LESSONS LEARNED

A HISTORY OF US ARMY LESSON LEARNING

BY

DENNIS J. VETOCK

. . . I shall be content if it is judged useful by those inquirers who desire an exact knowledge of the past as an aid to the interpretation of the future. . . .

— Thucydides,

The History of the Peloponnesian War

circa 430 B.C.

PREFACE

Let us ask how armies learn their lessons. We take for granted that armies seek to profit from their experience and thereby improve their performance. How, specifically, do they accomplish this? What procedures actually transform usable experience into improved performance? Whatever they are, these procedures should not be taken for granted but should be identified and analyzed. We need to know when and how armies — including our own — have made effective use of operational experiences. This need is more timely than ever for the US Army, since it recently established the Center for Army Lessons Learned (CALL). Unfortunately, no comparative or historical studies on the subject are available to offer insights and understanding to the new agency or to the Army as a whole. Lacking, too, is a coherent explanation of the lesson-learning phenomenon itself. What follows is intended to serve as the needed historical background.

The purpose of this study is to examine when and how the US Army has made contemporaneous use of its combat experiences to learn lessons in wartime. It focuses on the lesson-learning process itself: the approaches and procedures that transformed battlefield data into the usable experiences we call lessons and how those lessons became learned, that is, applied. Moreover, it looks at this process chiefly *during* a war, not afterwards. Postwar lessons cannot affect that war's outcome, although they may well benefit those who will fight the next war. Contemporaneously derived lessons offer immediate opportunity to affect ongoing combat operations.

Excluded from focus are high-level matters, like theories of war, national defense policy, and strategy. Sights have been set on combat tactics, techniques and organization in order to avoid the distracting contentiousness associated with sweeping lessons that can never be proven, only argued. Battlefield-level lessons are more pragmatic, tangible, even measurable, and they offer a manageable approach to begin to understand how lessons have been learned.

This effort is not intended as the final history of the subject but its first comprehensive examination. It explores how the US Army used the experiences of war during the war itself. The historical framework of ideas and events presented here should be considered an invitation for further research and analysis by others to advance our knowledge of this important concept and practice.

Source material for this study came exclusively from the rich and varied holdings of the US Army Military History Institute. Because of the pervasive nature of the lesson learning concept, and the fact that no body of secondary literature specifically addresses it, the following account is a testament to the scope of information available to researchers in the Army's chief repository for unofficial historical materials. The National Archives and Records Agency serves as custodian of the Army's official records, while MHI serves the auxiliary function of concentrating and preserving selected non-record copies of documents, along with military-related publications and the personal papers of numerous Army officers. Unfortunately, constraints of time allowed little more than cursory exploitation of the thousands of boxes of personal papers. Printed documents form the bulk of the primary source material consulted.

Carlisle Barracks, Pa.
September 1988

ACKNOWLEDGMENTS

TABLE OF CONTENTS

Appendices

LESSONS LEARNED

A HISTORY OF US ARMY LESSON LEARNING

PART I

EARLY APPROACHES
1755 - 1939

Experience is the name everyone gives to their mistakes.
— Oscar Wilde, 1892

Wise men learn by other men's mistakes, fools by their own.
— H.G. Bohn*

Experience is the worst teacher; it gives the test before presenting the lesson.
— Vernon Law*

For the first 300 years of American military history, no organized lesson learning took place. This is not to say that commanders did not learn from experience. They did, but informally so and in an individualistic sense. Although military lesson learning applies usable experience to improve combat performance, a relatively simple concept, the modern process is complex and, above all, institutional. Organizational procedures now operate the process under the supervision and administration of designated executive agents, and both the procedures and responsibilities are formally prescribed. For US Army lesson learning, the modern epoch did not begin until the 20th century's two world wars. The first codification of procedures and responsibilities occurred as recently as the Korean War. Organized lesson learning is thus a relatively new phenomenon.

A survey of the long pre-modern era uncovered no evidence of organized lesson learning during wartime until the American Expeditionary Forces went overseas late in World War I and intentionally processed its battlefield experiences for lessons. Before then, lesson learning involved no specific organizational procedures; instead, it relied on informal means and an individualistic approach during and after wars to incorporate the usable experience into current practice.

It could be argued that, with the glaring exception of the Civil War, no compelling pre-modern need existed for organized lesson learning. Personal experience and an occasional revision of drill manuals sufficed during an age of relatively slow technological change and under North American conditions, where geography and history kept the peacetime American army pathetically small, widely scattered, and more of a frontier constabulary than the nucleus of a conventional army. Although that army expanded during the major wars by volunteers and militia, usually ill-trained, the slow-paced warfare allowed mutual sharing of experiences among the participants between the infrequent battles. Regiments and entire field armies camped, marched, and battled together, often within sight and control of their commanders. To heed some lesson of experience needed no specialized procedures and agencies. In those seemingly simpler times, armies did not even have formal doctrine, something that modern armies would be lost without.

The pre-modern Army managed to muddle through without modern doctrine and without modern lesson learning because the times, in fact, were simpler. Personal knowledge acquired directly from experience, augmented by shoptalk and an occasional headquarters directive, kept commanders updated on techniques during wartime. Over the long intervals of time between wars, the careers of officers served as institutional memory. The active service of just three officers who became Commanding Generals, for example, spanned almost the entire pre-modern era, from the Revolutionary War to the Spanish-American War: James Wilkinson, actively served from 1775 until 1815; Winfield Scott, from 1808 to 1861; and Nelson A. Miles, 1861 to 1903. Under such conditions, informal approaches to lesson learning generally sufficed in North American warfare, except for the Civil War and until the First World War's European warfare taught differently.

---

* Unless otherwise noted, all introductory quotations are from *Bartlett's Familiar Quotations*, 15th ed., as is the Wilde quote. The other two are from Lawrence J. Peter, *Peter's Quotations* (NY: Bantam, 1979), pp. 170 & 174.

NOTES

1. The three quotations were found, respectively, in *Home Book of Quotations*, 8th ed. (NY: Dodd, Mead & Co.), p. 594; Carl von Clausewitz, *On War*, edited and translated by Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), p. 122; and Arthur L. Wagner, *Organization and Tactics* (Kansas City, MO: Hudson-Kimberly Publishing Co., 1897), frontispiece. The Maurice cited by Wagner could be Maurice of Nassau (1567-1625), Prince of Orange, whose military reforms professionalized modern Europe, or it could be Maurice, Roman emperor of the East (539-602), who wrote a treatise on military strategy.

2. John Shy, "First Battles in Retrospect," *America's First Battles, 1776-1965*, edited by Charles E. Heller and William A. Stofft (Lawrence, KS: University Press of Kansas, 1986), pp. 327-329.

3. The exact figures are 490,193 and 1,229,669, taken from the official data in the annual almanac issue of the Department of Defense's public information magazine *Defense* (Sep 1982), p. 46.

4. An official definition is pending as this study is being prepared. See US Army Training and Doctrine Command, "Army Lessons Learned System: Development and Application," draft Army Regulation (AR 11-XX), 6 December 1985, p. 3. (MHI Ref files).

5. *Oxford English Dictionary . . . on Historical Principles*, Vol. VI (Oxford: Clarendon Press, 1933), pp. 156-157 & 210-211.

6. Lucian K. Truscott, Jr., *Command Missions: A Personal Story* (NY: E.P. Dutton, 1954), p. 534.

7. TRADOC, draft AR 11-XX, p. 4.

8. See Jay Luvaas, "Lessons and Lessons Learned: A Historical Perspective," *The Lessons of Recent Wars in the Third World: Approaches and Case Studies*, Vol. I, edited by Robert E. Harkavy and Stephanie G. Newman (Lexington: D.C. Heath, 1985), pp. 53-72, and Michael Howard, "The Use and Abuse of Military History," *Royal United Service Institution Journal* 107 (Feb 1962), reprinted in *Parameters*, (Mar 1981), pp. 9-14.

9. Shy, "First Battles," pp. 327-352.

experience, the better. The Red Army, notably, studied its battle experiences *during* World War II, deriving and applying lessons efficiently and often. Lesson learning became a fundamental determinant of its wartime operational doctrine and tactical techniques. A general staff responsibility, the system involved centralized processing at the leading war colleges and included a field organization for processing experience directly on the battlefield. The system was far ahead of the US Army procedures of the war.

Other armies, too, have learned well how to process experience during ongoing conflicts. The French army, after its unhappy Indochina experience, practiced noteworthy lesson-learning procedures in subsequent combat in Algeria. The Israeli army currently uses a rapid response system to evaluate its operational experiences. Not only can the US Army learn from its own history, it can learn from other armies as well.*

---

* See Appendix D for further information on the three foreign armies mentioned and their lesson-learning practices.

time, the battalion was keyed to a high pitch of nervous tension. It broke completely under a new and terrifying sound. Our training had been at fault for we had failed to accustom men to all of the unfamiliar sounds of battle, and we failed to instill the rigorous discipline and control to prevent these panics.[6]

Once reported into a lesson-learning system, observations on naval gunfire and other information undergo evaluation by higher headquarters and designated agencies. They approve the official lessons, which may only constitute potentially useful applications for commanders and be disseminated as informational lessons literature. More authoritative applications include modifications of established tactics and techniques, sometimes limited to a particular command or theater and sometimes extended throughout an army by modification of doctrine or structure.

The lesson learning process described here fits the basic procedures that operated during the Korean and Vietnam Wars and on a pending peacetime system.[7] They share the fundamental feature of a complete circuit. Experience collected from the battlefield undergoes evaluation by designated analysts and the resulting lessons are applied in various ways that return to the battlefield in the form of new doctrine, adjusted techniques, adequately trained replacements, or simply useful information. When this circuit is completed, lessons have been learned and usable experience has been institutionalized to some degree. Lessons may not remain valid for long, perhaps not the next war, but they will most likely improve performance in any ongoing one.

Time For Lessons

Military lessons may be derived from experience on three occasions: after, during, and sometimes even before an event. Afterwards equals history, when outcomes have already been decided and the wisdom of hindsight helps derive lessons from the past. Looking in the opposite direction, lessons may be derived in advance by anticipating experience with probability theory. Between past and future, however, lies the always fleeting present, when experience is contemporary and when the outcome of a war or campaign could be affected by the application of lessons derived from its ongoing operations.

Contemporaneous lessons obviously have practical application during a war, but in peacetime the next best thing is previous experience, that is, history. The past serves well as a storehouse of combat experience, needing only research and interpretation to draw out the lessons. Learning war's lessons from those who fought before has been done throughout recorded civilization, intensively so in the past few hundred years. Past battles and campaigns have become laboratories for the conduct of war and for gaining experiences not otherwise available to peacetime commanders. However, the so-called lessons of history are not always clear or agreed upon. The fog of battle obscures history as well as war. Furthermore, once removed from its unique time and place, a past event, or a lesson derived from it, may no longer apply. Historical lessons are not universal solutions or immutable principles but only insights on a particular past situation.[8]

Whether historically or contemporaneously derived, once a lesson becomes learned, that is, institutionalized, how long does it stay learned? For individuals, lessons might remain for a lifetime, even when no longer valid, as in the case of soldiers who learned to differentiate between friendly and enemy artillery. Ask veterans of World War II combat how vividly they recall the deadly sound of the German 88mm gun. For armies, however, the life-span of lessons learned is not so permanent. As the veterans of the previous war's combat experience depart, the first battle of the next war will involve the personally inexperienced.[9] Additionally, the next war will be unique, as all events are. Although similarities and parallels exist between wars and battles, the lessons learned from an earlier unique situation may not necessarily apply to the new unique situation. Doctrine, training, and materiel that served well before may need adjustment to the new circumstances. The current conflict is the best time to learn lessons, continuously.

The Foreign Dimension

Some armies have learned better than others that the quicker an army learns from new

everyday speech with little thought given to the meaning of what seems self-explanatory. In the military profession, however, the term has acquired specialized meaning and pervasive usage that beg for definition and explanation. For nearly a generation, military overuse and misuse have given rise to different meanings. To some, the term suggests commonplace observations; others reserve it strictly for incorporated doctrinal precepts; and still others apply it broadly to any innovative and potentially performance-improving idea. The list of notions goes on. "Lessons learned" is much used but rarely defined. In fact, term and concept have never been officially defined or explained. Despite a long working association with it, the US Army has long neglected to standardize understanding of this vital activity.[4]

The lack of authoritative definition has not prevented lesson learning from taking place, but neither has it aided understanding of the concept. Relying on general language usage fosters confusion. Consider common dictionary definitions: "lesson" — an observation or experience resulting in new knowledge and "learn" — to gain knowledge through experience. Placing the two words together seems redundant, but the term has come to mean more than the sum of its parts. The noun "lesson" emerged in medieval English of the 13th century, while the verb "to learn", followed separately the next century. Not until 1697 did the tandem first appear in print and grace the English language with "learns the Lesson."[5] Significantly, the early usage of the term meant to *teach* the lesson, not to *learn* it, usage which is no longer grammatically correct. Modern teachers teach subjects to pupils and do not "learn" them to the pupils. A fine point, perhaps, but of import to more than wordsmiths, because every good teacher knows that what is taught is not necessarily learned. Teaching offers knowledge in the form of lessons, but learning means that the knowledge has been acquired. Usable experiences teach, but armies must learn these lessons by institutionalizing them. The military meaning of "lessons learned" should indicate something both taught and learned. A *lesson* is not necessarily a *lesson learned*, although both concepts are often used synonymously.

Lesson learning involves two basic elements, like the term itself. The lesson element represents a slice of experience somehow determined as useful. The learning element constitutes actual application to make that identified experience useful. If large patrols, instead of small ones, are identified during jungle operations as more effective, that is the *lesson*, which becomes *learned* when incorporated into operational procedures and manuals. Once identified or derived, a lesson must await application before becoming learned. What experience may teach, the soldier, unit, or army must still learn. An effective lesson-learning system should manage both elements.

A simple illustration of individual lesson learning reveals the basic process. A soldier new to a modern battlefield will soon learn to differentiate between the overhead sounds of outgoing and incoming artillery shells. He will then ignore the one but react prudently to the other. The soldier's personal learning involved a three-stage process of collecting, evaluating, and applying his usable slice of experience. First he collected the sounds of the various shells through exposure, noting their distinctive characteristics. Next he evaluated his experience and separated dangerous from non-dangerous overhead sounds. Finally, he added this knowledge to his personal store, which governs his subsequent reactions to seek cover or not. Thus he learned the lesson, usually a relatively uncomplicated process at the personal level.

For organizations, especially large and bureaucratic ones like armies, the processing becomes more complex. However, the three basic stages — collection, evaluation, and application — remain as valid for an army as for a single soldier. Usable experience must be first identified or collected. General Lucian K. Truscott, Jr., one of the top combat commanders of World War II, learned that lesson in one of the first actions, the November 1942 landings in North Africa. As he vividly recalled:

> It had never occurred to me that naval gunfire passing over the heads of an infantry battalion could cause such panic that the battalion would take to its heels and disperse so that it required most of two days to collect the stragglers. Yet no shell fell within a thousand yards of the battalion, and no enemy was firing upon it. Subsequent investigation disclosed two causes for this sudden abandonment of duty. The battalion was not familiar with the characteristic sound of naval gunfire passing overhead. Having just landed on a strange and hostile shore, advancing in darkness on a dangerous mission, and entering battle for the first

INTRODUCTION

In almost everything, experience is more valuable than precept.
— Quintilian, *DeInstitutione Oratoria*

We have identified danger, physical exertion, intelligence, and friction as the elements that coalesce to form the atmosphere of war, and turn it into a medium that impedes activity. In their restrictive effects they can be grouped into a single concept of general friction. Is there any lubricant that will reduce this abrasion? Only one, and a commander and his army will not always have it readily available: combat experience.
— Clausewitz, *On War*

No man's personal experiences can be so valuable as the compared and collated experiences of many men.
— Maurice[1]

Usable experience is the key to this subject. How does an army learn from its own experience in order to avoid repeating the same mistakes and cope with the unexpected. Ideally, an army identifies its useful experiences, studies them, and then applies them to doctrine, organization, and training in a continuous circuit running from the battlefield, through higher headquarters, and back again to the battlefield. This overall process should be understood as "lessons learned." An army learns from experience by institutionalizing the perceived lessons.

This explanation begs the question of how long institutionalized lessons remain valid. According to an analysis of initial battles in the major wars of the United States, the first shock of combat always revealed a glaring lack of experience among the soldiers. "Won or lost, the first battle almost guarantees that inexperience will be paid in blood," concluded the analyst, who attributed the costly inexperience to intervals of peace and the forgetfulness of time.[2] A closer look at those intervals of peace reveals that they averaged 20 years, long enough to suppose that many veterans of the previous war's combat were no longer available for active field service when the next war began. However, what explains the brief intervals? To what extent did training and doctrine fail to provide unseasoned soldiers with the benefits of

previously learned lessons? Or, more broadly, are we dealing with a lesson-learning failure? Considering, the uniqueness of each historical event, the different enemy, terrain, and technology of the new war may well obviate the previous war's lessons. In this case, lesson-learning procedures must be already functional and go along with the first units to the first battlefield.

Unfortunately, in nearly all of America's wars, no formal lesson-learning procedures existed during the first battle or even the second and third. Most of the wars, in fact, ended without the benefit of any organized lesson learning — and were won, too. But at what price? US Army battle deaths in those wars total nearly half a million soldiers, with more than twice that many wounded.[3] How many casualties could have been prevented by timely lessons from the battlefields no one can say. We can be reasonably certain, however, that the process of learning from experience will not only reduce casualties but also increase combat efficiency.

The Concept and Process

While nearly everyone acknowledges the general value of lesson learning, few fully appreciate the concept and process involved. The term "lessons learned" is commonly used in

Intervals Between Wars

Begin new war	1812	1846	1861	1898	1917	1941	1950	1964	?
End old war	-1783	-1815	-1848	-1865	-1898	-1918	-1945	-1953	-1973
Interval	29	31	13	33	19	23	5	11	?

1

CHAPTER 1

EARLY AMERICAN SCHOOL OF WAR

Experience is the best of schools and the safest guide in human affairs. . . .
— Nathanael Greene, 1777[1]

Experience keeps a dear school, but fools learn in no other.
— Benjamin Franklin, *Poor Richard's Almanac*

It was not until after Gettysburg and Vicksburg that the war professionally began. Then our men had learned in the dearest school on earth the simple lessons of war.
— Wm. T. Sherman, *Memoirs*, Vol. II

For the first three centuries of the American military experience, North America and its unique conditions provided the classroom for lessons of war. Until the war with Spain in 1898, the conduct of war was geographically confined to the continental mainland, where European-based military practices underwent adjustment in the wilderness and frontier conditions. When Americans first filtered European ways of warfare through their own military experiences, they practiced lesson learning that continued throughout the early era. Their approach to learning from experience was informal, primarily oral, and highly individualized. No articulated procedures or organization existed to institutionalize usable combat experience. This casual approach to lesson-learning lasted into the 20th century and graduation from the North American school into the global school of war.

To better depict the informal approach, this chapter is divided into separate examinations of Indian and conventional wars. The separation allows lesson-learning continuities to emerge more clearly within each, rather than intermixing the two different modes of warfare purely for chronology's sake. Each mode reveals in its own way the adequacies and inadequacies of the early American school for lessons.

A. INDIAN WARFARE

Braddock's Defeat and Its Legacy

The historical thread of US Army lesson learning runs back to the earliest British military encounters with North American Indians, but it can be picked up with dramatic effect in 1755, when the British army received a severe lesson in Indian warfare — and learned from it.

The Battle of the Monongahela, better known as Braddock's Defeat, ranks second only to Custer's Defeat as an example of stunning and inglorious defeat. Set in the French and Indian War, it resulted from the Anglo-American attempt to capture Fort Duquesne. Major General Edward Braddock, commanding the crown's forces, attempted to sieze the wilderness fort located strategically at the Fork of the Ohio River, site of present-day Pittsburgh. Its French garrison numbered less than 300 regulars and militia but relied on support from Indian allies. To capture the fort, Braddock assembled an expedition of nearly 1,500 British regulars and colonial militia, plus artillery and supporting teamsters and laborers. His formidable force advanced slowly westward, carving a twelve-foot wide road through the virgin forest that carpeted ridges and ravines. The road building, necessary for passage of the artillery and impedimenta, slowed the rate of advance to a few miles per day. It required a month to reach the banks of the Monongahela River, only a few miles from Fort Duquesne. There, the fort's commander gambled on a spoiling attack by a smaller force of Indians with a sprinkling of regulars and militia, perhaps 900 in all. At midday on 9 July 1755, after having just forded the Monongahela, the stretched-out British column came under attack from its front and both flanks. Although surprised and nearly surrounded, the British held

the potential advantages of superior numbers, firepower and discipline — factors that counted greatly in conventional warfare but required open fields and a massed enemy. Unfortunately for Braddock, the surrounding terrain restricted his tactical movements and nullified the advantages over the bushwacking enemy. Confusion, frustration, and finally panic resulted. The British force, half destroyed and entirely routed, fled headlong down the new road in the wilderness.[2]

This disaster evoked lessons in its own time and, as part of our historical consciousness, continues to offer practical lessons well over two centuries later. Military writers still draw upon it for parallels.[3] Some of the lessons have been more cultural than tactical and interpreted by Americans as a well-deserved lesson in humility and forest warfare for the haughty British. Generations of American school children learned that scarlet uniforms made excellent targets and that General Braddock failed to heed the advice of Indian-wise colonials. Although this popular interpretation reflected an American sense of cultural distinctiveness from Europe, it did not stray too far from explaining the disaster tactically.[4]

The formalized close order and intricate linear tactics of European warfare, which Braddock's soldiers epitomized, did not suit wilderness conditions in North America. Such tactics prevailed on the open fields near Quebec, where Wolfe's regulars decisively defeated Montcalm's regulars, but that was the exception. Forest warfare ruled, and the debacle on the Monongahela was actually the first major encounter of British regulars and Indians. Braddock's troops performed poorly chiefly because they faced an unfavorable battleground and unfamiliar tactics. Thus disadvantaged and constantly under fire from a hidden enemy, the redcoats crowded together and lost their effectiveness. One American eyewitness reported that the panicky soldiers ". . . 10 or 12 deep, wou'd then level, Fire and shoot down the Men before them." This observer, Colonel George Washington of the Virginia militia and aide-de-camp to General Braddock, blamed most of the British casualties on the panic-induced friendly fire and the "dastardly behaviour of the English Soldier's [sic]." Recent scholarship generally agrees with Washington's analysis: unfavorable conditions

and an unfamiliar enemy strained discipline in the ranks beyond the breaking point. If discipline had held, the results might have been different. As one British historian has noted: "There were woods in Europe, after all, and Braddock was no amateur."[5]

General Edward Braddock, a veteran of 45 years military service, cannot escape the commander's burden of responsibility for the defeat but, for him, the burden weighed heavy indeed: utter defeat, death in retreat, and historical ignominy. Although overconfident in the ability of his regulars to cope with the unfamiliar, Braddock was not blind to the differences and dangers of wilderness warfare. His advance through the dangerous forest included reasonable precautions against surprise attack, such as scouts, flanking parties, and a strong advance guard. In the event, perhaps he was simply ill-fated. Interestingly, Braddock emerged from the defeat an optimist. Dying from wounds on the retreat, he reputedly stated: "Another time we shall know how to deal with them."[6] Whatever he had learned, we shall not know, for it went with him into his wilderness grave, and his gravesite and lessons remain lost.

