individually reviewed. The qualifications of the officer concerned are weighed against the needs of the Army to determine whether an overriding military need exists for the officer's specific qualifications. In those cases where it is determined that an individual should be retained in the service, retention will be for a specific number of months in order to give that individual some reasonably firm basis upon which to make personal plans.

If in the future they still desire to be released, officers who are selected for retention may resubmit their application through channels in accordance with the appropriate Army Regulation—AR 135-173 for relief from active duty and AR 635-120 for resignation—to be effective on or after the specified date. Unless new and extraordinary circumstances develop, and provided the officer is otherwise qualified, his new application will be approved and his release will be effective as soon as possible on or after the date specified. Submission of a request for release based upon extreme compassionate circumstances is not precluded, but such a request must be fully substantiated and documented by the officer.

Requests for resignation usually are not accepted by the Adjutant General more than 6 months prior to the requested release date. Requests for relief from active duty normally are not processed more than 120 days prior to the desired release date. In each such case, though, applications must reach the Department of the Army at least 60 days prior to the requested release date.

In those cases where an officer is retained involuntarily for more than 12 months, an automatic review will be held within 10 months of the release date originally requested by the individual to determine whether the officer may be released prior to serving the full period of his retention.

The Regular Army officer or the Reserve officer who has signed an indefinite service agreement is considered to be career officers. He may incur specified service obligations—the three-year active duty obligation upon acceptance of a Regular Army commission; the one-year service obligation resulting from attendance at the In-

fantry Officers Career Course; the two-year service obligation resulting from attendance at the Command and General Staff College; and, under most conditions, the obligation to complete an oversea tour.

In addition to these specified obligations, the career officer, by virtue of his military status, is subject to certain additional obligations. Through long-established regulations, for example, the career officer who is eligible may request resignation or release from active duty. Release in such cases is not automatic but is individually determined for a date acceptable to both the Army and the officer. The final decision will reflect consideration of individual circumstances and the personnel situation at the time. In the past, the Army has generally accepted resignations whenever personnel requirements permitted; but, force commitments such as the Army now faces have required the selective retention of needed personnel.

In the current situation, there is no authority for the involuntary retention of every officer. There is authority for an individual's retention when his qualifications are carefully weighed against Army requirements and it is determined that there is an overriding military need which cannot be satisfied by means other than his retention.

The selective retention of individuals requires—with no alternative available to the Army—that one individual may serve disproportionately longer than another. Too, there are many factors which affect the decision made in apparently identical cases—an individual's assignment, the necessity for personnel continuity, and the resources and needs of the Army at various intervals. Thus, the action taken in one case at one time may not necessarily coincide with the decision on a similar case at another time, inasmuch as retention requirements and release capabilities will vary. Although action in any one case cannot, in any way, dictate the decision on another, every effort is made to achieve as much uniformity as possible under laws and policy pertinent to identical objectives.

Needless to say, it is impossible to forecast the outcome of pending requests. Officers who have questions pertaining to the application of the policy in their particular situation, however, are encouraged to contact the Infantry Branch. They may do so by writing to:

Chief of Personnel Operations
Hq, Department of the Army
ATTN: OPIN
Washington, D.C. 20315

or telephoning Major Childs/Maj Van Deusen at the Infantry Branch, Tel: Washington, D.C. OXford 78460 or OXford 68562. ■

EFFECTIVE LEADERSHIP TRAINING

Captain Melvin E. Kriesel, USA

A LEADERSHIP SCHOOL at battalion level can solve a major problem in the Infantry today: the effective training of junior leaders at fire team level. Too often a young specialist becomes a small unit leader simply by being the ranking man in his fire team. As he takes over his first leadership position, the extent of his formal military education may be no more than basic and advanced individual training.

Now would be an ideal time to send this junior leader to a noncommissioned officer academy to develop the traits and learn the principles of leadership. But, in many commands, such academies do not exist, or quotas are almost impossible to come by. Certain administrative difficulties such as time remaining in the command, and intention to reenlist, deter a candidate from attending. It is conceivable that a noncommissioned officer could spend his entire career in the Infantry with no formal schooling in small unit tactics, methods of instruction, or leadership other than what he receives from "The school of hard knocks."

The training of young leaders can be best accomplished at the level in which the soldier will serve throughout his career—the battalion. A battalion level leadership school would also serve to train potential

leaders to replace noncommissioned officers lost through reassignment.

Within the battalion are all of the manpower resources necessary to conduct a leadership school. Experience derived from the conduct of two such schools by the 3d Battalion (Airborne) 508th Infantry at Ft Kobbe in the Canal Zone, has shown that one officer and six enlisted men are sufficient to form the school committee which can easily handle 20-25 students at one time. These seven men perform as the:

*School Commandant—Officer responsible for discipline, training, and conduct of the school. He also instructs in military leadership.

*Committee Chief—Senior noncommissioned officer, second in command; assists in the control of the committee, instructs in military leadership, and acts as faculty advisor. The committee chief must carefully screen grades and counsel students with academic difficulties.

*Tactical Noncommissioned Officer—Responsible for discipline and development of personal leadership qualities of the students. He must be at once a specialist in training, a technician, an advisor, and an example to the students.

*Supply/Training Noncommissioned Officer—Requests, receives, and issues supplies, training aids, and equipment for the school. Under supervision of the chief instructor he prepares the school training schedule and coordinates guest instruction (times and rehearsals).

*Chief Instructor—Responsible for supervision of all periods of instruction and presents methods of instruction. Should be a school-trained instructor.

*Assistant Instructor—Assists Chief Instructor. Must be prepared to act as a demonstrator for all guest instructors if required.

*Clerk-Typist—Performs necessary clerical duties such as preparation of lesson plans. He also maintains training and supply records.

The primary mission of these seven men is the administration and operation of the school. In accomplishing the mission, it is recommended that their instructional duties be limited to teaching methods of instruction and leadership subjects. Instructors for the principal courses are drawn from the many specially-qualified officers and noncommissioned officers throughout the battalion who can act as instructors in their specialties, *e.g.*, communications, intelligence, field sanitation, and maintenance. These personnel may have instructed at branch or staff level schools or have attended an Army level leadership school or academy.

But, regardless of their instructional background, their prime qualification is a comprehensive knowledge of a technical subject. There should be no hesitation in calling on other personnel for advice and assistance.

Consideration should also be given to asking for instructor help from outside the battalion. For instance, the 3rd Battalion obtained highly qualified guest instructors from the 36th Ordnance Detachment, demolition training; from the G2, Office of U.S. Army Forces Southern Command, to present intelligence training; and from the USARSO Chemical, Biological, and Radiological School. These instructors thus obtained were qualified to present subject matter which the student might not receive in higher level leadership schools. Too, these instructors could cite specific problems which their agencies encountered in dealing with the battalion.

To create an academic atmosphere and reduce distraction, the school should be located separate from the battalion. A suitable classroom, barracks, and study hall are minimum requirements.

Training aids and facilities for such a school must be the best obtainable. It is surprising what a search of potential sources can turn up. For example, the 508th School located brand new blackboards, mahogany podiums, magnetized boards and other training aids. Motion picture projectors, training films, PT stands,

The greatest emphasis in the course must be placed on practical exercises rather than theoretical instruction.



VU-graphs, and military publications can be made available for student use with only a temporary hand receipt. A parade field, an obstacle and/or confidence course, and an athletic field are available on most posts, their use requiring only coordination with other units.

The course of instruction is best determined by the training problems and leadership deficiencies noted by the battalion commander. To assist the project officer in setting up the school, Army Subject Schedule No 22-1, *Basic Leadership Training: The Leaders Course*, dated 24 July 1959, is an excellent guide, although modification or improvisation of some portions is necessary to solve the training problems peculiar to a given unit.

The greatest emphasis in the course must be placed on practical exercises rather than theoretical instruction. When lectures are necessary, it is desirable that the students prepare and present the instruction. Their performance can then be graded and made a part of their academic record. Opportunity should be provided for the leadership school students to instruct and lead each other. During the instructional periods as well as during off-duty periods, the students must be encouraged to take the lead in everything they do. The school committee must constantly endeavor to keep the student's efforts directed toward the training objectives.

To achieve a comprehensive evaluation of each student, the school must employ a merit system by which each student is observed and rated on a continuing basis. All aspects of individual performance and conduct should be included for evaluation. The students must be impressed with the fact that, whether they are in the classroom, study hall, barracks or training site, they are soldiers 24 hours a day, and their actions are subject to commendation or censure at any time.

The 508th Battalion found that a three-week course was the most practical for our purposes. Basically, the first two weeks were devoted to methods of instruction, leadership instruction, and general military subjects and to insure continuity and uniformity of instruction, the leadership and the methods-of-instruction classes were presented by the school cadre. Guest instructors were used for all other portions of the course.

The third and final week of the course should be devoted to field training, which consists mainly of patrolling. In this phase of instruction, the student should be taught all aspects of combat and reconnaissance pa-

Captain Melvin E. Kriesel, AIS, a graduate of the United States Military Academy and Ranger and Airborne Schools, drew material for this article from his experience as the project officer for organizing and conducting a battalion level leadership school at Fort Kobbe, Canal Zone, for the 3d Battalion (Airborne), 508th Infantry.



Each student is observed and rated on a continuing basis.

trolling, with maximum use made of the Ranger-qualified personnel of the battalion to conduct this instruction.

In the 3d Bn, 508th's School, the field-training week culminated in a 24-hour airborne raid patrol. This patrol was conducted by a senior captain who had previously instructed at the Ranger Department, U.S. Army Infantry School. Under extremely demanding conditions the leaders of this patrol were required to plan, rehearse, and conduct a long-range combat patrol deep into enemy-held territory.

In recognition of both individual and collective achievement, a graduation exercise should be held at the completion of the course, with awards presented to the outstanding students to demonstrate the importance placed upon leadership training by the commander. It is the policy of the 3d Battalion to invite high-ranking commanders to present graduation certificates and awards.

Maximum use was made of radio, television, and newspapers to publicize student accomplishment, and the commanders, families and friends of the students were encouraged to attend the graduation ceremony. This served to enhance or build the professional image of the school.

A good leadership school anticipates the need for junior noncommissioned officers and provides the training necessary to develop leadership ability. It is a school that can be tailored by the commander to fit the needs of his unit, and, it is a type of school that can be conducted at battalion level. ■



DEATH OF A WARRIOR

Brad Day

AFTERNOON SHADOWS lengthened across the French countryside and a distant thunder of artillery rose above the hush which had enveloped us.

Barely five weeks previously, the military cemetery at St. Mere Eglise had been a green meadow untouched by war. Now, long rows of freshly bulldozed earth covered our dead. The mood of sorrow will remain indelible in my memory. Brigadier General Theodore Roosevelt, Jr., Assistant Commander of the 4th Infantry Division, had been a leader of singular stature. I stood among battle-weary troops, gathered for his warrior's funeral, conscious of the awe which gripped them.