Others drew lessons, too, and the British army applied this usable experience. To cope with North American warfare, the British modified their regular establishment to include new colonial auxiliary organizations more adapted to irregular warfare. Ranger companies, organized and led by Robert Rogers, served as long-range scouts and raiders, while a new light infantry unit of the regular line, the Royal Americans (60th Regiment), recruited and trained colonials to operate as highly maneuverable skirmishers. Some modern scholars have considered these responses, or lessons learned, as precedent for tactical innovations in the British army that became its famous "thin red line" of the Napoleonic Wars.[7] Meanwhile, in the Pennsylvania forests, the applied lessons proved effective during the ongoing French and Indian War, as shown by two subsequent British expeditions.

The 1758 expedition, led by Brigadier General John Forbes, accomplished Braddock's mission and captured Fort Duquesne. Lessons from Braddock's experience included tripling the size of the force and adding more colonials. Regulars constituted only one quarter of Forbes' strength and included a battalion of Royal Americans —

the new light infantry — under the command of a Swiss-born professional, Henry Bouquet. Colonel George Washington commanded a brigade and, along with other veterans of Braddock's expedition, functioned as direct links with the earlier experience. Forbes relied upon their advice and specifically asked Washington to design an order of march that would prevent or counter a surprise attack. Furthermore, Forbes chose a different, more rugged route to Fort Duquesne, which required five times longer to get there than had Braddock. When he arrived unscathed, the French garrison abandoned the fort without a fight.[8]

Five years later, in 1763, a smaller British expedition in the region paralleled Braddock's experience when it was ambushed and surrounded by warriors. History did not repeat itself at this Battle of Bushy Run, which turned into a British victory because lessons had been learned from Braddock's defeat. Colonel Henry Bouquet and 450 troops, who traveled the Forbes road to Fort Pitt (formerly Fort Duquesne), represented the British army's subsequent adaptations to wilderness warfare. Bouquet had become an able student of frontier tactics, having trained the new light infantry units and led the Forbes expedition's vanguard. His ambushed force of nearly all regulars, including Royal Americans, beat off the initial surprise assault and withstood repeated attacks into the next day. Then, by ruse and vigorous counterattack, these regulars decisively defeated and scattered the Indians. Bushy Run avenged Braddock's defeat and vindicated the British Army's continued but adapted reliance on the discipline and bayonets of its regular forces in wilderness warfare.[9]

Northwest Lessons and the Legion

In conducting its Northwest Indian War, 1790-1795, the young American Republic contended with military disasters that raised the ghost of Braddock's defeat. The resulting reforms — lessons, to be sure — helped shape the fundamental national military establishment and reshaped temporarily its entire field organization. This episode stands out as the most pervasive lesson-learning experience ever undergone by the US Army.

This first war waged by the United States under the Constitution took place in the original Northwest Territory against confederated Indian tribes. Undeclared and relatively small scale, the conflict is barely distinguishable at first glance from the many Indian conflicts throughout early American history, but it represented a major diplomatic and military effort by the new national government. President Washington expressed it clearly: ". . . we are involved in actual war."[10] At stake was the territorial integrity and future growth of the country, which hinged on control of the northwestern borderlands. Ceded along with independence by Great Britain, the Old Northwest lay north of the Ohio River and stretched westward to the Mississippi River, encompassing a vast unsettled region serving as homeland to several thousand Indians of a dozen major tribes. Alarmed by the growing pressure of land-seeking settlers, the Indians grew increasingly hostile and were abetted by the British, whose soldiers still defiantly occupied posts inside US territory. The situation raised the possibility of an Indian buffer state that would block westward settlement. To prevent this and assert US sovereignty in the Northwest became a major policy objective of the Washington administration. When diplomacy failed, the Army became the chosen instrument to establish control in the area by conducting punitive operations directly against the Northwest Indians and indirectly against the British. To attain the control required five years, three expeditions, and hard lessons.[11]

The first US punitive expedition in 1790 failed miserably. It included most of the few troops in the nation's tiny military establishment, augmented by a large number of militia called out and placed under Josiah Harmar, commander of the single frontier regiment that constituted, in effect, the regular US Army. He led an untrained and undisciplined force on a campaign that degenerated into little more than piecemeal village raiding. The Indians were not significantly hurt, but Harmar's casualties ran disproportionately high. One large raiding party from his force was ambushed and half annihilated. Instead of overawing the Indians, the expedition earned their contempt and encouraged further Indian attacks along the frontier. Harmar's leadership subsequently underwent Congressional investigation, which exonerated

THE NORTHWESTERN FRONTIER
1755 - 1832

⊙ POSTS IN U.S. TERRITORY HELD
BY BRITISH UNTIL 1796

✗ ENGAGEMENT WITH INDIANS

100   0   100   200
MILES

Lake Superior

Michilimackinac

Lake Michigan

Lake Huron

Mississippi R.

BAD AXE
1832

Detroit

Ft Miami

HARMAR'S DEFEAT
1790

TIPPECANOE
1811

FALLEN TIMBERS
1794

ST. CLAIR'S DEFEAT
1791

Vincennes

Cincinnati

Ohio R.

Lake Erie

Erie

Ft Pitt

BRADDOCK'S
DEFEAT
1755

Carlisle

BUSHY
RUN
1763

Ft Niagara

Lake Ontario

Oswego

Oswegatchie

Pte au Fer

UPPER   CANADA

LOWER   CANADA

Ottawa R.

Montreal

Quebec

St Lawrence R

West Point

Springfield

New York

Philadelphia

10

him of personal responsibility for the failure and blamed the unreliable militia instead.[12]

The following year a second expedition failed too, but more spectacularly. It assembled in mid-1791 under Arthur St. Clair, the appointed territorial governor and a veteran of conventional combat in the Revolutionary War — but not of frontier warfare. His expedition received the benefit of the manpower lessons perceived in the failure of the first expedition. Congress authorized him less militia, doubled the size of his regular core, and drew upon a new and politically acceptable source of manpower — volunteers recruited directly by the national government for limited service. These six-month "levies" avoided the distasteful reliance on long-term professional soldiers, which the Revolutionary generation considered a step toward tyrannical government. However, the short-service levies presented time constraints. Just assembling the new recruits on the distant frontier consumed their precious service time, leaving less for turning them into effective soldiers and scant time for campaigning. Before winter arrived and his levies departed, St. Clair had little choice but to place his trust in Secretary of War Henry Knox's maxim that "disciplined valor will triumph over the undisciplined Indians," and he rushed into the wilderness with inadequately trained troops. His force totalled nearly 1,400 — about the same, coincidentally, that Braddock led in 1755. Penetrating deep into thickly forested Indian territory, the inexperienced, ill-trained, ill-disciplined and motley collection of "regulars," levies, and militia constituted a disaster waiting to happen.[13]

It happened after a month of wilderness marching, near the headwaters of the Wabash River, when a surprise attack overran their encampment. Indians launched a well-timed assault just after the troops relaxed from their usual pre-dawn stand-to. The onrushing warriors quickly penetrated the outer defenses and swept over nearly half the campsite before meeting effective resistance. The shock of surprise threw many of the troops into what St. Clair later described as "considerable disorder . . . never altogether remedied." Officers rallied enough troops to prevent an immediate rout and managed to hold the attackers temporarily at bay. A desperate counterattack

succeeded in breaking through to the road they had cut through the forest and, in St. Clair's words: "The retreat in those circumstances was, you may be sure, a very precipitate one; it was, in fact, a flight." Panic-stricken soldiers fled down the road, leaving behind their weapons, equipment, and wounded — the fruits of victory, which distracted the Indians from serious pursuit. Less than half the expedition returned. Left behind were many of the women and children camp followers.[14]

The severity of the defeat stunned the nation, impacting emotionally and politically. It raised the ghost of Edward Braddock. For the Washington administration, it constituted a major setback and national calamity: a government unable to control its frontiers; its army humiliated and practically destroyed. Nevertheless, the administration did not publicly censure St. Clair. To have done so after the recent Harmar failure would have merely admitted further incompetence. Instead, Secretary of War Knox sympathized with St. Clair's explanation that "we were overpowered by numbers." Consoling him on his "misfortune," the Secretary suggested that: ". . . it was one of those incidents which sometimes happen in human affairs, which could not under existing circumstances, have been prevented." A Congressional investigation exonerated St. Clair, blaming instead the inadequate supply system for creating discontent that led to the poor performance of his troops in battle. The investigation also held blameworthy "the want of discipline and experience of the troops." Very soon thereafter, the administration readily accepted the resignation of St. Clair's military commission. New leadership would command the next army already being planned and built upon the hard lessons.[15]

Some of those lessons were old ones, as an old soldier and recognized authority on Indian warfare noted. John Armstrong of Pennsylvania, "Hero of Kittanning" in the French and Indian War, analyzed the details of St. Clair's defeat for President Washington, with whom he had served on the 1758 Forbes expedition. Armstrong expressed disbelief over St. Clair's claim of being outnumbered, inferring instead that only 500 warriors — about one-third the size of St. Clair's force — had inflicted the damage. He criticized St. Clair's dispositions and tactics: ". . . too

much attachment to regular or military rule . . . whereby he presented a large and visible object, perhaps in close order, too. . . ." Armstrong noted that successful modes of coping with forest Indians had been employed "over and over long before that day." As for now, he ventured:

> In vain, however, may we expect success against our present adversaries without taking a few lessons from them, which I thought Americans had learned long ago. The principles of their military action are rational, and, therefore, often successful. We must, in a great degree, take a similar method in order to counteract them.[16]

Congress responded to the defeat by authorizing yet another but larger army of 5,000, double the size of the one destroyed, and showed that it had learned a major lesson about raising armies for the war. Instead of the expedient short-service levies, it lengthened enlistments to three years. Furthermore, Congress in its new wisdom deferred to the Chief Executive on the organization of the force. President George Washington and Secretary of War Henry Knox had already decided to abandon the conventional regimental-based structure and replace it with a legionary one, which they believed better suited wilderness campaigning. As a result, in 1792 the American military establishment became the Legion of the United States.[17]

The new terminology stemmed from the very old military organization of the ancient Roman republic, whose writings and political thought generally inspired the founding generation of the American republic. In 18th century terms, "legion" designated a composite force of several combat specialties — line infantry, riflemen, artillery, cavalry or dragoons — under a single commander, which usually conducted independent operations. (Modern soldiers will recognize its similarities to a combined arms task force.) By whatever name, it remained the US Army but was re-structured specifically for Indian fighting in the northwestern forests. The Legion comprised four sublegions, numbered 1st through the 4th, each containing the combined arms. Its flexibility and striking power gave it greater efficiency under frontier conditions than the traditional regimental organization.[18]

Structurally adapted by the lessons of recent experience, the new army was then entrusted to a new commander who thoroughly prepared it for battle. Anthony Wayne had already distinguished himself in the Revolutionary War as an aggressive commander and tactician. Despite his sobriquet of "Mad Anthony," he proved neither erratic nor reckless but a meticulous organizer and trainer. He was allowed ample preparation time by the government, which did not wish to risk another defeat due to haste. Secretary Knox explicitly instructed him that "Another conflict with the savages with raw troops is to be avoided by all means," and Wayne spent well over a year assembling, equipping, and training the Legion. When he finally commenced campaigning, he led a highly trained force not matched since the Continental Line had been professionalized by Baron von Steuben at Valley Forge.[19]

In professionalizing the Legion, Wayne's rigorous methods and close attention to the details of appearance enhanced his martinet's reputation but produced highly disciplined soldiers. He demanded perfection in close order drill and issued each officer a copy of von Steuben's *Blue Book*. (Wayne's requisition for the manuals, incidentally, caught the War Department short, necessitating a new printing.) Like St. Clair, Wayne intended to rely on "disciplined valor" against his Indian opponents, but he ensured that the discipline existed. Wayne believed no force of Indian warriors could withstand disciplined fire and bayonets. In this regard, his approach to frontier tactics was basically conventional, but it represented the same lesson that the British army had learned earlier in North America — regular forces defeated Indians in pitched battle if they adapted to the circumstances.[20]

Wayne also adapted conventional tactics to fit his legionary structure, especially in using its mobile elements. In case of sudden attack, he trained his line infantry to react immediately and fix the attackers, while his dragoons or light infantry quickly maneuvered to outflank and trap the attackers between the two elements. He even conducted field exercises to practice them and on at least one occasion staged a mock engagement with an aggressor force composed of his light infantry "highly painted" to represent the enemy.[21] He also emphasized the employment of

12

mounted troops against forest Indians, which perfectly suited the combined force structure of the Legion. Credit for effective use of horses in the forest actually belonged to the Kentucky militia, who developed a mounted quick-strike force to conduct punitive raids deep into Indian territory. Because of shortfalls in recruiting three-year legionnaires, Wayne incorporated these mounted Kentuckians into his campaign forces and used them for skirmishing, flanking attacks and general reserve.[22]

Once the Legion entered Indian territory, still more lessons from recent experiences became evident in its standard procedure for overnight encampments. Elaborate security turned each night's wilderness bivouac into a strongly fortified position, featuring outposts, sentinels, and bastions on each corner of rough breastworks that ringed the camp. Such practice recalled the ancient Roman legions in the dark teutonic forests.[23]

Thus armed with structural and tactical lessons, the Legion succeeded. The climactic justification of its efforts took place in the summer of 1794, when Wayne struck deep into the Indian stronghold, practically under the noses of the British. Forced to fight by Wayne's aggressive pursuit, the Indians cleverly chose to defend themselves on a site strewn with uprooted trees where once a tornado had touched down, which rendered the battleground unsuitable for mounted troops. In the ensuing Battle of Fallen Timbers, Wayne launched a frontal assault with his disciplined line infantry, whose steadfast advance under fire flushed the Indians from the timbers into open ground. There his mounted troops routed them.[24]

St. Clair's defeat had been redeemed by an army that learned lessons. The Legion, child of the Northwest Indian War, soon became an orphan. Having accomplished its mission of militarily stabilizing the borderland, it was dismantled in 1796. Born of frontier humiliation, it rose from the ashes of defeat and served uniquely as a repository of lessons derived from recent experience.

Northwestern Aftermath and Personal Linkage

The lessons of the Legion survived its disbandment and the return of the military establishment to a traditional structure. Successful Indian-fighting techniques were made available for later application without recourse to manuals, because no doctrine ever formally evolved on frontier combat. The tactics and lessons traveled through time by informal means, transmitted through personal linkage. Subsequent Indian-fighting in the Old Northwest, from Tippecanoe in 1811 to Bad Axe in 1832, illustrated this informal approach.

Although the Legion had stabilized the Northwest, continued settler encroachment led inevitably to a resurgence of hostilities. Another tribal confederation arose, this time around the Shawnee leader Tecumseh, again with British encouragement. To counter this new threat, the territorial governor, William Henry Harrison, called out the militia, received a core of regular soldiers, and himself led a thousand-man show of force into the Indian territory. His 1811 expedition strikingly paralleled some features of the unfortunate St. Clair expedition of twenty years earlier. As before, Indians launched a surprise pre-dawn assault on the expedition's encampment but this time with different results. Harrison's troops rallied, counterattacked, and won the field by driving their attackers off. This Battle of Tippecanoe became politically renowned later by helping elect Harrison President of the United States in 1840 ("Tippecanoe and Tyler too"). In 1811, however, the battle reflected the successful military application of previous experience.

To understand why Harrison succeeded in the forest and St. Clair failed requires further appreciation of the informal approach to lesson learning — the personal linkage factor. As George Washington had linked the experience and lessons of Braddock's 1755 expedition to Forbes's 1758 effort, Harrison linked Fallen Timbers to Tippecanoe. The young Harrison served as a subaltern in the Legion and personally experienced its organization, tactics and training. He also experienced, while delivering recruits to Fort Pitt in 1791, the dramatic arrival of St. Clair and the other survivors. Later, Harrison served as aide to General Wayne and participated in the Battle of Fallen Timbers, where he earned special praise for his exemplary conduct and bravery. The imprint of all this carried forward into his 1811 expedition. The Legion's lessons had become his personal

experience, which he then imparted and applied to his command. One visible application involved his employment of mounted troops. In assembling the expedition, Harrison included mounted riflemen from the militia (the regular establishment had none at this time) and designated this cavalry as his general reserve, a standard Legion practice. This mounted force led the crucial counterattack that decided the outcome at Tippecanoe.[25] Harrison had learned well and personally enabled tactical lessons to survive the Legion despite the absence of a formal body of doctrine on frontier warfare.

Hard on the heels of Tippecanoe came the second war with England, 1812-1815, and a continuation of successful lessons. Much Indian fighting took place all along the young nation's frontiers, as smoldering territorial disputes burst into open warfare along the borders. In the northwest, William Henry Harrison headed an expedition that advanced into Canada against a mixed force of British troops and Tecumseh's warriors. After his defeat at Tippecanoe two years earlier, Tecumseh had fled to Canada to become an open British ally. Harrison's force of 2,000 engaged the slightly smaller British and Indian force in the Battle of the Thames, where his Kentucky mounted volunteers again proved instrumental in achieving decisive victory. Tecumseh died in the battle, his followers fled, the British retreated, and the lesson of mounted troops in frontier combat remained valid.[26]

Two decades later, a minor flare up of Indian unrest in the Old Northwest concluded the region's frontier warfare and suggested the continued adequacy of personal linkage. The so-called Black Hawk War erupted in 1832 along the upper Mississippi River, when a band of about 500 Sac and Fox warriors, led by Black Hawk, refused to renounce claim to their tribal lands. Their belligerence raised the remote possibility of yet another Northwest Indian confederacy with support from British Canada and evoked a major US military response. The region's regular garrisons concentrated, the Illinois militia turned out, and a reinforcing expedition set out in haste from the East. Nearly 7,000 troops mobilized for what in truth constituted overreaction to a minor affair.[27] Even so, the campaign illustrated some

long-standing problems in conducting Indian warfare.

Once again the Army underwent the difficulty of finding an elusive enemy in the wilderness who did not wish to stand and fight. Most of the campaign involved trying to find and fight Black Hawk's renegade band. The experience of one Illinois militiaman, 23-year old Abraham Lincoln, typified the campaigning: ". . . I had a good many bloody struggles with the musquitoes [sic] and . . . I can truly say I was often very hungry." Like Lincoln, most of the militia fruitlessly searched the forests and marshes of southern Wisconsin for an unseen enemy and then went home. However, a force of regulars and volunteers from the militia located Black Hawk and relentlessly pursued him to the Mississippi River, where the Bad Axe River joins it. Caught against the larger river, the band stood and fought. Outnumbering the Indians four-to-one, the troops under the command of Colonel Zachary Taylor — another future President in this tiny war — formed battle lines and assaulted the hasty Indian defenses. A brief fight broke the resistance and rampaging militiamen finished the Battle of the Bad Axe, a massacre by any other name. Of Black Hawk's band, perhaps 300 died, including women and children, while about 200 survived. The Army sustained only 5 killed and 20 wounded.[28]

The lopsided victory completed a cycle in the Northwest. Between St. Clair's defeat in 1791, when Indians massacred militia, and the Bad Axe in 1832, when the militia massacred Indians, lay forty-one years of lessons learned and not learned, mostly the former because of personal linkage. Zachary Taylor, who commanded at Bad Axe, began his military service in 1808, long after the Legion ended but not long enough to miss the informal transmission of its lessons in the small regular force. Furthermore, Taylor personally experienced Indian campaigning and combat in the Northwest during the War of 1812. His small victory in 1832 at the Bad Axe may well be attributed in some degree to his previous experiences. If nothing else, he avoided ambush and relied upon the power of discipline and bayonets — lessons long learned and personally transmitted. So long as the links in the chain of human memory remained unbroken, the informal

approach sufficed — at least in that particular region.