The cemetery was crowded with men of the 4th Division and old 1st Division comrades with whom Roosevelt had served during World War I and part of World War II. Suddenly, an air battle between two German and American fighter planes mounted the eastern horizon, but we stood at attention, waiting.

General Roosevelt's flag-draped casket was borne slowly into the cemetery on a half-track following the

division band, which played Chopin's Funeral March. Advancing with measured tread were the pallbearers, then Roosevelt's son, Quentin, the general's aide, and his jeep driver. Following were 10 honorary pallbearers led by Generals Bradley, Patton, Huebner, Hodges, and Raymond O. Barton, Commanding General of the 4th Division. Marching at the rear of the procession was an honor guard of one man from each unit of the 4th.

The division band played a solemn hymn. Then, as two chaplains began the funeral service, I reviewed the brief months Roosevelt had been with us, recalling his colorful qualities of leadership which had spurred us to victory against bitter German resistance.

punishment

He had joined us in March, a tough, wiry brigadier general, whose weathered face wrinkled deeply when he smiled. Battle-scarred by two wars, this man was no ordinary general officer. Theodore Roosevelt, Jr., was the eldest son of a famous President of the United States, a little-known but much-decorated hero. During pre-invasion training on the English coast, I often saw him in the field. He was not a large man, but his jaunty bearing and tremendous voice set him apart from others. What impressed me most was that he possessed combat experience particularly suited to our role in the initial assault of Fortress Europe.

The 4th Division was to spearhead the landing of American ground troops in Normandy at a point on the coast nearest Cherbourg, and Roosevelt requested permission to lead two battalions of the 8th Infantry in the assault. Our division commander, General Barton, at first refused, fearing that Roosevelt would be killed. But when Roosevelt insisted that the troops needed a seasoned hand to steady them during their first engagement against the enemy, Barton consented.

The English Channel was rough as the great invasion fleet steamed toward France and tension spread among the men who would storm Utah Beach on the following morning. Finally, in darkness, the transports anchored off the coast. Infantrymen, untried in battle, were nervous and frightened, but Roosevelt's presence tightened their esprit de corps. If this rugged bull-voiced grandfather who had arthritis and carried a cane could lead them onto an enemy beach, they were determined to quickly breach the German defense.

I will never forget the tracer-spattered darkness of that night. Aerial bombardment flamed behind the beaches and aircraft were constantly overhead. Sleep was impossible and apprehension increased as morning approached. Burdened with equipment, troops stood on the deck of the U.S.S. Dickman at first light, waiting to enter the boats. They were to destroy German resistance on the beach, then fight inland across two causeways

spanning flooded areas, to meet airborne units which had landed in Normandy during the night.

Thousands of planes swept toward shore to bomb and strafe plotted enemy fortifications. Naval bombardment, thundering with indescribable fury, pounded the rim of the coast.

A turbulent sea made loading of the landing craft difficult. Infantrymen huddled in the boats, wet and seasick, as they cleared the ship and proceeded toward rendezvous points. Awaiting the signal to head shoreward, the small boats circled, dwarfed by an immense invasion armada. Then the first wave suddenly steamed toward the beach, irrevocably committed, anticipating heavy casualties.

General Roosevelt's boat was first to touch down and he waded ashore, carrying his familiar cane and a map, armed only with a .45 in a shoulder holster. Climbing a sand dune, he reconnoitered the area, ignoring occasional spurts of sand near him from enemy bullets. Utterly preoccupied with inspecting the terrain, he was immediately confronted by an unforeseen and critical problem.

temporary governor

Roosevelt discovered that, through an error of a Navy guide boat, the Utah Beach landing had been made 2,000 yards south of the designated beach but directly opposite Exit Two, one of five causeways leading through the flooded area. Either the rest of the 4th Division could be brought ashore here or the entire assault diverted to the two assigned causeways. Roosevelt quickly decided to fight across the single causeway.

"We'll start the war from here," he said.

Aerial and naval bombardment had stunned German defenders on this segment of the beach and resistance was lighter than expected. However, the beach soon came under heavier rifle, machinegun and mortar fire from nearby enemy emplacements. Presently German artillery opened up.

Roosevelt knew that he must immediately move the assault force off the beach or casualties would become severe. He walked among the exposed troops, urging them to seek cover behind the seawall. Then he personally led hesitant groups over the seawall to establish them inland, as small units of Infantry attacked German positions behind the beach. His disregard for his own safety encouraged frightened men to engage the enemy aggressively. The first layer of German defense began to crumble.

By the time the third assault wave landed, enemy artillery had ranged-in accurately on the beach, but Roosevelt stood fast, directing the attack. When youngsters undergoing their baptism of fire saw Roosevelt among them and heard his booming encouragement, they quickly plunged into battle. This was a moment of

Infantry NOTES

COMBAT NOTES

The Combat Notes section of INFANTRY Magazine is not restricted to items only on or about the fighting in Vietnam. Rather, we welcome combat notes from around the world, to include good ideas on combat planning, preparations, and tactics.

SHARE YOUR EXPERIENCE

Everyone who has been in combat in Vietnam has an experience worth sharing. The Infantry School needs that experience to insure that our soldiers arrive in the combat zone fortified with the experiences of those who went before them.

A book is to be published at USAIS containing a series of short narrative descriptions of experiences of small unit leaders and their units in combat or combat support roles in Vietnam.