The Florida War:
Limits of the Informal Approach

Another Indian war in a different region severely tested the informal approach and revealed its limitations. The Florida War of 1835-1842, also known as the Second Seminole War, began in ambush and disaster, then proceeded downhill. A bitter and difficult war, it lasted seven years, comparable in length to the Revolutionary War or the war in Vietnam. It was prolonged by the Army's inability to find, defeat and relocate some 5,000 Seminoles who resisted forced removal to trans-Mississippi reservations. The long and frustrating effort involved some 60,000 troops, mostly short-term volunteers and militia, and required the continued presence in Florida of one-quarter of the entire Regular Army. When finally declared over, nearly half the elusive Seminoles actually had been removed, half had been killed, and a defiant few hundred remained at large in the inaccessible swamps, a testament to the difficulties of successfully conducting irregular warfare in the Southeastern wilderness.[29] Despite two centuries of previous Indian-fighting experience, the Army had to learn again some of the old lessons.

One of the oldest lessons — vigilance against surprise — was forgotten at the onset. The ghost of Braddock's defeat arose again, reincarnating itself this time in the Wahoo Swamp of central Florida and known as Dade's Massacre. In 1835, a column of more than a hundred troops on a routine garrison relief mission, under the command of Major Francis L. Dade, marched into an ambush. Concealed warriors caught the column completely unaware; half the troops, including Dade, fell in the first volley. The survivors rallied enough to prolong a defense, but only one soldier reached safety to relate the tale.[30]

Reverberations from the Dade disaster influenced President Andrew Jackson, an old and successful frontier commander himself, to place Major General Winfield Scott, a recognized authority on standard drill tactics, in charge of the military operations in Florida. Scott directed a well-planned campaign that utterly failed. Scott's converging columns swept the swamplands but trapped no Seminoles, who did not obligingly respond to his tactics. Running out of supplies and needing additional troops, Scott requested both, received neither, and was recalled from Florida to campaign more successfully in Alabama against a Creek Indian uprising. A court of inquiry, convened at Scott's own request, examined and exonerated his conduct in both Indian campaigns. The court agreed with him that any blame for failure rested on shortages of transportation and supplies, the brevity of volunteer service, and, above all, the inhospitable terrain. These same problems, it seems, had been experienced before in the Northwest Indian War, nearly a half-century earlier, and overcome by Wayne's Legion. The lessons apparently did not carry forward into the 1830s or, perhaps, the earlier forest lessons did not apply to the unique Florida swamplands or its Seminoles. In either case, Winfield Scott, author of the Army's standard manual on infantry tactics, suffered from the absence of any equivalent Indian-fighting manual. Moreover, he himself had undergone no previous Indian-fighting experience until the unsuccessful 1837 campaigns.[31]

Zachary Taylor, on the other hand, possessed experience against Indians and fared somewhat better in Florida than Scott, but ultimately failed, too. Taylor won the only major engagement of the war recognizable as a set-piece battle, not freestyle bushwacking. About 400 Seminole warriors, confident in their well-prepared stronghold along the shore of Lake Okeechobee, stood and fought him on Christmas Day 1837. Using standard battle formations and relying on the discipline of his regular troops, Taylor routed the Indian defenders and scattered them into the swamps. His victory broke the main organized resistance but left five more years of scattered warfare. The battle also proved again that "disciplined valor" defeated Indians when they stood and fought — but at relatively high cost in this case. The casualty ratio was 138 soldiers to 21 warriors. Nonetheless, in a war short on victories, this battle made Taylor a hero, a general, and then commander of the peninsula. Of the half-dozen generals who directed the war's field operations, Taylor proved the most successful, or the least failing. "Old Rough and Ready," whose sobriquet came from sharing campaign privations with his

troops, tried various approaches to end the Seminole resistance, including starvation tactics, bloodhounds, and search and destroy expeditions with combined arms task forces. He even tried containment in northern Florida by constructing an interlocking grid of small posts connected by communication roads, but he never had sufficient troops to fully implement the program. When he requested relief in discouragement, after two years of effort, several thousand Seminoles remained at large. For Zachary Taylor, further victories came later in the Mexican War and the presidential election of 1848, but not in Florida.[32]

Conventional approaches and standard tactics failed to achieve victory in the Florida War, while even innovations, such as joint Army-Navy riverine operations or Taylor's containment program failed, too. The seven-year struggle of the Seminoles suggests that they conducted the most effective guerrilla warfare in North America. In the end, attrition finally worked. Superior resources and the willingness to continue the struggle whittled the Seminole population down until only a remnant remained at large. These unbowed survivors were then simply ignored and the long struggle declared over — without treaty or victory.[33]

Despite its length and the Army's preoccupation with it, the Second Seminole War ranks low on the scale of American wars, if measured by casualties. Of some 10,000 regulars who served in the Florida campaigns, almost 1,500 died, nearly all from disease. Combat killed only 328 of them, one-third of those in the opening ambush of Dade's relief column. Another 55 volunteers and militiamen died in battle. This was not an exorbitant price to pay, in one scholar's view, for the valuable field experience gained by officers who would exercise important field commands in the coming Mexican War or later in the Civil War — Winfield Scott, Zachary Taylor, William T. Sherman, Braxton Bragg and Joseph E. Johnston, to name a few. "These men and others necessarily learned something from the Florida War which they employed later," concluded the preeminent historian of the Seminole conflict.[34] All well and good for the next war or two, but what about the then-current one? What did those officers learn during the long struggle in Florida that would have improved ongoing operations and possibly shortened the conflict?

To a discernible degree, the Army drew lessons from its Florida experience and applied them in the ongoing conflict. Modifications of standard tactics did occur, such as the deployment of smaller, more self-sufficient and mobile units, the use of night attacks on suspected camps, and the recruitment of guides and scouts from among the local Indians or Negroes. The new riverine operations, of course, built upon their own experiences during the war, for nothing else existed to guide on. Old lessons were re-discovered, too, among them the benefits of light cavalry against an irregular enemy. After initially discounting the need for mounted troops, Scott and other commanders soon recognized their value. In addition to calling upon mounted militia, the Army raised a second mounted regiment of regulars for service specifically in Florida, where it remained throughout the conflict.[35]

Unfortunately, the war's discoveries of useful experience went unrecorded in doctrine or manual. Long afterward, historians would rediscover them and make those lessons available to the Vietnam War generation, especially those concerning riverine operations.[36] In the immediate aftermath of the Seminole War, the experiences and lessons only went forward informally, carried by veterans who experienced them firsthand. In like manner, pre-1835 experiences and lessons had been carried into the Florida War, and the Army struggled through the Seminole conflict without benefit of a formal doctrine on Indian-fighting. To be sure, doctrine in the modern sense of codified precepts did not yet exist even for conventional warfare, although drill manuals and military treatises substituted well enough for tactical use. However, the US Army never prepared, published, or accepted under its auspices a manual specifically on Indian-fighting. A few private works approximated such a manual,[37] but commanders learned how to fight Indians by instinct or personal experience. Instruction given regular soldiers exclusively concerned conventional warfare based up on the tactics of European-style close-order movements. Indian-style warfare, with all its seeming disorder, received the contempt of the regulars, who generally relegated its conduct to the undisciplined frontier militia, who had grown accustomed to Indian methods and even appropriated some of the practices. To expect trained regulars to fight

Indians Indian-style would have required extensive re-training.[38]

An opportunity to re-train regular units in the experiences and lessons of the ongoing Florida War arose in 1839 with the conduct of a special camp of instruction for remedial training. Long advocated by General Winfield Scott to remedy Army-wide training deficiencies caused by the Seminole disruptions, the summer camp at Trenton, New Jersey, drew in regular garrisons from across the East, including those units able to be spared from Florida operations. Scott, former field commander in Florida, could have applied current combat lessons; instead, he required standard instruction "by the book" in order to raise the troops to his high standards of dress, decorum, discipline and drill. Scott continued to earn his sobriquet of "Old Fuss and Feathers." He had literally written the book on such matters, but his drill manual included nothing on the conduct of irregular warfare.[39]

In ignoring the opportunity for training based on the then-current lessons of irregular warfare, Scott perhaps reflected a larger lesson, learned several times previously, that the "disciplined valor" of well-trained regulars defeated Indians in pitched battle. Bushy Run, Fallen Timbers, and the recent Okeechobee battle confirmed it. Regular soldiers, first British then American, had broken the power of the Eastern Indians, who often had foreign support, in the early conflicts that collectively amounted to a struggle for continental mastery. Once that grand struggle had been decided by discipline and bayonets — not the frontiersmen's individualistic prowess, folklore to the contrary — the warfare devolved into frontier policing and the Army became a fragmented constabulary. Black Hawk's stirrings in 1832 amounted to a pale reflection of earlier threats, and the rounding up of Seminoles in the Everglades did not even come that close. Although many of the tactical lessons learned about Indian combat remained valid in the Army's 19th century policing of the frontiers, the larger lesson of reliance on the disciplined regulars outlived its time. Bayonet charges did win the set piece battle on the shore of Lake Okeechobee but failed to flush the Seminoles from the deep swamps. Rarely would the disciplined battle tactics of regular infantry significantly contribute to the Indian-fighting that had already begun to shift west with the frontier line into the Great Plains and southwestern deserts. Nevertheless, the tired lesson continued to find supporters in mid-century, especially advocates for a larger military establishment, such as the soldier-scholar "Old Brains" Halleck, who in 1862 presented the view that two regiments of regulars concentrated near St. Louis in 1832 would have prevented the Black Hawk War and the same number available in 1835 would have avoided the Florida War.[40]

Whether or not a concentration of regular troops in Florida would have prevented the war is moot, but the absence of specialized doctrine and training for those who fought it is not. The Army went to Florida with only the Indian-fighting tactics and techniques remembered by individuals. Unwritten, this informal body of tactical knowledge traveled through time and place in the memories of still-active veterans of previous Indian campaigns. However, no major Indian warfare had occurred since the War of 1812, a generation earlier. The prominent Indian-fighting generals had passed away or beyond active campaigning; Andrew Jackson and William Henry Harrison, for example, had become elder statesman and served out their presidencies during the long Florida War. On the other hand, all of the active Army's general officers and most of its senior field grade officers in the later 1830s, had served long enough to make likely their having personally experienced some of the earlier Indian campaigning. Of the 38 field grade officers assigned to line regiments in 1837, slightly over half had served during the War of 1812, a conflict which involved much Indian-fighting. A few of the senior colonels had even begun their service in the last decade of the 18th century, one going back 46 years to 1792 and service in the Legion. Although the young junior officers in the Second Seminole War had no opportunity to participate in previous Indian warfare, their senior and commanding officers apparently did.[41]

The prolonged and frustrating military effort in Florida suggests that perhaps the limits of the Army's informal approach to Indian-fighting doctrine, training, and lesson learning had been reached. The breaking point of living institutional memory lay somewhere in time between the War of 1812 and the Second Seminole War or in the differences of Florida conditions. In any case, the

Seminole conflict closed the Army's Indian warfare in the east. In the trans-Mississippi west, the warfare had barely begun. However, it will not be necessary to follow the lesson-learning thread through the more than a thousand combat actions that cost the Army an equal number of battle deaths during the rest of the 19th century. It suffices to say that despite the changed environment, tribes, and disparate circumstances, the Indians' irregular style of warfare remained unchanged, as did the Army's approach to it: informal, ad hoc, and based on personal experience.[42] For a scattered constabulary policing unorganized aborigines, this approach almost proved adequate, at least more so than in the conduct of conventional warfare against technologically equal enemy armies.

B. CONVENTIONAL WARFARE

A Revolutionary Lesson

Although, the Army formally ignored and failed to institutionalize its Indian-fighting experience, it did better in regard to conventional warfare. Drill manuals and other treatises approximated doctrinal guidance on the elaborate style of warfare conducted by European armies. Despite the greater frequency of conducting Indian warfare, the American regular army generally prepared itself for European warfare. Nevertheless, the North American school of experience taught lessons in the conduct of war European-style, which can be seen at the US Army's creation during the Revolutionary War.

American national independence owed much to the Continental Army commanded by George Washington, who deliberately built and trained that army, with the approval of the civilian leadership, in the professional manner of the contemporaneous armies of Britain, France and Prussia. The Continental Army replaced the British army as bastion of European professional orthodoxy in North America. The Continentals became professionals in their discipline and skillful execution of the era's complex drill movements, unlike the local militia which briefly joined them for a nearby campaign or battle. The militia displayed distinctive American characteristics of skirmishing, firing from cover, and other skills

associated with frontier conditions and Indian warfare. The Continentals, on the other hand, steadfastly stood elbow to elbow under fire in order to deliver volleys or a line of bayonets against an equally steadfast line of redcoats. The Continental Army fought the British army and its German mercenaries on their own terms, professional against professional.[43] However, in transforming the initial rabble in arms into a professional European-style army, the Americans adapted a blend of European tactical theories and practices to suit North American experience. In so doing, they practiced lesson learning.

For its initial organization and tactics, the Continental Army relied upon British military practices and manuals. The personal library of its commanding general, George Washington, contained standard British military works, such as Humphrey Bland's *Treatise of Military Discipline* and Thomas Simes' *Military Guide*. Later, the Franco-American alliance brought an allied French field army to North America and, along with it, the tactical ideas of the Marshal de Saxe and the Compte de Guibert, whose published works Washington also held in his library.[44] Ultimately, however, the professionalizing American force relied upon tactical doctrine developed expressly and uniquely for an American army, a process that began significantly at Valley Forge.

The first winter encampment at Valley Forge, 1777-1778, represented the turning point. The Continental Army emerged from it as a disciplined and effective fighting force by European professional standards. That winter, a review of the previous year's campaigns led to decreased reliance on local militia and commitment to a regular army able to fight in the European manner. In reorganizing toward the new standards, Washington selectively used technical advice from the many foreign officers serving the American cause. In general, the European theories and practices passed through the filter of North American experience, especially those of the recent French and Indian War. Lightness became a watchword, as European heavy shock cavalry turned into American light dragoons and light rifle companies became the skirmisher element in the line battalions. Mobile and semi-independent combined arms units appeared in the form of partisan corps or legions. The lessons taught by

earlier North American warfare were incorporated into the first American army's organization.[45]

Of all the foreign advice and adaptations, none impacted more than the offerings of Baron Frederick Wilhelm Augustus von Steuben, who most directly professionalized the Continental Army and created its first tactical doctrine. Although his "Baron" and "von" were fictitious, his ability to effectively train the American army proved genuine. Arriving late to winter quarters at Valley Forge in February 1778, Steuben, a former staff officer in the Prussian army of Frederick the Great, soon became drillmaster to Washington's army. While disciplining and drilling the ragtag soldiers in the complex evolutions of linear tactics, he fashioned a suitable battle doctrine for the Continental Line, codifying its movements into a manual that regulated and standardized the drill upon which the tactics rested. Written in 1778, it received General Washington's approval and that of the Continental Congress as well. The first published edition appeared in the spring of 1779, just after the second Valley Forge winter. Steuben's *Regulation for the Order and Discipline of Troops of the United States* went through at least 70 subsequent printings over the next three decades. Known simply as the *Blue Book* — from its binding — it served as the US Army's first field manual and, in effect, its first doctrine.[46]

Steuben synthesized the Prussian system to British custom and American conditions. Based on his initial experiences in drilling and working with the amateurish troops at Valley Forge, the Prussian officer decided to deviate from prevailing principles and maximize certain traits and characteristics he found prevalent, notably marksmanship and an ability for quick maneuvering, characteristics associated with light, not line, infantry. His drill standards emphasized a lighter approach, but balanced it by insisting on the necessary discipline to deliver the shock of bayonet attacks.[47] By incorporating these ingrained characteristics associated with the frontier environment of North America, Steuben broadly heeded a lesson of experience. In this sense, the first formal expression of US Army tactical doctrine contained a significant element of lesson learning.

The Continental Army, necesary for the struggle for independence, became unnecessary when the war ended. It existed to oppose the British army in North America and without that opposition served no purpose to a new nation willing to rely on its militia and deeply suspicious of standing armies. Disbandment in June 1784 was so complete that *all regimental lines of descent stop there; no of-ficial lineages of the Regular Army bridged the gap created by disbanding the last Continental regiment.*[48] However, the first army did transmit a legacy of European-style professional warfare that the future regular army would continue to emulate even while conducting Indian warfare. It also transmitted its tactical doctrine and lessons in the form of Steuben's *Blue Book*, used extensively, it will be recalled, by the Legion under Anthony Wayne, who further and informally adapted it to the Northwestern wilderness.

Winfield Scott: Symbol of the Age

Winfield Scott's long life (1786-1866) occupied a significant span of American history, from Constitution through Civil War. His military service spanned more than a half century (1808-1861) and three major wars, the second of which established him as one of the greatest American field commanders. However, unlike the other military heroes of his era — Jackson, Harrison, and Taylor — Scott never attained the US Presidency. He came close, twice. In 1840 he lost the Whig Party's nomination to "Old Tippecanoe" Harrison, but won it in 1852 only to lose the election to Franklin Pierce, a citizen soldier who had served under Scott in Mexico. Instead of becoming one of the nation's soldier-presidents, Scott had to content himself with remaining the Commanding General of the US Army for his last 20 years of service. If justice had been truly ser-ved — he always felt — the top military command should have come to him some dozen years earlier. However, before becoming the official head of the Army, Scott served as its unofficial drillmaster and authority on tactics, molding American military practice to European theory. He reflected the lesson-learning approach of the age.[49]

Scott established his reputation during the second war with England, in which the American army contended with two different enemies and

styles of warfare: redcoats and redskins, regular and irregular tactics. The Indian-fighting of the war differed little from previous experience and involved no significant lessons. The conventional combat, on the other hand, involved American re-learning of the old lesson that even the best leadership cannot overcome the handicap of ill-trained and undisciplined soldiers. By relying on the militia tradition and placing faith in frontier-bred skills, to the neglect of the regimentation needed for effective close-order combat, American military forces usually found themselves bested on the battlefield by the more proficient British units. True, American marksmanship and other frontier virtues seemingly triumphed in the Battle of New Orleans, where Andy Jackson's motley force of citizen soldiers decimated the disciplined formations of British veterans, but it proved little. Besides being pointless — the war had ended weeks earlier — the battle revealed British foolishness in directly assaulting en-trenched American marksmen, a lesson taught in the previous war at Bunker Hill. Furthermore, the defensive New Orleans battle was quite ex-ceptional. Most of the war's conventional combat occurred as meeting engagements in which the better trained and more disciplined battle line won the field. Americans were taught this lesson in the first battle of the war and nearly all the remaining battles, most embarrassingly so at Bladensburg. When the collapse of militia-based defense led to the burning of the nation's capital.[50] Not until third year of the war did one American general finally learn the lesson.

On the northern edge of the war, along the Canadian border in western New York, a 27-year-old, recently brevetted brigadier general learned the vital training lesson and won a battle. Winfield Scott, veteran combat commander, grew dissatisfied with leading newly raised units of half-trained personnel into battle, with predictably poor results. Seizing an opportunity afforded him in the spring of 1814, when given complete charge of preparing a fresh division for the summer's campaign, Scott established a camp of instruction near Buffalo and turned out a product that few American commanders of the war possessed — skilled and disciplined soldiers.[51]

During the early 19th century, infantry recruits generally underwent no special Army program of instruction. Their units normally prepared them for duty and combat, but wartime commanders did not always have the opportunity, inclination or requisite knowledge to proficiently instruct their officers and men in tactical drill. Furthermore, the Army possessed no standardized tactical drill for the war, at least none that could be agreed upon. After 30-some years usage, Von Steuben's classic *Blue Book* had fallen into disfavor by the regular army and was deemed suitable only for the militia. Two newer manuals, Alexander Smyth's *Regulations* and William Duane's *Handbook*, did not receive complete approval, either.[52] At his Buffalo camp, Winfield Scott overcame this doctrinal problem by the expedient of writing his own manual. Less than original, it consisted of his verbatim translation of the 1791 French drill regulations, the contents of which suited Scott's inclination and immediate needs. The French principles and formations differed only slightly from the generally prevailing American practices. Regardless of system, Scott's application and training produced disciplined soldiers who could stand fast under enemy volleys and return them in kind, along with a bayonet charge. The echoes from Valley Forge, 35 years earlier, could be heard at Buffalo in 1814. Like von Steuben, Scott became a drillmaster, first teaching company officers who, in turn, taught their men. Intensive drill and instruction went on ten hours a day for three months at Scott's camp, out of which marched professionalized troops in the tradition of the Legion and the Continental Line. An old lesson learned again, training and discipline provided the margin for tactical success.[53]

During the ensuing Niagara campaign, Scott's trained and disciplined soldiers gave the nation a small but welcome victory and provided the Army with a lesson and tradition. The American force of about 4,000, including Scott's brigade, crossed into Canada and collided with an equal British force in open terrain near the Chippewa River. In a brief engagement on 5 July 1814, Scott's brigade advanced against the British line and was mistaken at first for local militia. Scott's troops wore gray uniforms — the same color worn by New York militia — due to the unavailability of regulation blue cloth at Buffalo. The steady advance of the gray-coated American line under fire soon corrected the British misconception, giving rise to

their commander's celebrated exclamation: "Those are regulars, by God." Because of Scott's efforts, they did perform as regulars and won the Battle of Chippewa by breaking the redcoat line. The triumph became the stuff of legend and tradition within the US Army, notably in the style and color of the dress uniform still worn by West Point cadets, said to commemorate that day's gray-clad performance. Although the American performance was repeated soon thereafter, in the larger Battle of Lundy's Lane, it only matched, not bested, the enemy.[54] Even so, win or draw, Scott had demonstrated the fundamental lesson of adequately preparing soldiers for combat. While this training lesson may seem self-evident and commonplace, no other American commander in the war appears to have learned it to the extent Scott did.