These small unit narratives will be principally squad, platoon, and company actions plus a selection of pertinent battalion and brigade actions. To assist our personnel going to the advisor positions a portion of the book will be reserved for that type experience. Contributions from supporting units and other free world forces fighting in Vietnam are being solicited more complete.

In order to make this worthwhile book available to our future combatants at the earliest possible date you are invited and encouraged to submit your Vietnam experiences to the Office of the Director of Instruction, USAIS, Fort Benning. They should be dispatched so as to arrive by 1 January 1967, using the following format:

INTRODUCTION:

Include what kind of action it was, which unit participated, where and when it took place, and any other essential background information.

NARRATION:

A brief, clear and concise description of the action involved, with illustration(s) highlighting the critical points of the operation, i.e. those friendly force actions or reactions and enemy force actions or reactions which lead to a meaningful analysis of the operation.

ANALYSIS:

An honest evaluation of the action as to the result of the operation and/or its impact on the operation of the next major unit.

C & GS INCREASE

Attendance at the regular course of the U.S. Command and General Staff College will be increased from 784 to 1344 beginning with school year 1967-68. In order to handle the increase, the associate course will be discontinued. The reason for the change is to better qualify the maximum number of active Army officers for command and general staff functions.

U. S. EUCOM HEADQUARTERS TO RELOCATE

United States European Command Headquarters at Camp des Loges, France, is being relocated to Stuttgart, Germany, as a second major step in the Defense Department's program to rearrange and streamline the U. S. military command structure in Europe.

The move is a result of the necessity to relocate U. S. military forces from France, according to a DOD announcement.

It is planned that EUCOM Hq will be operational in Stuttgart by 31 March 1967.

STATUS OF FORCES AGREEMENT

The Republic of Korea and the United States have signed a Status of Forces Agreement similar to those now existing with Japan and various NATO countries.

Like other SOFA pacts, the Korean agreement is

designed to resolve legal conflicts between American and host-country law.

One provision of the 31-article agreement gives Korea jurisdiction in civil claims disputes among Americans and Koreans.

Another proviso applies to offenses not arising out of any act or omission in performance of official duty. In such cases, the U. S. may exercise jurisdiction unless the Korean government decides within 15 days whether it wishes its courts to exercise jurisdiction.

Should a serviceman be tried by a Korean criminal court, the agreement contains an extensive list of procedural protections in accordance with U. S. constitutional guarantees.

The agreement will not go into effect until three months after the Korean government notifies the U. S. that the pact has been ratified.

OFFICIAL PHOTOGRAPHS

On a daily basis, personnel actions concerning Infantry officers are decided at Department of the Army. Such actions as promotion, school selection, and PCS assignments are made at DA without the benefit of the officer's personal presence. Since it is impractical for an officer to make a personal appearance for each action that concerns him, an official photograph is the best way to provide the personal touch needed to make "personalized treatment" a fact.

AR 640-140 prescribes procedures for the maintenance of recent photographs in both the official (TAGO) and branch files. Officers in the grades of captain through colonel are responsible for having full-length photographs taken at an Army photographic facility and to advise the custodian of their personnel records of the date the photograph was taken. Procedures for processing are well understood at each Army photographic facility. They are equipped to handle the requirement except for one item. YOU are needed in front of the camera!

CHANGES IN OFFICER PROCUREMENT

Army has announced two changes to officer procurement programs affecting reserve officers who are eligible to apply for active duty.

The most significant change is new age criteria for active duty. Second lieutenants may be accepted up to their 31st birthday, with first lieutenants eligible until their 35th. Captains are eligible until their 39th birthday and majors must not have reached their 41st.

This is a more liberal policy than the previous one based on maximum age and waivers for active commissioned service.

The other change concerns active duty warrant officers holding lieutenant or captain reserve commissions. Past restrictions regarding ability to qualify for retirement as commissioned officers have been removed.

This means warrant officers holding reserve commissions as captains or lieutenants will be considered for active duty as commissioned officers regardless of age or service.

Warrant officer records are being screened and selected individuals will receive a letter inviting them to apply for active duty. Initial tour is two years with further extension based on service needs and officer's performance.

OFF-DUTY STUDY

A Department of Defense directive encourages eligible active duty personnel to "avail themselves of voluntary off-duty educational opportunities" provided in Public Law 89-358.

The law provides educational assistance allowance through the Veterans Administration.

DOD directive 1322.7, signed by Deputy Secretary of Defense Cyrus R. Vance, notes that use of off-duty education opportunities would assist individuals:

- In performing military assignments more efficiently.
- In preparation for more responsible military assignments and increase chances for promotion.

In-service education, the directive explains, would also help individuals in maintaining continuity in academic or vocational training begun before entering military service; increase value to the civilian manpower pool when separated from the Armed Forces; and contribute to a person's appreciation of the quality of American life.

Under the law, active duty military personnel who have completed less than two years of active duty service are ineligible to receive in-service educational allowances from the VA.

MILITARY JUSTICE

In several recent Court of Military Appeals Cases, while considering the legality of a search authorized by a commander, the court has stated that their task would be simplified if the authority to conduct the search was in writing.

A commander may, upon probable cause, orally authorize a search of an area for which he is responsible. If the consent to search is in writing, however, spelling out the facts upon which the authorization is based and enumerating the articles to be seized, there would be no necessity for extensive testimony, months

NOTES

after the event, as to the circumstances relating to the scope of the authority to search.

It is advised that commanders at all echelons seek the advice of the local Staff Judge Advocate when any doubt exists as to the legality of authorizing a search.