After having established his credentials at Chippewa, Scott expanded his drillmaster role to include the entire Army, which for the next 47 years never went without a system of standard infantry drill tactics that he had not approved or prepared. While recovering from a severe wound received at Lundy's Lane, Scott initiated a request for a special board to review and adopt a uniform system of drill. Congress approved and Scott headed the 1815 board that incorporated the French system into the first American tactical manual prepared under official auspices. (Steuben's *Blue Book* received approval *after* its preparation.) Scott presided over additional boards on drill tactics during the next two decades and in 1834-1835 prepared a three-volume manual "unencumbered with a board," as he described it. He acknowledged freely that in all of this he drew inspiration and material from the tactical system introduced by the revolutionary armies of France, practiced by Napoleon, and refined by the theorist Jomini, which emphasized the smashing power of massed columns rather than thinly spread lines. Scott himself observed firsthand the Napoleonic-era armies of Europe when he spent nearly a year in France and England as an unofficial observer in 1815-1816, arriving just after the climactic Battle of Waterloo. Significantly through Winfield Scott, the French military system arrived and remained in North America for use in two wars.[55] His 1835 three-volume *Infantry Tactics* served as the Army's authorized manual for the next quarter

century, through the Mexican War and into the Civil War. It appeared in ten editions, none of which revised the original publication; its contents remained untouched by time, events or the ominous technological advances in weapons lethality. The lesson learning at Buffalo and Chippewa had become chained to an outmoded tactical system.[56]

In the Mexican War, 1846-1848, the system presented in Scott's manual did not always prove adequate outside of major set-piece battles. Although it drew upon Europe's experience and was used against the European-trained professional army of Mexico, the North American environment taught a few different lessons. American commanders discovered the manual's emphasis on close-order mass formations irrelevant and its peripherical treatment of open formations and skirmisher tactics insufficient. In Mexico the terrain and other considerations called for more than incidental use of earlier lessons taught by North American warfare concerning light infantry's value. Scott had forgotten or ignored those lessons in the War of 1812 and afterwards only grudgingly appended some loose tactics for skirmishers in his system. However, in Mexico's dense chaparral at Resaca de la Palma and the street fighting in Monterey, commanders abandoned the manual's close order formations in favor of more practical skirmisher tactics. American field artillery in Mexico also ignored its French-based manual and relied with great success upon common sense and initiative, notably by Samuel Ringgold. Additionally, in both the northern and central campaigns, Generals Taylor and Scott faced local guerrilla activities in a Europeanized culture and setting, for which neither doctrine nor personal experience was available. Countermeasures included winning local allegiance, levying retaliatory fines against suspected villages, and other more brutal tactics.[57]

Scott himself did not look to his manual or French experience for the masterful touches that enabled him to capture the Mexican capital. His innovative campaign began with the Army's first large amphibious assault landing at Vera Cruz, which proved highly successful. Although the absence of any opposition contributed measurably to its success — the small enemy defense force quickly retreated from the site — the logistical

effort and inter-service cooperation remained impressive. Nearly 90 transports and warships smoothly unloaded a battle-ready force of 8,500 troops in waves of specially constructed surf boats on an open beach in under five hours without the loss of a single life. Unfortunately, the details of its planning and execution failed to receive subsequent analysis for lessons. The Army's engineers, who managed the landing, would use lessons from Vera Cruz in the Civil War's joint amphibious landings, but the Navy appears to have been the lesson-learning source, having formally recorded details of the landing experience in an authorized monograph, unlike the Army's continued reliance on the informal approach.[58]

Ironically, Winfield Scott deserves credit for the earlier establishment of significant ways to transmit such innovative experiences and lessons. He labored long and brought forth in 1821 the first codification of military functioning in a comprehensive volume of general regulations. His *Military Institutes* prescribed practically everything done by the Army, except for the specialized details of engineering and drill tactics covered in separate publications.[59] The new regulations included the first published appearances of Army battle doctrine and the requirement for written battle reports — two important elements in modern lesson learning.

Article 54 of the *Institutes* contained several pages of general statements and precepts on the conduct of battle, guidance not provided explicitly in the detailed procedures of drill manuals. This generalized guidance approximated what the modern military expects of prime or basic operational doctrine. It laid down basic principles "not to be departed from except under peculiar circumstances." Most of these first principles involved tactical dispositions but included a few broad tenets, such as: "In battles, and military operations in general, one ought always seek to take the *lead*, that is, to reduce the enemy to the defensive." It also prescribed "a written report of the day" to cover battles and directed their submission from battalion level through the entire chain of command so that each higher commander could corroborate or correct the reported information. The chief intent of the report, it seems, concerned which individuals should be brought "to the notice of government, and the

admiration of the country." This concern for personal and general praise or blame remained frozen in print, along with the battle doctrine, through the rest of the century.[60]

When General Scott reported the events of his Mexican campaign, the innovative experience of the amphibious landing at Vera Cruz appeared as a one liner: "The whole army reached the shore in fine style. . ." Other usable experiences of the war, such as the Army's first extensive use of tactical divisions for command and control, did not find their way into reports, manuals, or doctrine.[61] Scott's postwar edition of *Infantry Tactics* contained no lessons drawn from the Mexican War and continued in use into the next war. It reflected an age and tactics being left behind by new technological developments.

Two Civil War Failures

Scott's tactical doctrine failed on the battlefields of the Civil War and so did the Army's informal approach to lesson learning. Technological change had doomed the established attack doctrine before the war began. During it, when the doctrinal failure became apparent, another failure occurred in the inability of unorganized means to effectively adjust tactics to the new battlefield conditions. If the earlier Seminole war in Florida had suggested the limits of relying on the oral and personal transmission of historical lessons, the Civil War offered a clear demonstration of its contemporaneous failure.

Prior to the great conflict of 1861-1865, the Army needed no quick-reaction system to evaluate its tactical doctrine in the light of ongoing experience and make compelling adjustments. The limited nature of previous warfare, the measured pace of most campaigning, and the infrequency of the brief battles helped make it unnecessary. However, the scale and intensity of the Civil War surpassed all previous warfare. It called forth mass armies that continually fought each other across half a continent for four years. The countless combat engagements — one source lists over 10,500 — produced perhaps half a million battle casualties, grim testimony to a new technological dimension of the conflict. To a large extent, technology sustained the million-man US Army with mass-produced equipment and subsistence,

enabled it to communicate and travel quickly via telegraph and railroad, and gave it and its rival Confederate army new weapons that rendered the old doctrine obsolete and dangerous.[62]

When the two armies first clashed, they drew upon established tactical theory and practice that had remained essentially the same for the previous 50 years. The drill tactics taught by the young Winfield Scott at Buffalo in 1814 differed little from his published drill regulations that generally sufficed for the Mexican battlefields three decades later, and guided the early Civil War commanders. Unfortunately, the close-order movements of compact bodies of troops — the established way — was obviated by new weapons technology of the 1850s. In the decade following the Mexican War, quick-firing rifles superseded flintlock smooth-bore muskets. Whereas the inaccurate smooth-bore could kill at 250 yards, if fired in a concentrated volley, the latest rifles firing a Minie bullet could individually kill at a range of half a mile, and with a faster rate of fire. When the new rifles became standard infantry weapons, they dominated the battlefield with their lethality and they changed the face of battle. The defense became ascendant and destroyed literally the compact formations and close-order tactics based on the characteristics of the smooth-bore musket. Massed frontal assaults and bayonet charges, as well as the shock of a cavalry charge, belonged to an earlier age. They were theoretically gone but by no means forgotten.[63]

Prevailing theory emphasized taking the tactical offensive and many successful Civil War commanders on both sides built their reputations on an aggressive or relentless offense, notably Grant, Lee, Jackson and Sheridan. However, the Northern commanders, relying on much larger manpower resources, could better absorb the high casualties. The Southern army and population could not. By taking the tactical offensive more often than the North, the South suffered disproportionately higher battle losses, which it could ill-afford, and thereby bled itself to ruination by 1864. It illustrates the battlefield's new lethality and the deadly obsolence of established doctrine. As one Confederate general concluded after losing a third of his troops in a frontal assault during the July 1862 Battle of Malvern Hill: "It was not

war — it was murder." A year later at Gettysburg, the Confederate cause and the new battlefield lethality climaxed in the grand assault of some ten thousand troops against the Federal positions on Cemetery Ridge. Pickett's Charge, named after the commander whose unit spearheaded it, resulted in failure and casualties easily exceeding half the total assault force. When advised immediately afterward to prepare his division for a possible Union counterattack, George E. Pickett replied simply: "General Lee, I have no division now. . ." His bare statement effectively expressed the consequences of pitting flesh against the new firepower. Although it took both sides quite long to learn the new lesson, the South paid the higher price.[64]

Although the Confederate cause may have required that more risks be taken with the tactical offensive, General Lee also followed the same basic doctrinal emphasis on attacking as did his Union counterparts. Not surprisingly the two armies resembled each other closely in tactical organization and doctrine, for they shared the same manuals, regulations, and heritage. The president of the Confederacy, after all, had been a US Secretary of War and if Robert E. Lee had been less loyal to his native state of Virginia, he might have commanded the Union army. As it was, however, graduates of the US Military Academy filled the higher commands on both sides and reflected the common influences that underlay their professional knowledge. The instruction they received at West Point approximated the operational guidance provided today's commander by modern field manuals. Although the earlier era's drill manuals provided details on formations and movements, the usage and underlying principles came primarily from the academy's curriculum and faculty, chiefly Professor Mahan.[65]

The teachings of Dennis Hart Mahan significantly influenced the military leadership of the 19th century Army with what constituted the era's doctrine. Considered the academy's greatest teacher, tactician, and strategist, Mahan's tenure spanned the 1830s-1870s. Intensifying his influence was the fact that he taught the only formal instruction on military art and science offered in America. The major commanders of North and

South learned while cadets the principles of tactics and strategy in his brief course given in their senior year; the rest of the academy's military instruction took place on the drill field outside the academic curriculum. Inside his classroom, Professor Mahan taught what evolved into the first systematic American military theory, and by virtue of being the only theory formally taught, it represented basic doctrine. His ideas were first expressed to cadets in the form of textbooks printed on his own small lithographic press. Such course material formed the basis of his several commercially published books, notably *An Elementary Treatise on Advanced-Guard, Out-Post, and Detachment Service of Troops, and the Manner of Posting and Handling Them in Presence of an Enemy. . . .* First published in 1847, this treatise quickly and commendably became shortened to simply *Out-Post,* but it still misled those who would judge a book by its title. Mahan intended it as a complete handbook on tactics that expounded precepts and general methods, not as another set of drill regulations. Although he later added material on strategy and other heady stuff about historical principles of war, his *Out-Post* remained a commander's guide to basic and special combat situations, expressed pragmatically for fighting in forests or mountains, attacking or defending, while escorting convoys or when ambushed. In form and function, it was ancestor to the modern field manual.[66]

Although absent from the printed text of *Out-Post,* a uniquely American tactical subject sometimes appeared on the pages, annotated in pen during lectures. Professor Mahan covered Indian warfare in his military course at the academy. An 1835 text printed on his personal lithograph press analyzed the general tactics of Indian fighting. In addition, he interspersed his lectures with bits of practical advice and tactical techniques for the cadets, who could soon expect to be fresh lieutenants on an Indian campaign. Attentive students noted his advice in the margins of their copies of *Out-Post,* alongside the printed precepts of Napoleonic warfare.[67]

The tactical doctrine taught by Mahan at West Point and contained in his published writings, along with the influential treatise of his favorite pupil, Henry Wager Halleck, drew heavily upon French military theory. Like Winfield Scott in

tactical drill, Mahan and Halleck transplanted the precepts of the Napoleonic approach to American military thinking and practice. Its direct approach, decisive concentration, and aggressive style reappeared as battle "doctrine" in the *Army Regulations* of 1857, which contained Scott's original 1821 doctrine, slightly edited, as "rules [which] are to be observed generally," such as: "In battles and military operations it is better to assume the offensive, and put the enemy on the defensive. . . ." These principles remained unchanged during the war and long afterward. The Confederate mirror version of the US regulations and its battle section likewise remained unaffected by the new battlefield conditions.[68]

At the beginning of the Civil War, the gap between the new battlefield lethality and established doctrine constituted, in modern terminology, a combat developments failure. Tactical doctrine had failed to keep pace with changing weapons technology, despite some limited pre-war recognition of the problem. A tactical system based on the rifle emerged in the mid-1850s from a board headed by Major William J. Hardee. The new manual, *Hardee's Tactics,* represented a response to the rifle technology. Based on French practices in Algerian warfare, its drill modified Scott's cumbersome system by opening formations and speeding up movements, theoretically offering less troop exposure to deadly rifle fire. However, the new system did not replace the vintage manual and system, possibly influenced by the fact that its author remained Commanding General. Instead, the two manuals and systems were deemed complementary and both continued in force through the early war years. Hardee's manual became heavily favored and much used on both sides. In 1862 the US War Department replaced both manuals with Casey's *Infantry Tactics,* which offered Hardee's system without the awkwardness of using a manual named after an enemy general. By whomever, the infantry drill systems failed to bridge the gap between conditions and practices, and the same basic problems held true for the cavalry and artillery drills.[69]

The old war horse Winfield Scott, who retired late in 1862 because of failing health, completed and published his memoirs while the war continued. In them he admonished those who had

undercut and replaced his drill system, leaving posterity with his conservative precept: "it is extremely perilous to change systems of tactics in an army in the midst of a war, and highly inconvenient even at the beginning of one."[70] Contrary to that advice, actual tactical practices during the combat changed often, although the authorized version remained the same and oblivious to the changed conditions.

Established doctrines and the manuals expressing them can often be counted among the first casualties of war. As General William T. Sherman recalled in his memoirs:

> Very few of the battles in which I have participated were fought as described in European text-books, viz., in great masses, in perfect order, manoeuvring by corps, divisions, and brigades.

Echoing that sentiment, a modern scholar concluded: "The battle that was described in the pages of Jomini and Halleck was never fought and after the initial encounters was rarely attempted. . . ." After tossing away the old manuals, the school of hard experience taught the subject. Commanders relied on trial and error, or a good example, to find effective attack formations. Emory Upton, for one, whose re-write of the Army's infantry manual was published *after* the war, experimented successfully with a rushing column assault in the 1864 battle at Spottsylvania Court House. His tactics soon spread to nearby commanders who, unfortunately, did not achieve the same success, perhaps because they merely imitated and did not understand the tactic's principles.[71] Nonetheless, many lessons were taught by battlefield experience and a few were learned, although none by any formal or organized effort.

While their commanders experimented with new attack formations, the troops coped with the new battlefield lethality in their own fashion, using an instinct for survival to create what the preceptive Arthur L. Wagner later signaled out as "perhaps the most marked tactical feature" of the war — hasty entrenchments. Wagner, who applied scientific history to the study of battle experience, did not mean the planned and engineered earthworks of siege operations, such as at Vicksburg and Petersburg, but the habitual tendency of soldiers when in the presence of the enemy to protect themselves by digging individual rifle pits and using other forms of impromptu shelter on the battlefield. While it is arguable whether or not Mahan's pre-war doctrinal teachings in his *Treatise on Field Fortifications* anticipated the Civil War's trench warfare, the fact remains that the soldiers often took upon themselves their own further improvements of engineer-built field fortifications and they also improvised individual shelters whenever they could. General Sherman noted that even skirmishers in attacks usually improvised shelters and he concluded overall: "It was one of Prof. Mahan's maxims that the spade was as useful in war as the musket, and to this I will add the axe." Anticipating the trench warfare of 1914-1918, the Civil War's soldiers dug more, and more often, than soldiers had ever dug before.[72]

The hasty entrenchments and more elaborate earthworks did not appear on the early battlefields, but emerged during the 1862 Peninsular campaign. By the spring of 1864, the practice had spread throughout the various field armies and entrenchments became standard features on all the battlefields. It represented, wrote Wagner "the outgrowth of the intelligence of the American volunteer applied to the experience of many bloody battles." In his analysis the pervasive habit of protective entrenching ". . . would have arisen in any war of sufficiently long duration to enable the combatants to profit fully by their own experience."[73] Guided more by innate survivalism and the power of example than by command direction or any organized effort, the entrenching practice represented a well-learned contemporaneous lesson. It did not however find its way into any authorized tactical literature during the war.

Professor Mahan at West Point did use the war as a laboratory to improve his ideas and instructional material. He sought operational details from field generals — some his former pupils — and obtained fortifications data from the engineers.[74] However, no significant changes in his tactical doctrine resulted during or after the war. Even if he had, his medium of dissemination was limited to a single classroom. Other media promised more.

The *United States Service Magazine* functioned to a limited extent as a self-appointed medium for

sharing experiences and transmitting lessons. In the inaugural issue of January 1864, it described itself as "a new literacy enterprise in the domains of the Military Art" and explained that it did not intend to offer mere weekly news items — a reference to the *Army and Navy Journal*. Instead, it intended to provide "full and complete dissertations" on a monthly basis

> . . . to give not only a general idea of the condition and prospects of the military art, but also a concise body of military doctrines and principles with practical illustrations drawn from the present war.[75]

Its editor, Henry Coppee, who gave the magazine a scholarly tone, brought academic as well as military credentials to his task. Graduating with the USMA Class of 1845, he served with bravery in the Mexican War, afterwards teaching at West Point, then resigning his commission to teach at the University of Pennsylvania. He authored military manuals for the militia during the Civil War before taking editorial charge of the new *Service Magazine*. Coppee provided readers with varied fare that included articles discussing details of tactical principles and procedures or describing potentially usable experiences, such as the innovative use of fireworks for night illumination. After a dozen issues, he proclaimed the magazine a success and gratefully acknowledged the "full and unqualified support of our great generals," whose names he pointedly dropped, viz.: Scott, Grant, Halleck, Sherman and others who had praised or aided the magazine.[76]

Its most promising lesson-learning feature, "Military Notes and Queries," solicited contributions from readers and hoped to serve as a forum exchanging useful information. First appearing in the May 1864 issue, the feature appeared frequently but never fully realized its potential for sharing experiences or transmitting lessons. Many of the queries and comments that did appear in it concerned niceties of military courtesy and parade ground procedure, such as regimental saluting, sword sheathing, or the conundrum posed by "J.L." of the 128th Ohio Volunteer Infantry: "in what direction does a sentinel face, when 'facing the proper front' " as prescribed in Army Regulations? More tactically useful were a few queries and responses on forming defensive squares and division columns.

"H.E.K." submitted a lengthy description, complete with diagrams and tables, of his scheme for reorganizing infantry units.[77] The potential, at any rate, existed for sharing combat experience.

Unfortunately, the end of the war ended the *Notes and Queries* feature and the magazine's contemporaneous approach as well. In fact, the forum feature did not once directly relate a usable experience and few experience-based articles appeared elsewhere in *Service Magazine during* the ongoing conflict in time to influence events. Disappointed but not discouraged, Coppee blamed wartime conditions for preventing many thousands of officers from contributing their experiences, and he proclaimed a new postwar beginning. The magazine would now become the historical organ of the Army and Navy, publishing the experiences and thoughts of those heretofore preoccupied or cut off by the war. The editor now sought anecdotes, treatises, observations, and the "doings of brigades, regiments, companies, and instances of individual valor."[78] It looked suspiciously as if the magazine desparately needed material. Not long afterward, Henry Coppee left to become president of Lehigh College, and the magazine lingered on for another six months until June 1866. After a run of 30 monthly issues, the publisher wrote its valedictory in the last one. Peacetime did not require distinctive military literature, he concluded, and like the armed forces, the magazine would muster out, "praying that the time may be far distant when another call to arms shall require the re-appearance of the *Service Magazine*."[79]

It should be added that this unique periodical anticipated the lessons literature that would become standard fare of the next century's lesson-learning systems. It also previewed the lesson-learning role that service-oriented journals would later fill. Like several aspects of the war it covered, the magazine was ahead of its time.

New Frontiers: Arthur L. Wagner

In the half century that followed the Civil War, the Army finished the Indian campaigns in the West, then left the continental mainland to fight a brief war with Spain and a longer one in the Philippines. The disappearance of the continental frontier marked the end of the constabulary role

that had delimited the 19th-century Army, while reformers and other agents of change helped create a modern organization for the conduct of land warfare. During the transformation process and the two overseas wars, the Army came a few steps closer toward organized lesson learning.