U.S. vs. Martineze, 16 USCMA 40, 36 CMR 196;

U.S. vs. Penman, 16 USCMA 67, 36 CMR 223;

U.S. vs. Hartsook, 15 USCMA 291, 35 CMR 263.

NEW EUROPEAN COMMUNICATIONS NETWORK

A major segment of defense communications network in Europe has been activated as part of European Tropo-Army system spanning a number of Western European nations.

The activation adds more than 1,200 channel miles to STRATCOM's worldwide communications complex. The system will support all U. S. forces in Europe and the NATO Armies.

It ties in communications from Leghorn, Italy, through the Italian Alps up to Bremerhaven, Germany, and from Heidelberg to within a few miles of Paris.

"Tropo" signifies tropospheric scatter, a method of long-range radio transmission by which signals are deflected off a layer of the atmosphere to an over-the-horizon receiving station.

OFFICERS' VOLUNTARY EXTENSIONS

Officers serving obligated tours scheduled to expire during Fiscal Years 1967 or 1968 may now request that their tours be extended for 12, 18, or 24 months. The purpose of this exception to provisions of AR 135-215 is to enable obligated tour officers to serve during the Vietnam conflict without making indefinite career commitments. Applications must be submitted before 1 July 1967.

How to Apply

Officers who wish to extend their obligated tours should submit a letter through channels to Department of the Army, in the following format:

"Under the provisions of DA Message 777592, I voluntarily request that my current obligated active duty tour which expires on (Date of expiration) be extended (specify 12, 18, or 24 months). I understand that if my application is accepted by the Department of the Army I will be voluntarily released from active duty at the completion of this extension unless I voluntarily incur an additional service obligation, or am under charges which may result in court-martial, or there exists a state of war or declaration of national emergency."

Requests for early release from extended portions of obligated tours will be considered in accordance with

AR 135-173. In the event of a reduction in force levels, early release will be in accordance with policies determined to be necessary at that time.

It is noted that the provisions of AR 135-215 pertaining to *short term* extensions remain in effect. It is emphasized that officers currently serving on short term extensions *are* eligible to apply for further extensions of 12, 18, or 24 months under this program.

Information officers are urged to assist commanders in publicizing this opportunity for obligated tour officers to serve in time of need without electing a career commitment.

ANNIVERSARY

The 25th Infantry "Tropic Lightning" Division celebrated its 25th anniversary on 1 October 1966. Born at Schofield Barracks, Hawaii, from elements of the famed old Hawaiian Division just 10 weeks before the attack on Pearl Harbor, the 25th earned an enviable reputation for its part in both World War II Pacific campaigns and the Korean War. It is adding to that reputation today in South Vietnam.



The Division's shoulder patch was adopted late in 1943. It is designed in the shape of a taro leaf, red with a gold border, and a bolt of lightning superimposed in gold. The taro leaf, native to the Pacific islands, is reminiscent of the Hawaiian birthplace of the Division, while the golden, zig-zag bolt of lightning symbolizes speed and aggressive spirit.

ASSIGNMENT PREFERENCE STATEMENT

Careers are managed by a team. Infantry Branch, a part of the Officer Personnel Directorate, is your career management office at Department of Army level. The Branch represents just one-third of the "manager team." Your immediate commander is another third and YOU are the final, all-important team member!

Your part of career management is to keep your immediate superiors and DA informed of career needs and personal preferences. The how, where, and when

need to be spelled out in terms of your desires. Keep your commander informed by personal discussion. Keep DA informed by providing current and realistic Assignment Preference Statements (DA Form 483).

When a Preference Statement is received at Infantry Branch it is placed in the branch 201 file and all previous statements are destroyed. The Preference Statement is examined as the first step in an assignment action. The needs of the service, individual career needs and personal qualifications can be overriding factors. For this reason, it is important that preferences are realistic and prepared carefully. For example, the large Infantry troop requirements in Vietnam and in CONUS training centers are needs which must and will be met. Eligibility requirements for ROTC assignments, service school instructor tours, and MAAG or Mission duty cannot be waived. Common sense must guide your pen!

Here are the DO's:

1. Take a few minutes to review the form and the instructions on the reverse side.
2. Indicate only your preferences in Section 8. You are not obligated to fill all blanks.
3. State the personal or compassionate considerations the Branch should know about in Section 10c.
4. Submit new statements as often as is necessary to keep the Branch current.
5. If you are currently serving on an overseas tour, complete Section 8b only if you desire an inter-theater transfer, *i.e.*, from Vietnam to Europe or from Europe to Vietnam. Amplify or qualify these desires in Section 9.

The Infantrymen at DA who form one-third of YOUR career management team can and will help you in getting the assignment of choice if you assist by making your desires known.

ASSIGNMENT PATTERN FORECAST

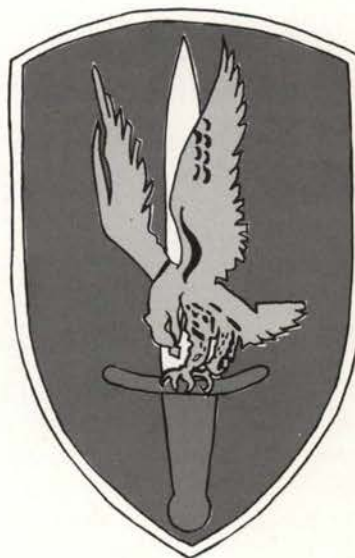
Those Infantry lieutenants whose initial duty assignments are within the Continental United States will normally be reassigned to a short tour (unaccompanied) area within five to 11 months after joining their unit. Most officers, whose initial duty assignment is to an overseas long tour (accompanied) area, will be reassigned directly to Vietnam after serving 24 to 36 months in the long tour area. Those officers whose initial assignment is in a short tour area other than Vietnam (*i.e.*, Korea) will probably be reassigned to Vietnam 12 to 18 months after returning from their short tour.

The Army training base, (training centers and service schools), is the most likely assignment for lieutenants returning from overseas.

BRIGADE PATCH NOW OFFICIAL

The 1st Aviation Brigade in Vietnam has been authorized to wear a distinctive crest and shoulder insignia.

Approval for the new insignia was granted by the US Army Institute of Heraldry on 2 August 1966. The shoulder insignia is a shield-shaped patch of ultramarine blue with an $\frac{1}{8}$ inch golden border—the blue and gold represent the colors of Army Aviation. In the center of the blue field is a red hilted, unsheathed crusader's sword with a swooping golden hawk grasping the hilt in its talons.



The unsheathed crusader's sword represents the origin of the mission of the Brigade in Vietnam. The hawk is a symbol of the concept developed during 11th Air Assault tests in 1963, and represents the impact of Army aviation on ground warfare. The gold of the hawk and the red hilt of the sword are the colors of the Republic of Vietnam, MACV, and USARV. MACV and USARV are the commands under which the Brigade was formed and now serves in combat.

CHAPARRAL PASSES TEST

The U. S. Army's newest air defense guided missile system, Chaparral, has been successfully test fired at White Sands Missile Range, New Mexico, it was announced 29 July by the Department of Defense.

All test objectives were met when the supersonic Chaparral intercepted a Firebee target missile. The test represents a continuing series of development at firings. Earlier tests were conducted at the Naval Ordnance Test Station, China Lake, California.

The successful test at White Sands was accomplished

NOTES

by a firing crew from the U. S. Army Air Defense Board, project personnel from Aeronutronic Division of Philco Corporation, and personnel from the Naval Ordnance Test Station.

Chaparral is one of two weapon systems selected by the Army for arming new air defense battalions being organized to provide field commanders with low altitude air defense in forward battle areas. It will be complemented by the Vulcan Gun, the self-propelled Hawk and the Redeye missile in the forward area air defense role.

The self-contained Chaparral fire unit is capable of aiming and firing missiles against hostile aircraft while mounted on various types of vehicles, including the self-propelled M730 tracked carrier, railroad flat cars, flat-bed trucks and trailers; the unit can also be ground emplaced.

The missile, a Navy developed Sidewinder IC modified for ground-to-air launch, is aimed by the gunner in a turret mount. The missile automatically guides on the target's heat source after launch.

ASSIGNMENT OF INFANTRY CAPTAINS

The type of operations being conducted in Vietnam places unusually heavy demands upon the Infantry. This has resulted in assignments of Infantry captains being primarily oriented to short tour areas. Particularly critical are the requirements in Vietnam. Forty-seven percent of all Infantry captains will be serving in Vietnam by 1 January 1967. This means that captains will begin returning to Vietnam for their second tour in late April 1967, after approximately eighteen months in CONUS. Infantry captains who have not completed a tour in Vietnam, if physically qualified and individual service commitments permit, will be assigned to Vietnam prior to sending non-volunteers back for a second tour. The priority of assignment of Infantry captains, returning from Vietnam, is to the CONUS training base (Army training centers, service schools and ROTC) and the Recruiting Command.

OFFICER'S BRANCH FILE

Officers who do not have the opportunity personally to visit their career branches in Washington may wonder just how the branch goes about keeping up with their latest status.

A file containing pertinent information is maintained on each officer by his career branch. This branch file represents "you."

This is not your official 201 file. The official 201 file is maintained by The Adjutant General. Your branch file is an informational working file which, although ac-

curate in its context, is not considered an official 201 file.

In order to represent you in every detail accurately, your branch file contains three general elements of information.

Qualification Record

The element most frequently used by the branch is your Officer Qualification record (DA Form 66). The 66 is one of the most widely used tools in personnel actions such as selection for schools, promotions and assignments. This is one reason why your annual audit to verify its accuracy and completeness is so important.

Efficiency Report Section

Another element in your branch file of comparable importance is the Efficiency Report Section. This section includes photostatic copies of every efficiency report that has been submitted on you, duplicates of service and civil school reports, letters of commendation, letters of appreciation and award citations. The original copies of these documents are maintained in your official 201 file, but for convenience of the branch, the duplicate file is maintained so that "you" will be represented as completely and as accurately as possible.

Correspondence Section

The final element in your branch file is the Correspondence Section which contains working papers initiated in or outside the branch, which have a bearing on your personal status. Such items as personal letters from you to the branch and copies of replies; your Preference Statement (DA Form 483); copies of assignment and transfer orders; items of special consideration concerning yourself or family; a copy of your official photograph, and personal interview forms are filed in this section.

This composite branch file is your personal representation in the Officer Personnel Directorate.

NEW CLEARING BLADE

A clearing blade that will fell trees quickly and safely is under test for possible military procurement at the U. S. Army Mobility Equipment Command's Engineer Research and Development Laboratories, Ft. Belvoir, Virginia.

The blade features a "stinger," or sharp projection on its left side, used to split large trees which are then sheared off at ground level. The same blade can also be used to pile cut material in windows or to construct drainage ditches.



Infantry REVIEWS

THE BATTLE OF THE MARNE. By Henri Isselin. New York: Doubleday and Company, Inc., 1966. 304 pages. \$5.95.