The Spanish-American War of 1898 did not offer sufficient time or combat for contemporaneous lesson learning. Declared in April, the conflict ended in August, a five-month span that included only three brief land campaigns. The siege of Manila in the Philippines and the invasion of Puerto Rico involved no sustained combat. The major campaign of the war took place in Cuba but involved only a few days of significant fighting. It was probably superfluous, too, for the US Navy's blockade of the island and its decisive defeats of the overseas Spanish fleets isolated the 200,000 Spanish troops in Cuba from reinforcement and resupply. The US Army's invasion merely hastened their inevitable surrender; it reflected diplomatic more than military necessity. Nevertheless, a corps-size expeditionary force of mostly regular units landed on the island near Santiago, the objective. The climax of the Cuban campaign occurred when the expedition attacked the city's defenses atop the surrounding heights, and a full-scale infantry battle led to its surrender. The first land battle of the war was also its last. A prominent modern scholar classified the battle for Santiago as "too brief and too successful to teach the Army much more about modern warfare than it already knew or thought it knew." Although administrative and logistical lessons resulted from a postwar investigation of the Army's

nearly 1,400 American dead and wounded, over 80% of the entire campaign's casualties. Despite the mitigating factors of the assaults being unplanned and almost spontaneous, not to mention successful, some critics wondered if the lesson about frontal attacks taught 35 years earlier in the Civil War had been learned.[81]

One of those critics, Colonel Arthur L. Wagner, a close student of American and European tactics, had been on hand in Cuba to observe the campaign. Educator, historian, and writer, the scholarly Wagner filled the role of tactical arbiter long held by Professor Mahan and briefly by Colonel Emory Upton when he revised the standard infantry drill manual after the Civil War. Wagner's teaching base was the new Fort Leavenworth school, which he helped develop into the Command and General Staff College, writing his own textbooks there, much like Mahan had at West Point. Wagner's published treatises on tactics and intelligence became as familiar to officers of the era as their drill manuals, and his tactical writings reflected a new historical and comparative approach that reveal him to be a transitional figure to modern lesson learning, just a half step ahead of his time. In introducing scientific history to the Army, he critically analyzed past military experience and made pragmatic use of the results, seeking from the old battlefields the tactical standards that could generally guide commanders on the new battlefields. To derive these tactical truths, Wagner searched recent combat experiences by relying not upon written records alone but also interviews and correspondence with participants in order to gain

included the well-publicized storming of a portion of the heights by the volunteer Rough Riders and their colonel, Theodore Roosevelt. The tactics used that day — frontal assaults against entrenched or fortified enemy positions — cost

comparatively. After his death, Wagner received tribute from a Leavenworth colleague, Eben Swift, for making use of the Civil War experience acquired by the professional officers who were "unprepared or unable to perpetuate in this small

army the lessons they had learned." Swift continued: "To bear this message to our service and to coordinate the experience of the foreigner with our own, we needed Wagner." Along with other reform-minded officers of the late 19th century, Wagner needed models; like many, he favored Prussian, or German, ones. A great admirer of the Prussian military system, Wagner used its schools as models for his later shaping of the staff school at Fort Leavenworth and the emerging war college in Washington, DC. Additionally, he may well have found inspiration in the Prussian system for his own historical approach to lesson learning.[83]

Arthur L. Wagner represented an end product of the so-called "Germanization" of the US Army during the late 19th century. Within that development, essentially a rejection of long-standing French influence and a search for better models, elements of lesson learning appear to have been imported along with the other borrowings of German style and substance, which ranged from short-lived spiked headgear to the permanent general staff system. Many American observers went to Europe after the Civil War and some returned with a sense that the Prussian Army owed its remarkable successes to some institutionalized form of self-criticism and corrective adjustment of its organization, doctrine, and procedures. One observer was struck by how. . .

> The Prussians have taken lessons from every modern war, and have constantly sought improvement, never foolishly thinking that they had nothing more to learn.[84]

Wagner, too, noted in analysis that Prussian tactics underwent some process of adjustment during their 1870-1871 war with France. He described — not too clearly — how a typical Prussian assault . . .

> though heroically made, was a dismal failure, and it became evident that tactical science had not kept pace with the improvement in weapons.
>
> Fortunately for the Germans, their military system is one which requires ends, not means; which has decentralization as its marked feature; and which, by ignoring methods and asking only results, leaves subordinate commanders free from the stunting influence of the opposite system, and renders them able to solve the problems presented by new conditions. A new tactics soon appeared without having been

regularly formulated or sanctioned by official order. This tactics, born of experience and common sense, was seen on the next great battlefield. . .[85]

What Wagner may have been imperfectly describing could have been the field operations of a modern lesson-learning system developed by the Prussian General Staff. Under the inspired and meticulous guidance of Helmuth von Moltke, the German staff had evolved into a highly competent body of planners and advisers who, according to a modern analysis:

> studied their errors, and readjusted their training and organisation accordingly. . . [and]. . . whose object was to fulfil exactly this function: applying to the conduct of war a continuous intelligent study, analysing the past, appreciating the future, and providing the commanders in the field with an unceasing supply of information and advice.[86]

The lessons taught by past or ongoing experience somehow became institutionally learned by the Prussian General Staff system, which enabled them to be better prepared for the next war and, once involved in it, more responsive to changing imperatives. One of the keys to unlocking the secrets of this Prussian success was apparently their extensive and pragmatic use of history. The Great General Staff included a separate Division of Military History that collected and preserved source material and produced critical descriptions of previous warfare. The main source material stored in its archives appears to have been battle reports. As described by the new American intelligence-gathering agency, which Wagner later headed:

> Especially valuable for historical purposes are the reports of the troops, their stories of the battles in which they took part and of the manner in which they executed the tasks that were required of them. A double report in every case is on file. The first was transmitted from the field immediately after the event; and under the instructions of von Moltke the other was written after the conclusion of peace, and contains supplementations and corrections.[87]

The pragmatic and effective German use of military history had not escaped the earlier observations of Emory Upton, who had recommended its similar use in the reforms he outlined for the US Army.[88] Being far in advance of his

time, Upton died long before a true American general staff system materialized and before historical activity became institutionalized. Wagner, on the other hand, came closer to having suitable institutions catch up with his advanced ideas. During the decade preceding the 1898 war with Spain, Wagner had exhibited lesson drawing from recent history in his 1889 comparative study of American and Prussian warfare. He drew tactical lessons, labeled them as such, and continued both practices in his major tactical treatise published six years later.[89] Wagner had established himself as the leading American practitioner of historical lesson learning in the 1890s. From the historical to the contemporaneous was but a short step, which he took in the next war.

In the 1898 war with Spain, Wagner practiced contemporaneous lesson learning or, at least, he came as close to it as the brief conflict allowed before quickly ending and becoming recent history. As head of the new Military Information Division under the Adjutant General — the beginning of the Army's intelligence agency — Wagner participated in the Cuban campaign as an observer who reported usable experiences and drew conclusions. Ostensibly his presence in the campaign involved security and intelligence, but Wagner also represented his own long-standing professional interest in tactics and missed few opportunities to observe and analyze the unfolding tactical situations. Organizational and tactical matters filled his final report on the brief campaign. Among them, he confirmed a pre-war lesson about the battlefield advantages of smokeless powder (used by the regulars but not most of the volunteers). He generally approved the uniformity and suitability of the tactics he observed, with the already noted major exception of the frontal assaults on Santiago's defenses. He noted how the troops that stormed the San Juan Heights had to await the arrival of picks and shovels from the rear before solidly entrenching themselves against counterattack, and he concluded that a personal entrenching tool was needed.[90]

Wagner's reporting and analyzing of selected experiences foreshadowed the later role of training and doctrine observers, but, unlike his successors, he had no processing agency to send his information to nor institutional procedures to transform it into doctrinal adjustments or new entrenching tools. To achieve that transformation, Wagner could only rely on his own individual efforts of persuasion, either personally or through his publications. By this time, however, he was racing for time against debilitating tuberculosis. Although he gained enough time to confirm and adjust his intelligence treatise based on the war's experiences, untimely death overtook him before he published his tactical adjustments. The posthumous edition of his tactical treatise, revised by colleagues at Fort Leavenworth, included no lessons, no experience, and no mention of the Spanish-American War. Although Wagner's report on the Santiago combat ran more than 150 printed pages, one-third of them filled with usable experiences and lessons, his immediate successors did not make noticeable use of it.[91] If Wagner had lived another few years, he might have led the Army into formally organized lesson learning, because institutions and practices were emerging that could support and organize such effort.

On The Institutional Brink of Lesson Learning

In the aftermath of the war with Spain, many institutional supports for systematic lesson learning began to emerge. Without an advocate like Wagner, however, the Army did not incorporate experience processing into its new central management system. The capstone of the reform package introduced by Secretary of War Elihu Root (1899-1904) was the general staff, a planning and coordinating body that provided a center in which professional activities and ideas received priority and direction. Although it would take well over a decade for the new general staff system to fully work out its role and procedures, it began early to perform its central management role in doctrine development. Out of the Army's emergent school system and the semi-official professional societies and their journals — products of the 1880s and 1890s — came a ferment of ideas for improvements in organization, tactics, and equipment that filtered through the new general staff and became institutionalized as basic doctrine. The service schools specialized, of course, in developing their own branch's tactics and procedures, thus diffusing the development of

tactical doctrine; but the new general staff, epitomizing central management, coordinated the specialties into unified guidelines. The first codification of basic doctrine for the US Army appeared in the 1905 publication of *Field Service Regulations* (FSR), a basic contribution of the new Leavenworth staff college but a final product of the Army General Staff. The FSR continued to be periodically published and became transformed over the years into the prime directive of today's *Field Manual 100-5, Operations* (See Appendix A-3). The early FSR, along with other doctrinal literature, provided a focal point for the experiments of reformers or for the lessons of experience. The General Staff had incorporated the responsibility not only for basic doctrine but also for its adjustment.[92]

Doctrinal adjustments based on experience could be made by the American general staff, as in the German model developed by Moltke, through a military history approach or contemporaneously during a conflict through battle reports. However, the American borrowing of German methods did not extend that far. American military history served only to instruct individuals, not to develop operational doctrine. It became important in the curricula of the Leavenworth staff college and the Washington war college for individual enlightenment and group instruction, as in staff rides, but it did not become a direct tool for improving tactical doctrine.[93] Neither did the battle reports, at least not until much later during the World War II era.

At the turn of the century, the use of battle reports had not progressed beyond their basic purpose of informing commanders about the general conduct of an operation and identifying who deserved praise or censure. After reaching the Commanding General, who used their contents in his report to the Secretary of War, the reports went to the Adjutant General, who became archivist of the documents, preserving them for record. During the Civil War, Congress had determined that such records ought to be made public and ordered their printing, a task that required 37 years and 128 volumes to complete in 1902 as the Civil War's *Official Records*. This impressive compilation of original reports, correspondence and other selected documents provided source material for reconstructing and

understanding the war's operations, but it reflected no tactical exploitation of the reported operational experiences. The published battle reports of the Civil War served military history, not military doctrine or other tactical concerns. Into the 20th century, the battle reports continued to be considered primarily as administrative and historical records and the property of the chief administrative officer of the Army. The 1892 handbook of campaign regulations, progenitor of the later FSR, required "engagement reports" within ten days after a battle, with one copy sent directly to the Adjutant General, apparently for strength and casualty reporting purposes.[94] Administrative and historical concerns precluded their use as transmitters of usable tactical experience.

The transmission of usable experience was left to the new service schools and professional associations through the media of their semi-official journals. Ideas, frustrations, lessons and experiences found expression and outlet in this periodical literature. Although the brevity of the Spanish-American War allowed insufficient time for quarterly journals to contribute truly contemporaneous experience-based information, they provided material for immediate postwar assessments. The *Cavalry Journal* and the *Journal of the United States Artillery* contributed such material (the *Infantry Journal* did not begin until 1904), but the *Journal of the Military Service Institution of the United States* offered the most prestigious vehicle for the war's lessons. It quickly offered such articles as "Some of the Defects in Our Military Machine," which pointedly asked "what have we learned," and "Field Intrenchments for Infantry."[95] The journal also contained an article that drew the opposite conclusion or lesson from the battle for Santiago. Whereas Arthur Wagner saw in the frontal assault against the San Juan Heights an old lesson unlearned, a young officer who was there saw a revolutionary new lesson. Lieutenant John H. Parker had commanded the Gatling guns that supported the assault. According to him, the lethal rain of bullets settled any question of the usefulness of machine guns: "It was the first time that such guns had ever been so used, but it will not be the last." He considered their offensive use as "a tactical lesson of the utmost importance."

Unfortunately for the young tactical prophet, the future would reveal in World War I that the machine gun's tactical supremacy lay in its defensive employment.[96] Correct or incorrect, however, he and others used the available media of the journals to share experiences and transmit their version of tactical truth and lessons in the immediate aftermath of the war.

The journals continued this role contemporaneously during the Philippine conflict that followed the American acquisition of the former Spanish colony. The war, never officially declared, involved the suppression of an organized nationalist movement and required more troops, more combat, more casualties and much more time than the war with Spain. It erupted in February 1899 and after several months of unsuccessful conventional warfare, the Filipino nationalists, or insurgents, resorted to guerrilla warfare that prolonged the conflict until it was declared over in July 1902. Thereafter, native unrest sporadically flared into combat over the next decade, particularly among the Moro population in the southern islands, involving the Army and its native auxiliaries. During the 1899-1902 "official" conflict and long afterward, the journals offered discussions and evaluations of tactics and procedures among the professional and volunteer officer corps. The pen of James Parker, now a lieutenant colonel of embattled volunteers, offered "Some Random Notes on the Fighting in the Philippines." Other writers offered their experiences on squad formations and other subjects, sometimes touching off journalistic debates on various tactical subjects, such as whether volley fire had become obsolete or not.[97]

By providing an outlet and a vehicle for experiences of the Philippine war, the journals functioned more meaningfully as lessons literature than had the Civil War's *United States Service Magazine*. At times, the new semi-official media even provided doctrinal-like guidance available nowhere else, as in the case of jungle tactics. Although previous experience in Indian-fighting may have helped the Army cope with the Filipino guerrillas, one might question how specifically useful previous tactics against the high plains Sioux or the desert Apaches proved in the Philippine jungles. Besides, by 1899, experienced Indian-fighters had moved up in seniority and did

not command the small units that actually fought the Filipino guerrillas. Furthermore, no Indian-fighting doctrine or manual was available — ever. From Samar in 1905, after more than five years of Philippine experience for the Army, a young officer offered his own "Jungle Tactics" article via one of the journals because he found no guidance in the latest official doctrinal publications.[98] The new mechanism for central management, the General Staff, had not caught up with its adjustment potential yet, and the journals continued their dissemination function, expressing clearly the spirit of learning from recent experience.

The spirit of lesson learning and a climate of receptive opinion toward it can be seen in the professional journals. The Military Service Institution's 1905 essay contest involved: "The experiences of our Army since the outbreak of the war with Spain: what practical use has been made of them and how may they be further utilized to improve its fighting efficiency." The gold prize winner, a junior member of the new General Staff, discoursed at length in his essay on various subjects ranging from overall mobilization to the need for a personal entrenching tool, suggesting: "Let us not ignore the lessons of the past . . ." The silver prize winner echoed that sentiment, stating: "From these experiences a number of lessons have been more or less learned. . ."[99] The terminology of "lessons" and the concept of learning them from recent experience appears in many military-oriented publications around the turn of the century. In American military literature, the terminology trend may have been introduced or popularized by the top Army intelligentsia some twenty years earlier. Generals Sherman and Upton both used the term and concept in their writings of the mid-1870s. Arthur Wagner soon followed and after the 1898 war with Spain, the term "lessons" had become commonplace in professional circles.[100]

The spirit of lesson learning, in the absence of an American war after 1902, found a substitute in the new peacetime field maneuvers that began that same year. Introduced by the Root reforms, a modest scheme of tactical unit training took place almost annually over the next decade. They compared poorly in scale and sophistication to the grand maneuvers conducted by European armies, and the required participation of undertrained

militia or National Guard limited the maneuvering, but they constituted an opportunity to learn from experience short of deadly combat. Although much of the learning involved the administrative and logistical operation of the maneuvers themselves, opportunities were taken to practice current tactics and experiment with new ones. Concepts in the new Field Service Regulations received occasional testing. As the peacetime maneuvering continued, it merged into shows of force along the troubled Mexican border and then the 1916 Punitive Expedition. Limited severely by the small size of the peacetime Army and other constraints, no large-scale maneuvering took place in the United States during this era.[101] Despite the lesson-learning benefits from the modest North American maneuvers, lessons that the US Army needed to learn were being taught on European battlefields beginning in August 1914.

NOTES

1. Quoted in Robert K. Wright, Jr., *The Continental Army* (Washington, DC: US Army Center of Military History, 1983), p. 139.

2. Based on the accounts of Francis Parkman, *Montcalm and Wolfe*, Vol. I (Boston: Little, Brown & Co., 1931), Chap. VII; J.W. Fortesque, *A History of the British Army*, Vol. II (London: Macmillan, 1935; originally published in 1899), pp. 274-287; Douglas E. Leach, *Arms for Empire: A Military History of the British Colonies in North America, 1607-1763* (NY: Macmillan, 1973), pp. 351-369.

3. Russell F. Weigley compared the US Army in the early stages of the Korean War specifically with Braddock's regulars in his *History of the United States Army*, enlarged ed. (Bloomington, IN: Indiana University Press, 1984), p. 519, and Justus M.M. Lenschau Jr., found inspiration in the fateful expedition for combined (multi-national) operations in his article "Braddock's Defeat," *Military Review* LI (Nov 1971), pp. 30-40.

4. Richard H. Kohn, *Eagle and Sword: The Federalists and the Creation of the Military Establishment in America, 1783-1802* (NY: Macmillan, 1975), p. 4; Robert L. Yaple, "Braddock's Defeat: The Theories and a Reconsideration," *Journal of the Society for Army Historical Research* 46 (1968), pp. 194-201.

5. Washington's quotes from *Writings of George Washington*, edited by John C. Fitzpatrick, Vol. 1 (Washington, DC: GPO, 1931), pp. 149-150; see also John K. Mahon, "Anglo-American Methods of Indian Warfare, 1676-1794," *Mississippi Valley Historical Review* 45 (1958), pp. 269-270, and Yaple, pp. 196 & 201, whose statement is quoted.

6. Fortesque, p. 285; Parkman, p. 234.

7. *American Military History*, ed. by Maurice Matloff (Washington, DC: Office of the Chief of Military History, 1969), pp. 37-38; Mahon, "Anglo-American Methods," pp. 264-275; Fortesque, p. 286; and Leach, pp. 369-370.

8. Thomas G. Frothingham, *Washington: Commander in Chief* (Boston: Houghton Mifflin, 1930), pp. 24-27; Douglas S. Freeman, *George Washington: A Biography*, Vol. II (NY: Charles Scribner's Sons, 1948), pp. 361-362; and Leach, pp. 438-445.

9. Mahon, "Anglo-American Methods,", pp. 270-274 and Leach, pp. 500-501.

10. Memo, February 1792, *Writings of George Washington*, Vol. 31, p. 491.

11. On the war's status and background, see the opening chapters of Wiley Sword, *President Washington's Indian War: The Struggle for the Old Northwest, 1790-1795* (Norton: University of Oklahoma Press, 1985), especially pp. xiii-xiv, and Kohn, *Eagle and Sword*, especially p. 92.

12. James R. Jacobs, *The Beginning of the U.S. Army, 1783-1812* (Princeton, N.J.: Princeton University Press, 1947), Chap. 3.

13. Marvin A. Kreidberg and Merton G. Henry, *History of Military Mobilization in the United States Army, 1775-1945*, Dept of the Army Pamphlet 20-212 (Washington, D.C.: GPO, 1955; reprinted 1984), pp. 27-29. The Knox maxim is quoted in Sword, *Washington's Indian War*, p. 181; see also his

Chap. 17. A scholarly monograph on the St. Clair expedition is William H. Guthman, *March to Massacre: A History of the First Seven Years of the U.S. Army, 1784-1791* (NY: McGraw-Hill, 1975). Other useful accounts are Jacobs, Chap. 5, and Francis P. Prucha, *The Sword of the Republic: The United States Army on the Frontier, 1783-1846*. (Toronto: Macmillan, 1969), Chap 2.

14. Direct quotations from St. Clair's letter to the Secretary of War, 9 Nov 1791, in *The St. Clair Papers*, edited by William Henry Smith, Vol. II (Cincinnati: Robert Clarke, 1882), pp. 263 & 264.

15. Kohn, pp. 114-117. *St. Clair Papers*, Vol. II, contains the quoted statements in letters, St. Clair to Knox, 9 Nov 1791, pp. 262-267, and Knox to St. Clair, 23 Dec 1791, pp. 275-276; the report of the Congressional investigating committee is reprinted in the same volume, pp. 298-299.

16. All quotations from Armstrong to Washington, 23 Dec 1791, in *St. Clair Papers*, Vol. II, pp. 276-277; see also *Dictionary of American Biography*, Vol. I (NY: Charles Scribner's Sons, 1936), pp. 353-354.

17. Memo, February 1792, *Writings of Washington*, Vol. 31, pp. 491-494; *St. Clair Papers*, Vol. II, p. 265; Kohn, p. 119 & 123-124.

18. John K. Mahon and Romana Danysh, *Infantry: Regular Army*, The Army Lineage Series (Washington, DC: OCMH, 1972), pp. 12-13 and Kohn, p. 124.

19. Kohn, *Eagle and Sword*, Chap. 7 and his profile of Wayne in the *Dictionary of American Military Biography*; letter, Knox to Wayne, 7 Aug 1792, in Richard C. Knopf, editor, *Anthony Wayne . . . Correspondence* (Westport, Conn.: Greenwood Press, 1960), pp. 7-8, 14-15, 63, 96 & 170.

20. Jacobs, pp. 134-136 & 154-156; Knopf, *Wayne Correspondence*, p. 105.

21. Ltrs, Wayne to Knox, 17 Aug 1792, and again, 14 Sep 1792, in Knopf, *Wayne Correspondence*, pp. 67-68 and 99.

22. Paul D. Nelson, "General Charles Scott, The Kentucky Mounted Volunteers, and the Northwest Indian Wars, 1784-1794," *Journal of the Early Republic* 6 (Fall 1986), pp. 236, 239-240 and 244-248.

23. Jacobs, pp. 158-159; Knopf, *Wayne Correspondence*, contains a drawing of the daily fortified camp opposite p. 281.

24. Sword, *Washington's Indian War*, Chaps. 25-29; Prucha, *Sword of the Republic*, pp. 36-37; and Jacobs, pp. 174-175.

25. Freeman Cleaves, *Old Tippecanoe: William Henry Harrison and His Time* (NY: Charles Scribner's Sons, 1939), Chaps. 2 & 8-9; Prucha, *Sword of the Republic*, pp. 40-42; *American Military History*, pp. 112-113.