John W. Wells

An unusually dispassionate and reasoned treatment of this giant battle of World War I that stopped the German drive of 1914 and resulted in the trench warfare usually associated with World War I. Here are the mistakes of each side, the definite, the probable, and the possible results; here also are the hurried moves and maneuvers to counter the mistakes or take advantage of them.

Marshal Joffre is treated without the usual attempt to paint him as either a genius-hero or a stupid bungler. Von Moltke shows some of the serious character traits that so often in the history of war have turned brilliant efforts of skilled subordinates and highly trained and motivated troops into defeat.

The author succeeds in giving his reader a sense of the person and of the multitude of unit actions while treating the giant battle (or series of battles) in terms of field armies. Over two million men, for example, were actively involved in this gigantic battle alone. And the famous Paris taxicabs? Well, they did transport a battalion to the front.

Henri Isselin, the author, was captain of a night bombardment squadron during World War II. The book is his first appearance as an author in the United States. He is a genuine military scholar and it is to be hoped that more of his work will soon appear. Military readers will not only enjoy this volume, but will gain from reading it. It is a worthwhile book.

THE NONCOM'S GUIDE. 18th Edition. Harrisburg: The Stackpole Company, 1965. 479 pages. \$4.95.

Published continuously since 1948 and similar in scope to the publisher's Officer's Guide, this book

provides a wealth of information to the noncommissioned officer of today's Army. The information which is presented is useful and more than just nice-to-know. There are chapters on duties and responsibilities, appointments and reductions, how to study and teach, military justice, and travel information. For the enlisted woman, there is a chapter for the WAC noncom. Appendices include information on military publications, unit veterans associations, and an enlisted MOS conversion list.

A most useful tool for the noncommissioned officer who wants to better prepare himself for his position.

MIDWAY: TURNING POINT OF THE PACIFIC. By Vice Admiral William Ward Smith (Retired). New York: Thomas Y. Crowell Company, 1966. 174 pages, six maps, 24 photographs. \$4.95.

With the emergence in the last two years of the Kennedy biographies, each of them written by a close associate of the former President, an old question has been given new life:

Is a man who made history qualified to write about it?

Vice Admiral William Ward Smith (Ret), one of four Flag Officers at Midway and Chief of Staff of the Pacific Fleet at Pearl Harbor, is one who was deeply embroiled in the history-making events of which he writes in MIDWAY: TURNING POINT OF THE PACIFIC.

Admiral Smith writes eloquently, warmly and sincerely from his point of view. Beginning his account with the Japanese attack on Pearl Harbor, he then chronicles the slow galvanization of the crippled fleet, the preparations of the Navy to fight back with what forces had survived "the day of infamy."

In constructing an exciting historical scenario, Admiral Smith describes the events that took place

REVIEWS

again a significant international power. The author is uniquely qualified to discuss his subject. A staff member of the Rand Corporation, he is at present Research Professor at the National Defense College in Tokyo; he has studied at Tokyo University, has lived many years in Japan, and has written two other books on that country.

This book tells the reader something about the land—"a country of great scenic beauty;" the people—"a mixture of several racial stocks;" and life in the past—"a remarkable degree of continuity" before launching into a discussion on the emergence of modern Japan and its relations with the other countries of the world.

Well illustrated, this volume is must reading for those whose interests lie in the Far East.

NEITHER LIBERTY NOR SAFETY: A HARD LOOK AT UNITED STATES MILITARY POLICY AND STRATEGY. By General Nathan F. Twining, USAF (Retired). New York: Holt, Rinehart and Winston, Incorporated, 1966. 320 pages. \$5.95.

In this volume, the former Chief of Staff of the United States Air Force expresses in strong terms

his feelings on such vital issues as the evolution of national security policies, the limited war concept, arms control, public information policies, nuclear weapons, and the cost effectiveness approach to military planning.

Undoubtedly, in the months ahead, this will be a widely discussed book, by the man in as well as out of uniform.

COMPANY ADMINISTRATION AND THE PERSONNEL SERVICE DIVISION. By Colonel C. M. Virtue. Harrisburg: The Stackpole Company, 1966. 496 pages. \$7.50.

This is the 30th revised edition of what has become a standard in its field. Chapter titles include supply and property accounting procedures, the company mess, morning reports, unit funds, military pay, and joint travel regulations.

Since 1933, this publication has been a handy reference for administrative personnel at both company and higher levels. The new edition is a worthy successor to the earlier editions, and should be in the hands of, or available to, the Army administrator and to all those interested in the administrative field.

INSTRUCTIONAL MATERIAL

Instructional material may be purchased by any member of the United States Armed Forces who so identifies himself when ordering. Purchase requests must include the name and address of the military unit to which the purchaser is assigned or attached, and a statement that the material will not be re-sold or otherwise released to individuals not assigned to the military establishment or to agencies not an integral part of the military establishment.

Mail orders must be accompanied by full remittance, including a postal surcharge—\$.25 for orders less than \$5.00; 5% of the total cost for orders over \$5.00. Orders will be mailed to the purchaser through his unit.

All inquiries should be directed to the Book Store, The United States Army Infantry School, Fort Benning, Georgia 31905.

EQUIPMENT LOG BOOK (Resident Handbook)

This is a 42-page sample log book to assist in preparation of an actual log book; it is for instructional purposes only. \$.20.

QUICK FIRE TECHNIQUES (Resident Booklet, Item 2).