26. Prucha, *Sword*, pp. 110-115; Cleaves, Chap. 15.

27. Prucha, *Sword*, Chap. 11.

28. Benjamin P. Thomas, *Abraham Lincoln: A Biography* (NY: Alfred Knopf, 1967), pp. 30-34; Cecil Eby, "That Disgraceful Affair," The Black Hawk War (NY: W.W. Norton, 1973), Chaps. 11-12; Prucha, *Sword*, Chap. 11; and K. Jack Bauer, *Zachary Taylor: Soldier, Planter, Statesman of the Old Southwest* (Baton Rouge: LSU Press, 1985), pp. 56-65.

29. Statistical data from Emory Upton, *Military Policy of the United States* (Washington, DC: GPO, 1907), pp. 190-191. See also the brief account of the war in Prucha, *Sword of*

Republic, Chap. 14, and the full treatment in John K. Mahon, *History of the Second Seminole War* (Garnersville, FL: University of Florida Press, 1967).

30. Mahon, *Second Seminole War*, pp. 104-106, and Virginia Peters, *The Florida Wars* (Hamden: CT: Archon Books, 1978), pp. 105-107.

31. Charles W. Elliott, *Winfield Scott: The Soldier and the Man* (NY: Macmillan, 1937), Chaps. 24-26, and Mahon *Second Seminole War*, pp. 140-142 & 161.

32. John K. Mahon, "The Second Seminole War," *Essays in Some Dimensions of Military History*, Vol. IV (Carlisle Barracks, PA: US Army Military History Research Collection, 1976), pp. 119-121; Bauer *Taylor*, Chap. 5; and Peters, *Florida War*, pp. 153ff.

33. John B. B. Trussell, "Seminoles in the Everglades: A Case Study in Guerrilla Warfare," *Army* 12 (Dec 1961), pp. 41-45; Mahon, *Second Seminole War*, pp. 323-325, and his article in *Essays*, pp. 109-110; George E. Buker, *Swamp Sailors: Riverine Warfare in the Everglades, 1835-1842* (Gainesville, FL: University Presses of Florida, 1975), pp. 136-140; Peters, 162-165.

34. Statistics from Upton *Military Policy*, pp. 190-191, and Mahon, *Second Seminole War*,, p. 325 & 321-333; the quotation is Mahon's.

35. Mahon, *Essays*, pp. 109-110, and his *Second Seminole War*, pp. 323-325; Mary L. Stubbs and Stanley R. Connor, *Armor-Cavalry*, Vol. I, Army Lineage Series (Washington, DC: Office of the Chief of Military History, 1969), pp. 8-9; Mahon, *Essays*, p. 108; and Theophilius F. Rodenbough, *From Everglade to Canyon with the Second Dragoons . . .* (NY: D. Van Nostrand, 1875), Chaps. I-VI.

36. See, for example, Christopher A. Abel, "Forgotten Lessons of Riverine Warfare," *US Naval Institute Proceedings* 108 (Jan 1982), pp. 64-68.

37. For example, James Smith, *An Account of the Remarkable Occurrences in the Life and Travels of Col. James Smith . . .* (Cincinnatti: Robert Clarke & Co., 1870), a reprint of the 1799 edition; see also Guthman, *March to Massacre*, pp. 122-127; and *Dictionary of American Biography*, 1963 edition, Vol. IX, Pt. I, pp. 284-285. According to Wright, p. 139, printed discussion of ranger tactics appeared much earlier in a history of New England's Indian wars by Thomas Church, first published in 1716 and reprinted in 1772.

38. Mahon, *Essays,* pp. 108-110, and Jacobs, *Beginning*, pp. 4-5.

39. Rodenbough, *Everglades to Canyon*, pp. 41-43; Elliott, *Scott*, pp. 210-211, 370-371 & 377; *Annual Report of the Secretary of War, 1839*, p. 59; and Winfield Scott, *Infantry Tactics: Or, Rules for the Exercise and Manoeuvres of the United States Infantry*, 3 vols. (NY: George Dearborn, 1835).

40. Mahon, "Anglo-American Methods," pp. 254-260 & 272-275, and Henry W. Halleck, *Elements of Military Art and Science . . .* (NY: D. Appleton, 1862), p. 143.

41. *The Army Register* (Jan 1837) lists all officers in relative ranking by grade categories. Capsule outlines of service for officers, 1789-1901, can be found in Francis B. Hertman, *Historical Register and Dictionary of the U.S. Army*, Vol. I (Washington, D.C.: GPO, 1902).

42. Robert M. Utley, *Frontier Regulars: The United States Army and the Indians* (NY: Macmillan, 1973), pp. 410, 412 & Chap. 3; see also his *Indian Frontier of the American West, 1846-1890* (Albuquerque, NM: University of New Mexico Press, 1984), pp. 166-170.

43. Russell F. Weigley, *Towards an American Army: Military Thought from Washington to Marshall* (NY: Columbia University Press, 1962), pp. 4-7.

44. Wright, *Continental Army*, pp. 138-143; William H. Bean, "Washington's Military Library," *Journal of the Military Service Institution of the United States* XXXV (1904), pp. 415-418; and Oliver L. Spaulding, Jr., "The Military Studies of George Washington," *American Historical Review* XXIX (Jul 1924), pp. 675-680.

45. Wright, Chap. VI, identifies these and other organizational developments.

46. Virgil Ney, *Evolution of the United States Army Field Manual: Valley Forge to Vietnam*, final report, Combat Operations Research Group, Fort Belvoir, VA, January 1966, pp. 11-15; Joseph R. Riling, *Baron von Steuben and His Regulations* (Philadelphia: Ray Riling Arms Book Co., 1966), pp. 27-30; Wright, pp. 137-142.

47. Wright, pp. 141-142 and Ney, pp. 12-14.

48. Kohn, *Eagle and Sword*, p. 41; Mahon and Danysh, *Infantry*, p. 11; and Mark Boatner, *Military Customs* (NY: McKay, 1956), pp. 73-74.

49. See the succinct profile and analysis of Scott by James H. Pohl in the *Dictionary of American Military Biography*, edited by Roger Spiller (Westport, CT: Greenwood Press, 1984), pp. 972-975, and Elliott, *Winfield Scott*, in general. Details on Scott's presidential aspirations are in Elliott, pp. 373-382, 410-411 & Chaps. 44-45.

50. John K. Mahon, *The War of 1812* (Gainesville: University of Florida Press, 1972), pp. 85-86, presents a brief explanation of the contemporaneous tactics. See also Jeffrey Kimball, "The Battle of Chippawa: Infantry Tactics in the War of 1812," *Military Affairs* XXXI (Winter 1967-68), p. 169; Theodore J. Crackel, "The Battle of Queenston Heights, 13 October 1812," *America's First Battles* (Lawrence, KS: University Press of Kansas, 1986), pp. 33-37; and *American Military History*, pp. 143-147.

51. Winfield Scott, *Memoirs of Lieut.-General Scott*, Vol. I (NY: Sheldon & Co., 1864), pp. 118-121; Elliott, *Winfield Scott*, pp. 143-153; and Kimball, pp. 170-171.

52. Kimball, p. 172 and Donald E. Graves, " 'Dry Books of Tactics': US Infantry Manuals of the War of 1812 and After," Part I, *Military Collection and Historian* XXXVIII (Summer 1986), pp. 50-61.

53. Details of the Buffalo camp appear in Scott's *Memoirs*, pp. 119-121; Elliott, pp. 146-148; Kimball, pp. 172-175; and Graves, p. 58.

54. Kimball, *op. cit.*; Elliott, Chaps. 13-14, especially p. 165; *American Military History*, pp. 141-142. During the 1950s-60s, the Army issued an official series of posters, *The U.S. Army in Action*, which included one depicting the advance of the American "grays" at Chippewa.

55. "System of Discipline for the Army," message to House of Representatives from Secretary of War, 22 November 1814, in *New American State Papers: Military*

Affairs, Vol. 5 (Wilmington, DE: Scholarly Resources, 1979), p. 54; Kimball, p. 186; Crackel, pp. 36-39 & 56; Graves, Part II (Winter 1986), p. 173; Scott, *Memoirs*, Vol. I, pp. 207 & 258; and Elliott, pp. 189-190 & Chap. 16.

56. Perry D. Jamieson, "The Development of Civil War Tactics," Ph.D. dissertation, Wayne State University, 1979, pp. 7-10.

57. Jamieson, pp. 10 & 17-18; Kimball, pp. 174-175; Graves, Part II, pp 175-176; and K. Jack Bauer, *The Mexican War* (NY: Macmillan, 1974), pp. 207-213, 220-225 & 330-335. The Army had no light infantry manual until 1854 and the efforts of a special board headed by Major William Hardee.

58. Bauer, *War With Mexico,* Chap. 13, and his *Surfboats and Horse Marines: U.S. Naval Operations in the Mexican War* (Annapolis, MD: US Naval Institute, 1969), Chap. VII. The Navy monograph is described by W.C. Lott, "The Landing of the Expedition Against Vera Cruz in 1847," *Journal of the Military Service Institution of the United States* XXIV (May 1899), pp. 442-448.

59. Scott, *Memoirs*, I, pp. 205-206; Elliott, *Scott*, pp. 228-229; US War Department, *General Regulations for the Army; or, Military Institutes* (Philadelphia: M. Carey and Sons, 1821), especially pp. 124-129.

60. US War Department, *General Regulations of 1821*, Article 54; *1835*, Art. XX; *1847*, Art. XLV; *1857*, Art XXXVI; *1861* & *1863*, Art. XXXVI; *1881*, Paras. 1286-1295.

61. See Scott's dispatch of 12 March 1847 to the Secretary of War, *Executive Documents,* 30th Cong., 1st sess., [Annual Report of the Secretary of War], Vol. I (1847), pp. 216-217

American Army: Military Thought from Washington to Marshall (NY: Columbia University Press, 1962), Chap. IV and his profile of Mahan in the *Dictionary of American Military Biography*, pp. 714-718.

67. Griess, pp. 306-307; Stephen E. Abrose, "Dennis Hart Mahan," *Civil War Times Illustrated* (Nov 1963), p. 35; and Robert M. Utley, "The Contributions of the Frontier to the American Military Tradition," *The American Military on the Frontier* (Washington, DC: Office of Air Force History, 1978), pp. 8-9.

68. Weigley, *Towards*, pp. 41-44, 51 & 54-67, and his profile of Halleck in *DAMB*, pp. 421-425; McWhiney and Jamieson, pp. 90-93; *US Army Regulations* of 1857, 1861 and 1863, Article XXXVI in general, "Battles" section in particular and especially Para. 709; and *Confederate Army Regulations* of 1862, 1863 and 1864, Article XXXVI, Paras. 696-722.

69. Mary C. Lane and John P. Kelly, *Today's Vision — Tomorrow's Victory: A Brief Survey of Army Combat Developments* (Fort Belvoir, VA: US Army Combat Developments Command, 1966), pp. 1-3; McWhiney and Jamieson, pp. 48-55 & Chap. 6; Nathaniel C. Hughes, Jr., *General William J. Hardee: Old Reliable* (Baton Rouge: Louisiana State University Press, 1965), Chap. IV; Graves, II, pp. 176-177. See also J.W.A. Whitehorne, "Inspector General Sylvester Churchill's Efforts to Produce a New Army Drill Manual, 1850-1862," *Civil War History* XXXII (Jun 1986), pp. 159-168, which relates the details of an attempt to standardize drill and ceremony but not, apparently, tactical movements.

and especially the data in Chap. 1, the Malvern quote of Gen. D.H. Hill appears on pp. 3-4. The Pickett quote and anecdote comes from Douglas S. Freeman, *R.E. Lee: A Biography,* Vol. III (NY: Charles Scribner's Sons, 1936), p. 129, and the data from George R. Stewart, *Pickett's Charge* (Boston: Houghton Mifflin, 1959), pp. 263 & 295-297.

65. Herman Hattaway and Archer Jones, *How the North Won: A Military History of the Civil War* (Urbana: University of Illinois Press, 1983), pp. 11-17, and Ney, *Evolution of Field Manual*, pp. 18-23.

66. Thomas E. Griess, "Dennis Hart Mahan: West Point Professor and Advocate of Military Professionalism, 1830-1871," Ph.D. dissert., Duke University, 1969, especially pp. 211, 304 & 366. See also Russell F. Weigley, *Towards an*

73. Arthur L. Wagner, *Organization and Tactics*, p. 33, and "Hasty Intrenchments," pp. 228-235 & 246.

74. Griess, "Mahan," pp. 337-338.

75. *Service Magazine*, I (Jan 1864), p. 2.

76. *Dictionary of American Biography*, Vol. 3, pp. 431-432. See for examples in the *Service Magazine*: C.W. Tolles, "Army Movements," Vol. III (Jun 1865), pp. 540-547; "A Good Use of Roman Candles," Vol. IV (Oct 1865), pp. 300-301; and "Ana of the War," Vol. V (Apr 1866), pp. 343-347. The proclaimed success and celebrity endorsements appear in the magazine's Vol. II (Dec 1864), p. 582.

77. *Service Magazine*, Vol. I, pp. 540-541; Vol. II, pp. 81-82, 188-189, 295 & 491-495; and Vol. III, 285, 479-481.

78. *Service Magazine*, IV (Aug 1865), pp. 97-98.

79. *Service Magazine* V (Jun 1866), p. 577.

80. Graham A. Cosmas, *An Army For Empire: The United States Army in the Spanish-American War* (Columbia, MO: University of Missouri Press, 1971), Chap. 7 and his "San Juan Hill and El Caney" in *America's First Battles*, pp. 109-148, especially pp. 111-114 & 147-148.

81. David F. Trask, *The War With Spain in 1898* (NY: Macmillan, 1981), pp. 234-248; Cosmas, *Army For Empire*, pp. 213-215 & 230, and *First Battles*, pp. 136-140 & 145-146; Arthur L. Wagner, *Report of the Santiago Campaign 1898* (Kansas City, MO: Franklin Hudson, 1908), pp. 105-111.

82. Arthur L. Wagner, *Organization and Tactics* (NY: B. Westermann, 1895), pp. v-vii; see also *DAMB*, pp. 1146-1149; and Eben Swift, "An American Pioneer in the Cause of Military Education," *JMSI* XLIV (Jan-Feb 1909), pp. 67-72.

83. See Wagner's *The Campaign of Koniggratz: A Study of the Austro-Conflict in the Light of the American Civil War* (Leavenworth, KS: C.J. Smith, printer, 1889), pp. 81-100; Swift quoted in "American Pioneer," p. 71; see also Peter D. Skirbunt, "Prologue to Reform: The 'Germanization' of the United States Army, 1865-1898," Ph.D. dissertation, Ohio State University, 1983, pp. 129-135.

84. William B. Hazen, *The School and the Army in Germany and France. . .* (NY: Harper & Brothers, 1872), p. 176; see also Skirbunt, Chap. III & pp. 179-180.

85. Wagner, *Organization and Tactics*, pp. 98-99.

86. Michael Howard, *The Franco-Prussian War: The German Invasion of France, 1870-1871* (NY: Collier Books, 1969), pp. 23-28; see also T.N. Dupuy, *A Genius For War: The German Army and General Staff, 1807-1945* (Englewood Cliffs, NJ: Prentice-Hall, 1977), pp. 89-92.

87. Theodore Schwan, *Report on the Organization of the German Army*, Military Information Division Report No. 2 (Washington, DC: GPO, 1894), pp. 63-65.

88. Emory Upton, *The Armies of Asia and Europe . . .* (NY: D. Appleton, 1878), pp. 216-217, 221 & 331.

89. See Wagner's *Campaign of Koniggratz*, pp. 81-100 and his *Organization and Tactics*, Preface & Chap. IV especially.

90. Arthur L. Wagner, *Report of the Santiago Campaign 1898* (Kansas City, MO: Franklin Hudson, 1908), a reprint of the final report submitted in January 1899, in which the examples appear on pp. 112-115, 124-126 & 129-131.

91. Arthur L. Wagner, *The Service of Security and Information*, 10th ed. (Kansas City, MO: Hudson-Kimberly, 1903), proclaimed itself "Revised in the Light of Recent American Campaigns" in the title page; see also p. 3. A comparison of the 1895 and 1906 editions of Wagner's *Organization and Tactics* uncovered no additions in the light of recent *American* campaigns; see also p. x of 1906 edition.

92. Summaries of the institutional changes of the late 19th-early 20th centuries appear in *American Military History*, pp. 346-349, and Weigley, *History*, Chap. 14. The unfocused nature of changing doctrine before the establishment of the General Staff receives attention from William R. Crites, "The Development of Infantry Tactical Doctrine in the United States Army, 1865-1898," masters thesis (Duke University,

1968), especially Chap. 1, see also Jamieson, "The Development of Civil War Tactics."

93. Timothy K. Nenninger, *The Leavenworth Schools and the Old Army: Education, Professionalism, and the Officers Corps of the United States Army, 1881-1918* (Westport, CT: Greenwood Press, 1978), pp. 97-99, and Harry P. Ball, *Of Responsible Command: A History of the U.S. Army War College* (Carlisle Barracks, PA: Alumni Association of the US Army War College, 1983), pp. 111-114.

94. US Army General Regulations of 1821, 1835, 1846, 1861, 1881, & 1895 with changes to 1920; *Troops in Campaign* (Washington, DC: GPO, 1892), pp. 53-54; Stetson Conn, *Historical Work in the United States Army 1862-1954* (Washington, DC: US Army Center of Military History, 1980), pp. 1-12; Livingston Wartrous, *Brief History of the Adjutant General's Department* (Governors Island, NY: Recruiting Publicity Bureau, 1927), pp. 14-15; and *List of the Records and Files of the War Department* (Washington, DC: GPO, 1890), p. 15.

95. *JMSI*, XXIV (Mar 1899), p. 196 and (July 1899), p. 71.

96. Parker's opinion first appeared in print as part of "Some Lessons of the War From an Officer's Standpoint," *American Review of Reviews* XVIII (Oct 1898), pp. 427-431 and then rewritten specifically and in detail as "Uses of Machine Guns," *JMSI* XXIV (Jan 1899), pp. 4-7; see also Cosmas, *First Battles*, p. 147.

97. The Philippine Insurrection is outlined in *American Military History*, pp. 337-339. See *JMSI*, XXVII (Nov 1900), pp. 317-340; XXX (Mar 1902), pp. 256-260, and (May 1902), pp. 409-417 & 445-448.

98. Louis M. Hamilton, "Jungle Tactics," *JMSI* XXXVII (Jul-Aug 1905), pp. 23-28. *American Military History*, p. 338 suggests the usefulness of previous Indian-fighting experience, but John M. Gates questions it in his "Indians and Insurrectos: The US Army's Experience with Insurgency," *Parameters* XIII (Mar 1983), pp. 59-68.

99. *JMSI*, XXXVI (Mar-Apr 1905), pp. 187-223 by Captain Charles D. Rhodes and (May-Jun 1905), p. 402.

100. Sherman's concluding chapter in his 1875 *Memoirs* bore the title "Military Lessons" and Upton's *Military Policy of the United States* published posthumously by Secretary Root had been written in 1878 and included several sections entitled "Lessons of the War." See Wagner, *Organization and Tactics* (1895), p. 101, and JMSI XXIV (Jan 1899), p. 15, and XXVII (Jul 1900), p. 17, in addition to the articles cited previously. Also, Alfred T. Mahan, noted naval strategist and son of Dennis Hart Mahan, published a collection of his essays as *Lessons of the War with Spain. . .* (Boston: Little, Brown, 1899).

101. Charles D. Rhodes, "The Experiences of Our Army Since the Outbreak of the War with Spain. . .," *JMSI* XXXVI (Mar-Apr 1905), pp. 220-222; Charles D. McKenna, "The Forgotten Reform: Field Maneuvers in the Development of the United States Army, 1902-1920," Ph.D. dissertation, Duke University, 1981, Chaps. II-V.

CHAPTER 2

WORLD WAR I:
BIRTH OF A LESSONS SYSTEM

You cannot create experience, you must undergo it.
— Albert Camus, *Notebooks* (1962)

But let us not for a moment forget that, while study and preparation are necessary, war itself is the real school where the art of war is learned.
— John J. Pershing,
addressing officers of 1st Division, April 1918[1]

It is far better to borrow experience than to buy it.
— Charles C. Colton, *Lacon* (1825)

We frequently hear it said, and it was said many times in France, that the best school for war is war. No idea could however, be more fallacious . . . Service in battle hardens officers and men, an important part of their training, but it does little toward their schooling.
— Harold B. Fiske,
lecture at Army War College, 1922[2]

Sustained contemporaneous lesson learning manifested itself during the First World War, 1914-1918. The continuous and prolonged combat afforded time for belligerents to routinely assess their battlefield experiences and the opportunity to apply the results to the next battle, not the next war. Halfway through the great conflict, formal expressions of experienced-derived lessons appeared on both sides of the front lines. About that time, the United States became a belligerent and borrowed some of the Allied lessons at first. Later the American Expeditionary Forces evolved overseas the US Army's first wartime system of gathering, evaluating, and applying ongoing experience.

Trenches and Lessons

In April 1917 President Woodrow Wilson led the nation on a crusade to make the world safe for democracy. Heavily armed with his idealism — and little else at the time — the United States Army entered the First World War, already in its third year. The unparalleled conflict surpassed in scale and intensity all previous war experience.

When the guns first erupted in August 1914, mobilization schedules had hurled huge armies at one another in vast and bloody meeting engagements along the national frontiers. The initial war of movement turned quickly into positional warfare behind elaborate systems of entrenchments, notably on the western front, where deadlock produced a terrible form of attrition warfare. Prodigious expenditures of men, bullets and high explosives failed to achieve significant gains or exploit a breakthrough. The trench became the new popular symbol and tactical essence of European warfare. In the spring of 1917, both the Allies and the trenches awaited the Americans.