Rifle Marksmanship instruction as now conducted does not wholly prepare the soldier for effective use of his weapon in combat. To fulfill this requirement the soldier must be trained to accurately fire his rifle at

any appropriate target in any situation likely to occur. It is known by combat example from the inception of modern warfare to the current action in Vietnam, that the individual soldier will at times find himself virtually face to face with one or more enemy. This, a situation for which he had not been trained, he now learns "on-the-job." This void in the current rifle marksmanship program must be filled.

Because the close-in target (enemy) is the most dangerous to our soldier, it is this one which must be

engaged first. To kill this type of target the soldier must be able to react instinctively and rapidly with effective fire.

"Quick Fire" is the rapid, instinctive engagement of surprise targets which are exposed for short periods of time at relatively close ranges.

Tests conducted at Fort Benning resulted in the development of special techniques which we feel will provide the soldier the capability of coping with a situation requiring "Quick Fire." 5¢

COMBAT FORMATIONS AND BATTLE DRILL (National Guard Problem 1302, Item 7). Problem states and explains the principles and techniques of platoon-level combat formations and battle drill. Problem also includes the inherent characteristics of all combat formations; the factors influencing a leader's decision in selecting a particular combat formation; the combat formations of the rifle squad and their characteristics; the combat formations of the rifle platoon and their characteristics; and the fundamental skills that the individual soldier must have prior to starting battle drill training and the sequence of battle drill training. 30¢.

RIFLE AND WEAPONS SQUAD IN THE ATTACK (National Guard Problem 1303, Item 8). Problem explains the actions of the rifle and weapons squads during the attack, to include preparation and actions upon seizure of the objective. Problem also includes the actions taken by the rifle and weapons squads while in the assembly area preparing for an attack; the troop-leading procedures that the squad leader follows after receiving the attack order; the three phases of an attack; the actions of the rifle and weapons squads from the

assembly area to the line of departure to include the attack position; the actions of the rifle and weapons squads from the line of departure to the final coordination line; and the actions of the rifle and weapons squads from the final coordination line to the objective to include consolidation and reorganization. 20¢.

INSTRUCTIONAL PAMPHLET, MECHANICAL TRAINING 107MM MORTAR. A 33-page pamphlet covering mechanical training on the 107mm mortar. Pamphlet covers employment; ammunition; rate of fire; crew drill; safety checks; sights; fire commands; calibration; and referring and realigning. 15¢.

ARTILLERY ORGANIZATION AND FUNDAMENTALS (Resident Problem BCO 01) This problem describes the five organic artillery battalions of the Infantry division and the direct support battalions organic to other divisions by weapon type and caliber. \$.05.

EMPLOYMENT OF AIR DEFENSE ARTILLERY IN FORWARD AREAS (Resident Problem BCO 31) This problem defines how air defense is provided to the forward area and how a company-size unit can effectively defend itself against aerial attack. It also specifies the actions which should be taken by a company-size unit to insure adequate air defense for that unit. \$.05.

AMPHIBIOUS PLANNING, LOGISTICAL SUPPORT (Resident Problem BKC 59) This problem explains the logistical considerations and principles that are unique to the amphibious operation. The problem also includes the planning of an amphibious assault. \$.10.

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INTRODUCTION TO COMBAT LOGISTICS (Resident Problem BJO 15) This problem explains the functional areas and activities of logistics and the logistical support available from the division support command to the brigades, including the functions of the organic support command units that normally operate in the brigade area. \$.05.

SUPPLY, MEDICAL AND MAINTENANCE OPERATIONS IN COMBAT (Resident Problem BJO 17) The problem deals with the systems of supply used in combat, the basic load of ammunition, the bases for obtaining ammunition, the required and available supply rates of ammunition, medical evacuation in the ROAD division, and the maintenance and evacuation responsibilities of the rifle company and combat battalion. \$.05.

LOGISTICAL CONSIDERATIONS IN UNIT READINESS (Resident Problem BJC/K 71) This problem involves current supply procedures and solutions to problems in this area encountered by the battalion in a garrison situation. The problem also details the requirements demanded of officers who have command responsibility for government property and the methods of informal accountability for government property maintained at battalion level. \$.10.

RIFLE PLATOON IN ATTACK—LIVE FIRE (Resident Problem CPB/O/G 24) This problem will enable the commander to plan and conduct a daylight attack with a rifle platoon, including the actions of a rifle platoon in a daylight attack from the assembly area

to the objective, the troop-leading steps and an estimate of the situation, a ground reconnaissance, and the most effective method of employing the machine guns to support the advance of the maneuver element. \$.05.

RIFLE COMPANY IN PERIMETER DEFENSE (Resident Problem CCO/K 42) This problem will enable the commander to plan for the employment of a rifle company in a perimeter defense and to explain how the fundamentals of a perimeter defense can be applied in the counterinsurgency/guerrilla environment. \$.05.

MECHANIZED RIFLE COMPANY AND PLATOON OPERATIONS (Resident Problem CCB/O 72N) This problem deals with the fundamentals of offensive, defensive and retrograde operations at the company and platoon level. The problem includes the plan for a security echelon, forward forces and a reserve; employment of indirect fires; and composition and mission of the reconnaissance party, main body, detachments left in contact, and applicable control measures. \$.20.

RIFLE COMPANY IN DEFENSE AND RETROGRADE OPERATIONS (Resident Problem CCO 41) This problem covers: the mission of the rifle company in defense; the mission of the combat outpost; the three echelons of defense and the battle area; the key terrain features and enemy avenues of approach; positions for barrages organic to and allocated to the rifle company; the use of wire and minefield obstacles; and communications, resupply, and evacuation. \$1.00.



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