Getting an American army into those trenches required more time than the desparate Allies had anticipated. American participation came dangerously close to being too little and too late. By 1917 the Allied armies were in danger of collapsing. High casualties for insignificant gains provoked mutinies among the French divisions and invoked political constraints against further British offensives. Both armies awaited the Americans, at first eagerly then desperately after

their great Russian ally left the war entwined in fateful revolution. Ominously, the German divisions no longer needed on the vast Eastern Front concentrated in the west for an impending spring 1918 offensive that might well decide the war's outcome. Meanwhile, American mobilization remained incomplete after nearly a year at war, for President Wilson had led an unprepared nation into the war and much needed done to effectively mobilize its industrial and manpower resources. As it turned out, American industrial mobilization did come too late to be fully effective; few sophisticated weapons of US manufacture reached the hands of US soldiers. American manpower, on the other hand, did get there in time — at least enough to provide the numerical and psychological edge for Allied victory. Raising sufficient numbers of Americans was easy enough, thanks to the selective service system, but turning the conscripted civilians into well-trained soldiers and finding enough scarce shipping to transport them to France proved difficult. When the German army, swollen by the eastern reinforcement, launched its great offensive, the American reinforcement was far from complete. In March 1918, only a half dozen unevenly trained US combat divisions had reached France. Training deficiencies and other inadequacies plagued the additional 37 US divisions that arrived before war's end. Many American soldiers learned their basic battle skills in the most exacting school of all—combat itself.

Generally speaking, combat soldiers learn their deadly skills through a combination of formal training and actual experience, preferably in that order. Sometimes the order becomes reversed or both stages occur simultaneously. One extreme example of concurrent training and combat experience is offered by the WW I Russian army. Desperate for replacements, it sent entire units of recently raised men directly to the actual defense of the front, where they received their basic training as conditions permitted, drilling immediately behind the trenches or sometimes in front of them.[3]

To a large and unavoidable extent, American doughboys and units learned much of their wartime trade on or near the French battlefields, not in the training camps and cantonments located in the United States. As George C. Marshall recalled:

> Our troops were sent overseas barehanded, versed only in the basic training of the soldier. Divisions were equipped in the field, trained within sound of the guns along the lines held by our Allies. Corps and armies were actually organized on the battlefield.[4]

Admittedly not the best approach, it came with the price of unpreparedness. In the rush to build up American forces in France and utilize available shipping, American combat divisions arrived in France with their training incomplete, which placed a major training burden on the overseas command. This additional burden practically invited the overseas command to exploit useful experiences from the nearby battlefields and incorporate the lessons into its training programs. At first from the Allies, occasionally from the Germans, and ultimately from its own units, the American field force drew lessons from ongoing events and adjusted doctrine, thereby operating the US Army's first organizational procedures for lesson learning.

Modern US Army lesson learning emerged in the American Expeditionary Forces (AEF). The rudiments of this first system materialized at the AEF's General Headquarters (GHQ) in France, not back in the United States in the War Department, the General Staff, or the doctrinal seedbed at Fort Leavenworth. The birth of the Army's lesson learning occurred overseas because, basically, that was where the war was and where the AEF's Commander-in-Chief, General John J. Pershing, functioned practically as a proconsul, fully supported — even deferred to — by the nation's civilian leadership. Pershing's status, his own personality and principles, and the combination of unpreparedness and urgency, produced an unparalleled situation in America's first military intervention in Europe. The effect was to shift the operational, training and doctrinal center of the Army some 3,500 miles east to the French town of Chaumont, where General Pershing settled his GHQ. Out of this headquarters came the first organizational lesson-learning procedures.

The seeds of this system came across the Atlantic. Almost as soon as the nucleus of the AEF reached France in June 1917, it planned to develop

and adjust tactical doctrine to upcoming experience. Within short weeks of arrival, Pershing's staff informed the War Department that

> Experience in the theatre of war will gradually develop new conditions and methods, and these will frequently change as the war continues. Then again, it is realized that many theories and principles have been and will be published which later experiences show to be erroneous. These errors can only be definitely disclosed by the troops associated with actual fighting and hardly by the forces being trained in the United States.[5]

Pershing himself had already decided en route that his headquarters would include a special training section and its duties would include the "incorporation of changes suggested by actual experience" into new AEF training manuals.[6] As the first American division assembled in France, it reported recommendations based on its new experiences to GHQ.[7] Although the newly arrived AEF was ready to manage experience, American combat experience took longer to acquire than anticipated.

Borrowing and Rejecting Allied Experience

In the summer of 1917, the cadenced footsteps of the first American army to ever march in Europe echoed over Lafayette's grave near Paris, symbolically repaying France for sending its army in the Revolutionary War. Unfortunately those marching sounds did not carry far because the tiny AEF was more promise than reality. Only one hastily assembled and incomplete American division arrived that summer. Over the next eighteen months, the AEF would become two million strong and participate in the final campaigns. However, the relevant knowledge and experience of the Army's tactical leadership was severely limited, especially in the handling of large units. Except for the minor Cuban campaign in 1898 and the opening phase of the Philippine campaign in 1899, the US Army in 1917 had conducted no major warfare since the Civil War of a half century earlier. The 1917 Army's collective combat experience consisted chiefly of small-scale irregular fighting against American Indians, Philippine insurrectos, and Mexican bandits —

and even that experience could be claimed by only a few of the older Regulars. By and large, the American army raised expressly for Europe's trench warfare was led by inexperienced officers, a cause of grave concern among the British and French armies. As one historian phrased it: "the American officers corps was a question mark."[8]

One of the overriding tasks facing the AEF involved the combat preparation of its officers and units by means of suitable training. Naturally, General Pershing and his staff turned to the Allies and their accumulated wealth of experience from three years at war. The hard-pressed British and French, desperate for the American reinforcement, willingly shared the benefits of their costly experience. As Edward House, President Wilson's close advisor and personal emissary, heard from the French Premier: ". . . if the Americans do not permit the French to teach them, the Germans will do so at great cost of life . . ."[9] Experienced Allied officers came to the United States to assist in the instruction and American officers went to Allied schools. Upon arriving in France, Pershing's staff, well aware of the training needs, carefully studied Allied methods of combat instruction and decided to supplement stateside training with a general scheme of overseas schools modeled on the Allied system. When setting up its first schools and training centers in the AEF's assembly area southeast of Paris, Pershing's staff borrowed both instructors and training manuals from the Allies. Additionally, early unit training drew directly on Allied experience by having US units serve within larger French units as part of a three-month program that acclimatized them to trench warfare. Having little choice and no experience, the AEF borrowed heavily from its allies.[10]

However, General Pershing and others on his staff held serious reservations about the experience they had to borrow. They noted in the British and French tactical systems that training in open warfare methods had practically disappeared. Pershing faulted the French as "inclined to be too paternal and as a rule they went little further in their instruction than trench fighting." British methods appealed more strongly to him, but he rejected their premise that traditional open warfare had become obsolete. The Allies, concluded the AEF's chief, had become not only war weary but

also hidebound to the tactics of trench warfare, relying chiefly on artillery and machine guns. Their defensive-mindedness contrasted sharply with his conception of a vigorous offensive, open warfare, and reliance on the infantryman's rifle. Many Allied officers in 1917 did not believe a breakthrough possible; Pershing did. A tactical doctrine gap widened between the Allies and the AEF.[11]

General Pershing faced a doctrinal and training crossroads. It required immediate decision and could not await the results of careful studies or testing by field exercises, because the AEF training program needed to be set in motion as quickly as possible. His realistic choices were to adopt the Allied doctrine of position warfare, which came along with the borrowed experience, or go with the open warfare already formulated in the US Army doctrinal literature. In choosing the American way, Pershing decided that the ". . . methods to be employed must remain and become distinctly our own."[12] To accomplish his goal, which amounted to double training in both trench warfare and open warfare, the AEF required more time than the impatient British and French wished to allow him. Realizing Pershing's intentions, they applied pressure for the immediate and piecemeal use of American manpower. The Allies did not object so much to the American doctrine but to the delay it entailed. They wanted American manpower as quickly as possible and considered Pershing's training program, along with his insistence on a separate, fully staffed American army, as dangerously time-consuming. The Allies already had the experienced commanders, staff, and units; they also had the weapons, equipment and support services in place. Just provide fresh American combat soldiers, they said, to bolster their depleted divisions. Pershing, however, stubbornly and successfully fought this amalgamation proposal. Amid Allied concern and dismay, he proceeded to build and train an American army in an American way.[13]

While the amalgamation controversy unfolded, the AEF unburdened itself of Allied experience. By the following summer, it had rejected all Allied instruction and supervision, politely informing the French that

. . . the time has come when we are no longer warranted in imposing upon the generosity of the French and permitting the American forces to deprive the French army of so many of its highly trained officers and men.

As time goes on, the greater will be the drain so that it is most desirable that we begin to rely entirely upon our own resources . . . it is most important that the whole American army be imbued with the spirit of self-reliance and believe this end may be best attained by removing all external aid.[14]

Default at the Center

At Chaumont, near the center of the American assembly and training area, no one looked for doctrinal guidance from the War Department, which deferred at this time to the AEF and its C-in-C in nearly all matters. Pershing, by virtue of the situation, relegated the Army Chief of Staff to an administrative and advisory role. Even later when a new strong-willed Chief of Staff, Peyton C. March, tried to override Pershing, he received no clear authority from the Secretary of War. While the top command relationship of the Army remained muddled, the long-standing Pershing-March dispute commenced and, for operational and doctrinal purposes, Chaumont, not Washington, set the pace.[15]

Overall, the War Department took little doctrinal initiative. It borrowed Allied trench warfare experience and doctrine and passed it on. The training responsibilities in the General Staff came initially under the War College Division, but soon relocated to the new War Plans Division, specifically its Training and Instruction Branch, which coordinated all Army training (See Appendix B-1). The branch's assigned functions included "cognizance and control of . . . the tactics and methods of warfare to be employed, together with all publications having relation thereto." In short, the branch had doctrinal responsibilities, at least to the extent of insuring uniformity in doctrine and methods of instruction throughout the Army. To accomplish this, the branch worked with and depended upon the several branch and service chiefs and the major combat arms schools.[16] However, in developing doctrine for the war, the War Department in Washington, DC, deferred to those situated closer

to the trenches. This meant at first the British and French, whose vast experience and doctrinal lead the War Department followed. Copies of Allied manuals and experience literature were obtained and reprinted under US auspices for US training purposes. Some French Army manuals, such as its 1917 *Manual for Infantry Platoon Commanders*, were translated by the US Army War College, which also edited the British army's 1916 pamphlet *Notes for Infantry Officers on Trench Warfare*. Much later, the War Plans Division edited and reprinted the British *Notes on Recent Fighting, March and April, 1918*.[17] In these and other publications, the War Department served as a conduit, passing along foreign experience and doctrine for the information of American trainers. The uncritical, non-analytical function is illustrated by the War Department's own *Notes* literature.

The British format of relating usable combat experiences found early emulation in the US War Department's series of experience literature, *Notes on Recent Operations*. Three so-titled pamphlets appeared in the summer of 1917 (not to be confused with the AEF's same titled series in 1918). Prepared by the War College from Allied sources, which included captured German material, the *Notes* pamphlets related the combat experiences of both ally and enemy. No American analysis or commentary appeared; the material spoke for itself. In contrast, some of the British literature reprinted in the American *Notes* included sections of "lessons" that drew conclusions on tactical principles and techniques. One *Notes* issue reprinted a translated German report, dated January 1917, on experiences in the recent Battle of the Somme in which the term "lessons learned" appeared. (Either actual German usage or a translator's choice of words, it represents one of the earliest appearances of the term in a military document.) Although both the British and Germans derived lessons from their reported experiences, the US War Department did not. It provided *Notes* material not as doctrine or lessons but "for the information of all concerned."[18]

Reprinting foreign manuals and foreign experiences was understandable in the absence of any appreciable American combat experience to work with, but even when the AEF participated in major combat operations, the War Department still did not evaluate American combat experience

and apply its lessons to tactical doctrine. A new publication by the Training and Instruction Branch, *Military Notes on Training and Instruction*, appeared in August 1918, followed by two more issues by October. This literature contained material derived from captured enemy documents and some British sources but very few US experiences. The only lessons therein were the ones already drawn by the British and German sources.[19] As before, the War Department left the doctrinal adjustment field wide open for the service schools and their journals. As one of these journals observed:

> . . . we have not enunciated a doctrine of war. Perhaps, indeed, the old doctrine still holds good, but in the multitude of training pamphlets there may be hypercritical souls who feel they are being given commentaries rather than the dogma which they seek.[20]

The service journals routinely featured instructional articles on trench fighting gathered from American observers, Allied experts, and even captured enemy documents. AEF combat experience, too, reached the professional journals of the infantry, artillery and cavalry associations (although the last-mentioned one ceased publication temporarily). The *Field Artillery Journal* often reprinted AEF literature on artillery experiences and lessons.[21] The *Infantry Journal* ran a regular feature, "Notes on Recent Operations in France," which contained experience-based information "worth serious consideration as a guide for training in the United States." Furthermore, the *Infantry Journal*, clearly conscious of the lesson-sharing need, asked editorially: ". . . how are other battalions to know unless they are told?"

> Notes of methods which have been found of value in one unit would be of value in another. Suggestions of methods would also be at least worth consideration. This journal should properly be the medium for the communication of these, but it cannot be unless they are sent to it.[22]

Its editors even advocated that all the service journals should collectively serve as the media for exchanging combat information and experiences within and among the several arms. To effect this, they suggested housing the associated staffs of all

the journals in one interconnected office building in the nation's capital.[23]

To the limited extent that the service journals functioned de facto as media for combat experience and lessons, they were aided by the War Department's injunction against the private publication of military information by service personnel. Individuals subject to military authority submitted for approval their material on military subjects intended for official or private publication. The Chief of the War College Division, General Staff, determined the material's suitability. What had heretofore been common practice, resulting in competing and contradictory information, now came under central control with two major exceptions: the service journals and "such military books and pamphlets as may be authorized by the commanding general, American Expeditionary Forces."[24]

Overseas Doctrine Development

Overseas, the AEF's General Headquarters published a great many military books and pamphlets, some of which disseminated combat experiences, lessons, and doctrinal material. With the War Department's default or deferrence in these matters, GHQ at Chaumont became the wartime center of doctrine development in the US Army. Leavenworth-taught principles, codified in the *Infantry Drill Regulations* and new *Field Service Regulations*, underwent adjustments based on the perceived needs and later the actual experiences of the AEF.

Actually, in 1917 the US Army had reached a crossroads of time and place in regard to its tactical organization and operational doctrine. The heritage of North American military affairs, the recent involvement with overseas possessions, and the impending participation in European warfare — past, present and future — all converged when the nation decided to join the Great War. The road already traveled by the Army as frontier constabulary, coastal defense force, and colonial caretaker had done little to prepare its tactical organization for a modern European war. The most recent operational experiences in Cuba, the Philippines, China and Mexico were largely irrelevant. Even war planning, a promising feature of the new US General Staff, had not contemplated conflict on the scale of the Great War

nor imagined that an American army would fight in Europe.[25] When the AEF began assembling in France, it assumed the lead in developing suitable organization and doctrine.

Shortly after arrival, Pershing's staff "realized that many theories and principles have been and will be published which later experiences show to be erroneous."[26] In 1917, however, and well into the following year, there were not enough American troops for meaningful American combat experiences; the AEF's test of battle and accumulation of battle experience lay ahead. In the meantime, it did not take long for the AEF to conclude that the British and French had learned the wrong lessons or ones that, at any rate, were not in accord with what Pershing held acceptable. In rejecting the positional warfare mode of the Allies, Pershing lined up squarely with American doctrinal tradition of the offensive,[27] which he made the cornerstone of AEF training policy. As decreed in the early fall of 1917: "All instruction must contemplate the assumption of a vigorous offense," which became the fundamental principle of the overseas unit training programs. It allowed for the teaching of specialized features of trench warfare but held that "the general principles governing combat remain unchanged in their essence." It invoked the essential principles already set forth in US Army doctrinal literature and identified the infantrymen's rifle, his marksmanship, and his aggressive spirit as the way to overcome the defensive deadlock on the Western Front.[28]

Unfortunately, in GHQ's view, the War Department did not fully cooperate with AEF doctrine. In the matter of training, for example, dissatisfaction grew over rifle marksmanship and other combat skills supposed to be taught stateside. Chaumont also deplored the lack of proficiency in minor tactics and open warfare among the arriving troops. Pershing believed that stateside training concentrated too much on trench warfare and thus "placed practically the entire burden of training in open warfare upon us in France."[29] Although burdensome, it nonetheless provided the opportunity to imbue the arriving officers and men with the spirit and procedures for battle AEF-style.

GHQ, in fact, squandered few opportunities to ensure doctrinal conformity to the AEF's offensive spirit. Tendencies toward the "incorrect" doctrine

of passive position warfare infiltrated the AEF through the American borrowings of Allied experience, manuals, and instructors, or when US divisions served in British and French corps during later combat operations. To counteract such inroads, GHQ continually issued instructions on correct doctrine and relied heavily on its training system to inculcate the authorized offensive spirit and its associated principles of open warfare. Under the close supervision of GHQ's Training Section, AEF schools and training centers became a tightly controlled system for doctrinal purity, as well as for technical proficiency in the skills of warfare. "In all instruction the supreme place of the rifle and bayonet . . . will be made clear," it was directed. As one GHQ directive explained:

> The ultimate purpose of the American army is the decisive defeat of the enemy and not the mere passive result of the pure defensive. To realize this ultimate purpose it is essential that every officer and soldier of these forces be imbued with the offensive spirit.[30]

Reflecting the AEF's trust in the offensive were its big divisions. In devising a suitable divisional structure for warfare in France, the US Army doubled the size of the standard European division and brought overseas what one historian described as "the wonder of the Western front."[31] Conventional Allied wisdom held that an infantry division needed to be structured for depth of manpower and firepower. The concentrated and prolonged attacks of trench warfare required the staying power of heavy divisions in a "square" configuration. A square division comprised two infantry brigades of two regiments each and, in some cases, four platoons per company and four companies per battalion. This configuration allowed two elements on line and two in reserve, which translated into the greater depth that the British and French felt was necessary. The Germans felt otherwise and discarded the square division in favor of a lighter triangular one. By 1916 German divisions comprised no brigades and three infantry regiments, each with three battalions, which allowed them better control and freed manpower to create additional divisions.[32] On the other hand, the American divisions organizationally reflected in their square structure and ponderous size the American perceptions of the European battlefield and the doctrinal inclinations

of the AEF. When the nation joined the war, the Army had no divisions in being nor any significant experience in their use or doctrine on how to employ them in trench warfare. The North American heritage of a small-unit army came up hard against large-scale European warfare, and US Army tactical structure and doctrine needed speedy adjustment. What was organizationally set forth in the latest edition (1911) of the *Infantry Drill Regulations* simply did not fit the new war.[33]

American divisional structure, as well as prime tactical doctrine, was set in France before the autumn of 1917. Earlier in the spring, the War Department had initially prescribed a division structure that called for 28,000 men in a three-brigade, three-regiment configuration, but its triangular features disappeared in the final wartime version that came out of Chaumont. GHQ studied the matter that summer and coordinated with a special War Department board dispatched to Europe. The Baker Board (named after the Army colonel who headed it and not Secretary of War Newton D. Baker) conferred with GHQ and agreed upon the General Organizational Project, which formed the basis of the AEF's overall structure and that of its divisions. A square configuration replaced the initial triangular one, but the American division retained its gigantic size, which the French treated as a corps. In mass and structure the division was exactly what Pershing desired — a division with staying power, able to absorb losses yet continue to batter through the German trenches into the open. The large divisions also required fewer staffs and lessened the demand for qualified American staff officers, who were in critically short supply. This structure and AEF doctrine were tested sooner than GHQ planned.[34]

The Test of Battle

On 21 March 1918 the German army launched the series of offensives upon which hinged the war's outcome. Having gained numerical superiority over the Allied armies, thanks to the Russian collapse and subsequent transfer of forces from east to west, the Germans delivered a series of major hammer blows against the Allied lines throughout the spring and early summer. The German offensive and numbers came as no surprise to the Allies, who anticipated both. What

caught them off guard was the effectiveness of new German assault tactics. The so-called Hutier tactics helped punch great holes in the Allied lines, allowing deep penetrations before the German momentum slowed. These assault tactics involved an infiltration approach that flowed around major points of resistance to reach vulnerable rear areas. They helped put the Allied cause in peril that spring.

The successful assault tactics, incidentally, resulted from German lesson learning. Their tactical success that spring stemmed in part from the attitude and practices of General Erich Ludendorff, one half of the leadership team that held the top command of the German army since mid-1916. Ludendorff, in pursuit of efficiency, looked to recent combat experience for answers. Units that participated in operations reported designated information to his headquarters. Staff officers observed operations and afterwards gathered line officers together for debriefings. From such information tactical principles evolved in a dynamic process of lesson derivation and application that produced major innovations, like the elastic defense that confounded the Allies early in the war and the infiltration assault tactics that confounded them later.[35] The German army under Ludendorff knew how to make effective and timely use of its experiences. Within two weeks of launching the spring 1918 offensive, "Notes" were prepared by the German General Staff to disseminate "some of the lessons taught by the recent fighting, which do not seem to be generally known and which are of importance for future battles . . ."[36]

Once Americans joined the war, their new allies provided captured enemy documents that included lessons material. George C. Marshall, for one, when newly assigned to GHQ used such captured material to prepare plans for the impending St. Mihiel operation. In drafting a combat order, Marshall later admitted drawing upon "copies of Ludendorff's most recent tactical instructions for the German Army."[37]

The combat test of the AEF began soon after the German army launched the spring offensive. Prior operational experience of the AEF had been limited to defensive deployments in quiet sectors for indoctrination under Allied tutelage. Occasional combat actions resulted, such as the trench raid against the 1st Division at Artois in November 1917 — the AEF's first blooding — and the attack that befell the 26th Division at Seicheprey in April 1918. But, after a year at war, America's combat contribution in France remained relatively insignificant, reflected by the actual presence of a mere six US divisions and only 163 accumulated battle deaths. The division buildup rapidly accelerated and casualties began to mount almost immediately as General Pershing responded to the spring crisis and Allied urgency by sending his most battle-ready divisions on loan to help stop the advancing Germans. Committed piecemeal and under Allied command, American divisions and corps rendered useful service that late spring and summer, blunting several enemy drives and spearheading limited counter-offensives. The first American attack of the war, a regimental assault against the occupied village of Cantigny, was eminently successful, especially its subsequent defense against persistent counter-attacks. About the same time, two divisions defending Paris along the Marne River effectively engaged the Germans in the noted skirmish at Chateau Thierry and the larger counterattack in the Belleau Wood. In midsummer, eight American divisions in two corps participated in the Aisne-Marne counteroffensive that wrested the initiative from the German army, never to be returned to it in the war. The beginning of the end had come and American forces contributed to its coming.[38]

In these initial tests, US divisions successfully conducted offensive combat but suffered heavy and sometimes needless losses. American troops displayed the courage and aggressiveness expected of them — evident in the large numbers of battle casualties, which some might describe as catastrophic, others as merely appalling. One infantry regiment of 3,000 men, after three days attacking near Soissons, counted only 200 effectives left. Such huge losses raised questions about the tactical handling of the willing and spirited troops. Obviously there were lessons to be learned, even from the fallen on the battlefields: some lay in tight clusters, having violated in life a major training tenet against congregation; others lay in windrows, mowed down in a grim harvest by the machine guns at which they advanced upright in close-order ranks. Brave men, it seemed, but seemingly wasted by foolish tactics.[39]

A new phase of American participation began as summer waned. In September 1918, the AEF independently planned and executed its first large-scale operation, a limited offense against the St. Mihiel salient. Situated south of Verdun, the German bulge in the lines had extended into Allied territory since the trenches first appeared in 1914. Supported by French artillery and some French infantry, nearly one-half million American troops participated. Eleven divisions and elements of six others were organized into three corps, all under the separate American First Army. As planned, the operation succeeded and pinched off the salient within a few days. Detractors pointed out that the salient had been defended by second-rate troops who were caught in the process of undergoing a planned withdrawal, but the victory symbolized the AEF's debut as a major contributor to the Allied effort. GHQ exuberantly considered the operation an object lesson to the Allies on the efficacy of the American tactical approach and offensive spirit, which showed that "good troops could successfully attack the most elaborate trench system."[40]

St. Mihiel may have vindicated the American offensive spirit, but not American tactics or their application. A highly critical assessment came from the other side of the lines, reported by German intelligence:

> The advance of the American infantry in the attack was altogether schematic. Great clumsiness was shown in the movement over the terrain of the waves of riflemen which followed each other closely. The shock troops hesitated when met by the least resistance, and gave the impression of awkwardness and helplessness. Neither officers nor men knew how to make use of the terrain. When met by resistance, they did not look for cover but went back erect. The American apparently does not know how to work himself forward or backward by crawling on the ground or by rapid rushes. At first he lies still and then tries to get up again. In fighting on shell-torn terrain the American is wholly inexperienced. He does not know how to stick to shell holes.[41]

Viewed from this perspective, Americans had learned little from previous AEF combat experience.

Some 40 miles north of St. Mihiel awaited the next opportunity to make use of its experience and the greatest AEF battlefield of the war, the Meuse-Argonne. From the eastern bank of the Meuse River just above Verdun, it stretched westward about 20 miles into the thickly wooded hills of the Argonne Forest. The Germans had skillfully augmented the rugged terrain with a series of four main defensive lines, one behind the other, each anchored to formidable strong points. Although in total area the new battlefield was slightly smaller than the St. Mihiel salient, its strategic importance — gateway to the north-south transportation system of the overall German front — meant stubborn defense. The ensuing campaign drew in over one million American troops in 22 divisons, 5 corps, and 2 field armies. Beginning 26 September 1918 with a massive assault against the first German line, the Meuse-Argonne battle ended abruptly six weeks later with the 11 November armistice. By that time American forces had broken through the last main defensive line and advanced rapidly to reach the outskirts of Sedan, almost forty miles from where they started. The achievement required six weeks of relentless assaults and grinding attrition in order to break through the defenses. It cost 117,000 American casualties, nearly half of all the battle losses sustained by the AEF during the war and 60% of its battle deaths.[42] Although the price was high, it might have been higher without the AEF's new lesson-learning system.

AEF Lesson Learning: The G-5

In mid-summer 1918, about two months after its major combat baptism at Belleau Wood, the AEF began to learn lessons from its accumulating store of combat experiences. Although some mistakes persisted to the end, improvements in the tactical handling of troops and appropriate techniques of combat have led some historians to conclude that the AEF had become more combat efficient.[43] What caused the improvement? Experience had to be a major factor: personal experience and, most importantly, organizationally-processed experience. By assessing its own battlefield performance and then disseminating the derived lessons or applying them to doctrine and training, the AEF inaugurated the practice of US Army wartime lesson learning.

The executive agency for the AEF's lesson-learning procedures was the Training Section of the general staff at GHQ. Because of the overriding importance of training to the

45

inexperienced American Expeditionary Forces, much was expected of this particular agency and much in fact was delivered. It served not only as schoolmaster to the AEF but also as its doctrine developer.

Training, from the onset, held the highest and most immediate importance as far as the AEF's commander-in-chief was concerned. General Pershing gave the training function extraordinary status within his headquarters. In creating a general staff of five sections, not three like the War Department General Staff, he included a specific training section (See Appendix B-1). While enroute to France, Pershing went against the advice of the majority of his staff and decided to split the usual tandem of operations and training. He did not wish to overwhelm one staff officer. More importantly, by dividing the two activities, the C-in-C expected the training officer exclusively to manage and coordinate his vital function. When the AEF's General Headquarters was reorganized in February 1918, after six months of operation in France, the initial training emphasis remained and the responsibilities of its Training Section expanded. The reorganization also gave new titles to all the general staff section heads, making them assistant chiefs of staff, and put numerical designations on the staff functions. As a result, the Training Section became the Assistant Chief of Staff, G-5 (Training). Although postwar American practice used the designator G-5 for other functions, notably civil affairs-military government, in 1917-1918 it represented AEF training matters, including doctrine and experience processing.[44]

The doctrinal function of the Training Section (G-5) was not specified initially but came inherent with its assigned training responsibilities. These included the preparation of division training programs and the publication of training manuals. Training programs scheduled the subject matter and activities for the divisions to follow, with each program designed for a specific division. Each program contained general principles of approved doctrine. The training manuals, corresponding in function to modern field manuals, began as simple translations of French manuals, but later became original products of the AEF G-5. In the February 1918 reorganization of GHQ, the Training Section (G-5) received explicit doctrinal responsibility and

increased authority to monitor the effectiveness of training.[45]

At the same time, the Training Section gained a new head who would remain in charge for the rest of the war. Colonel Harold B. Fiske became Assistant Chief of Staff, G-5, in February 1918, succeeeding his former chief, Colonel Paul B. Malone, who had headed the section from its establishment the preceding August. Malone received command of the 23d Infantry Regiment, which he led in combat. As Malone's successor, Fiske became an effective and demanding G-5, earning his first star in July 1918. In describing General Fiske, a superior officer noted that he operated "with an efficiency that was not conducive to popularity . . . but was a great service for his country."[47] Illustrating Fiske's forceful character, as well as the importance of schooling in the AEF, was the incident, late in the war, when the schedules of the fourth class at the AEF Staff College and the Meuse-Argonne offensive conflicted. In order to begin the college session as scheduled, General Fiske demanded that the unschooled officers on division staffs be released from their assigned duties in time to meet the college schedule. Most of the officers designated for the three-month session were then serving with the most recently arrived, inexperienced divisions in France. Despite pleas and arguments to allow those particular designees to remain with their divisions for at least the start of the Meuse-Argonne offensive, Fiske's demands won out. According to one observer, the operating staffs of the new divisions were "absolutely scalped," resulting in substantial mismanagement and confusion by those divisions that lost their most capable staff officers to the college. It troubled George C. Marshall, who waited a decade before criticizing his mentor, John J. Pershing, on that decision. From Marshall's view at GHQ Operations (G-3), a delay of ten days or even a week in starting the school session would have better prepared those new divisions for battle.[48]

General Fiske was further demanding in regard to the foreign tutelage of the AEF. An outspoken critic of placing US units with the British or French for training, he considered the practice un-American. It repressed, in his opinion, the distinguishing national virtues of self-reliance, responsibility and the offensive spirit. Foreign

instruction was more liability than asset, he argued, pointing out to the AEF Chief of Staff that "An American army can not be made by Frenchmen or Englishmen." Fiske strongly recommended complete "emancipation" from Allied supervision.[49]

Fiske's most pervasive influence came through the training policy and doctrine, which he tightly administered throughout the command. The AEF's centralized training program was prepared, administered, and inspected by the G-5 and his staff officers. Division commanders complained about the rigidity of the program and their own lack of latitude and initiative, but to no avail. The G-5 staff, with a peak operating strength of over 40 officers, including a few civilian and enlisted translators, carefully monitored training sites and trenches. One of these staff members, Lesley J. McNair, spent his entire wartime service as senior artillery officer in the G-5 section and later became the chief trainer of the WW II army. McNair, like the other G-5 staff, standardized training practices and ensured doctrinal conformity.[50]

The basic doctrine enforced by the G-5 monitors stemmed from the AEF Commander-in-Chief's interpretation of pre-war American doctrine, with his special emphasis on taking the initiative and on an offensive spirit. Essentially it was the teaching of the Fort Leavenworth schools. Both Malone and Fiske were "Leavenworth men." Although GHQ was replete with graduates of the Army's staff college, the two AEF training heads directly ensured that the methods and doctrine taught at Leavenworth were likewise taught at Langres, site of the overseas staff college. The Langres school became "an abbreviated, three-month imitation of Leavenworth."[51] Although cast in the same mold, Langres uniquely had proximity to the active battlefields and the G-5 had license to adjust doctrine to combat experience. From the beginning, July 1917, the Training Section of GHQ received the responsibility and duty of preparing training manuals "with incorporation of changes suggested by actual experience."[52] At first this only involved adapting the translations of French manuals w⸱⸱le waiting, as Fiske related, "until our infantry had attacked sufficiently to permit rewriting our Infantry Drill Regulations in the light of our own experiences."[53] Once the AEF began undergoing major combat in the spring of 1918,

the G-5 had American battle experience to work with, not British or French experience. Increasingly that summer and fall, American combat participation grew and with it grew a body of accumulated experience for processing.

The G-5 System

In pursuit of training efficiency and doctrinal conformity, and while using its February 1918 license to accommodate useful experience to doctrine, the AEF's G-5 section operated a lesson-learning system. The G-5 staffers did not call their procedures by that name, but they were well aware of the need to match experience with doctrine. As it transpired, they showed more concern over the execution of tactics conforming to prescribed doctrine than for uncovering new and more efficient methods. Regardless of motivation, however, operating procedures for a simple lesson-learning system arose within the American Expeditionary Forces. They consisted of two key components: G-5 inspectors and lessons literature.

The G-5 inspectors, being close at hand to training sites and the delineated combat areas, served as the major medium or transmitter of training and battle experiences. There was little need for reliance on unit battle reports, a later development, when the trip back to the Chaumont headquarters from practically anywhere in the AEF areas of France took little time. Oral observations, as well as written reports, became almost immediately available for processing in the abbreviated circuit of AEF lesson learning, thanks to the pervasive use of the GHQ's "inspector-instructors." The February 1918 reorganization of GHQ had given the G-5 new and explicit authority for conducting inspections throughout the overseas command in order "to ensure efficiency and thoroughness of training," as General Fiske understood it. His newly stated authority went beyond mere supervision of training centers and schools; it constituted authority for G-5 inspectors to visit anywhere in the AEF to conduct tactical inspections of units undergoing training. It should be noted that AEF units not actually engaged in combat trained continuously. To minimize the potential disruption of continuous inspections, the G-5 inspectors functioned like observers, quietly

47

joining the units for a time. However, they were not simple observers, for they represented GHQ and specifically the G-5, to which C-in-C Pershing gave personal direction in matters of training and especially doctrine. Minor deficiencies noted during these visits were corrected "by suggestion and instruction" on the spot, but "considerable failures" resulted in corrective orders from GHQ. General Pershing earned a reputation for relieving commanders who, for various reasons, failed to measure up to his high standards in either training or combat performance.[54]

The G-5 training inspectors functioned not unlike inspectors-general or, perhaps, doctrinal commissars. They monitored not only rear area training but also front line combat operations. When American units went into battle, G-5 personnel went with them, one per division, to observe firsthand the application of training to combat. General Pershing gave their continual presence much credit for the AEF's combat efficiency. The G-5 himself, General Fiske, accompanied three different divisions into battle on three different occasions. His observations and those of the other G-5 combat observers were recorded, consolidated and reproduced to become the US Army's first wartime lessons literature, the second key component of the AEF lesson-learning system.[55]

Training and doctrinal information, disseminated in various forms by GHQ, included orders, bulletins and other memoranda, as well as training programs and manuals. Nearly all emanated from or came through the G-5 as training literature. In the relatively brief wartime period in France, the G-5's list of major training publications totaled more than 160 items. Of that number, a dozen items came from the British for outright issue, the same as another dozen publications furnished by the US War Department, some of which were AWC translations of French manuals. Another two dozen items came directly to the AEF from the French for translation, adaption as necessary, and publication. This still left more than one hundred publications actually prepared by or under the supervision of the G-5. About one-third of these consisted of the individual training programs for the divisions, while the rest predominantly were AEF manuals on general or specialized subjects, including monographs on individual weapons,

camouflage, and even the baseball throw for hand grenades. That left, finally, a special category of literature that explicitly related and applied American combat experience.[56]

This first lessons literature appeared during the second summer in France, when the AEF's troop strength reached over a million and its battle participation intensified. The G-5 published in limited numbers *Remarks Concerning Deficiencies in the Training of Our Units as Brought Out in Some of the Recent Offensive Operations.* Awkwardly long, this first title described and reflected the vital lesson-learning connection between training and combat. Next came *Report of American Officer on Recent Fighting*, of which 5,000 copies were printed. In early August a training manual for corps and division commanders appeared in nearly 4,000 copies, a quantity obviously intended for more than the eyes of the two score higher commanders. The first real mass distribution of lessons literature began with the 15,000 copies of *Notes on Recent Operations*, the first issue in a series. Three more issues followed. The G-5 prepared a *Notes* issue after a major offensive operation, basing it chiefly on the reports of its inspectors who accompanied the participating divisions. Deficiencies in tactics and techniques were pointed out in the *Notes*, which were widely distributed: only 5,000 for *No. 2*, but 19,000 for *No. 3* and 27,000 for *No. 4*. Unlike the similarly titled War Department publications of 1917, which had merely transmitted untouched foreign experiences, the AEF *Notes* of 1918 constituted genuine American lessons literature. They transmitted the recent combat experiences of US divisions and the lessons drawn by authorized authority.[57]

The *Notes* series epitomized the lessons literature produced by the G-5, but it was not the only AEF media for disseminating training, doctrinal and combat information. Before the August-November 1918 appearance of the *Notes* series, GHQ occasionally broadcast such information through its general orders, bulletins and other authority publications.[58] A common feature of such publications was their prescriptive nature; they did more than inform, they directed. Unlike later lessons literature that disseminated experience-based information as potentially applicable and allowed discretionary use, GHQ's

lessons publications sought to enforce operational efficiency and doctrinal conformity. There was no authorized discretion.

Nothing illustrates this better than the AEF's *Combat Instructions*, the first of which appeared as a three-paragraph directive issued in June 1918. It first carefully explained how best to conduct a forward defense of the main trench line with outposts, a subject apparently not well understood. The *Instructions* directed brigade and division commanders to conduct frequent tactical inspections of their assigned trench sectors and warned local commanders that during inspections by the C-in-C or his representatives, they would be tested, in effect, on their knowledge of the tactical dispositions. Thus, doctrinal instruction and command directive — knowledge and orders — were combined in the first *Combat Instructions*. The second and last issue, two months later, appeared as a ten-page pamphlet widely distributed, about 55,000 copies being printed. Its opening paragraph cited combat principles previously set forth in orders and *Notes* that were not being properly applied: attack formations too dense, waves too close, and individuals too near one another. Open warfare methods needed more attention, the *Instructions* stated, and then set forth again the vital principles and correct procedures. Twenty-two instructional paragraphs later, the division commanders were directed to "secure full compliance with the principles herein enunciated."[59]

The *Combat Instructions*, the *Notes* series, and the other GHQ memoranda collectively formed the application stage of the AEF lesson-learning system. Such media disseminated and prescribed information, doctrine, lessons, training methods and other combat matters, all mixed together, in effect, as operational policy directives. It was a crude system, but in view of the circumstances, especially the constraints of time, these lesson-learning procedures apparently worked. The fourth and last issue of *Notes on Recent Operations* mentioned many improvements in previously cited deficiencies.

Actually, when *Notes No. 4* appeared in print the war had just ended. The potential for renewed fighting existed for a while and the AEF took the opportunity to complete its training and fully apply the lessons of the preceding months of combat

experience.[60]. It was then, after the cease-fire, that the culminating product of AEF experience and lessons appeared in the form of revised infantry tactical doctrine, which the War Department soon adopted for the entire army. The first volume of the AEF's *Infantry Drill Regulations (Provisional)* was published in December 1918 in Paris. Despite the traditional title, the AEF's *IDR* expressed tactical doctrine that fit its recent combat experiences. The first half of the 144-page manual described the parade ground close-order drill used for ceremonies and such, but the second half presented combat-oriented offensive principles, tactics and procedures — in a word, doctrine. Nearly 80,000 copies were printed. A second part followed six months later, containing complementary defensive doctrine and a preface that announced supersession of several War Department manuals and the Army's 1911 edition of the *IDR*. Not long afterwards, the War Department published the AEF's regulations as its own, in toto, for the use of the Army and National Guard.[61] The AEF still held the doctrinal lead even after the war ended.

A final assessment of AEF lesson learning must consider the limited extent of America's participation in the war. Owing to the nation's belated belligerency and general unpreparedness, plus other difficulties like shortages of transoceanic shipping, the American overseas army engaged in less than six months of major combat, only the last two as an independent force. In contrast, the armies of Great Britain, France and Germany had been engaged in continuous combat for well over four years. The war ended long before the AEF reached its planned buildup peak and just about the time that its combat forces reached full stride. Thus, the relatively brief exposure to battlefield operations did not fully test the AEF's prime doctrine and division structure, nor its G-5 experience-processing procedures. During the actual combat time afforded by the circumstances, the emergent lesson-learning system directed more attention to enforcing doctrine than to adjusting or developing it. If the war had continued much longer, perhaps the G-5's system would have addressed the adequacy of basic doctrine and organization. Within the limits of the available wartime, the Army's crude but first lesson-learning system had appeared, at least. In

the peacetime that followed, the system disappeared, but the idea lingered on.

Historical Aftermath, 1919-1939

After the war, during the two decades of peace that followed, the Army did not completely forget about its first wartime lesson-learning effort. Although the overseas mechanism that operated the system, the AEF's G-5, disappeared in the immediate demobilization, the lesson-learning concept did not vanish with it. Instead, the search for improving tactical efficiency shifted from the contemporaneous to the historical approach. The Great War became history once it ended and lessons continued to be derived from its experiences during the postwar decades.

Immediately following the November 1918 armistice, the AEF continued for a while to intensively train and to derive lessons from its recent operations, but it soon became clear that the armistice had indeed ended the war. The Army's first lesson-learning system then ended. Without the compelling urgency to prepare divisions for impending combat on now-silent battlefields, the once deadly serious training activities of the AEF shifted toward busy work. Two million American soldiers in Europe had become unnecessary and anxious for discharge; they knew very well that the war was over. The G-5, formerly the AEF's trainer and doctrine enforcer, increasingly presided over educational and athletic programs designed to "help our average man tide over the long wait to go home."[62] Without active battlefields or, at least, major field maneuvers, the lesson-learning procedures of the G-5 staff served no useful purpose. The next war lay in the future, as did the conduct of large-scale maneuvers. The budgetary and manpower cuts that dogged the postwar Army precluded appreciable peacetime maneuvers until the eve of WW II.[63] Thus, without ever having been formulated, prescribed or codified, the AEF's lesson-learning practices ceased.

The spirit remained, however, and found immediate expression in postwar AEF assessments of its experience. In the final report of the operations chief (G-3), for example, one section entitled "Military Lessons of the War" used the word "lesson" five times in the space of two brief paragraphs. "The tactical lessons to be gained

from the war are infinite . . .," concluded the report's author, Brigadier General Hugh A. Drum,[64] who also helped write another more comprehensive report on the AEF's experience.

While occupying its allotted bridgehead in Germany and rapidly demobilizing, the AEF systematically and comprehensively analyzed its wartime experience in the Army's first such intensive and nearly contemporaneous self-examination. Minor boards convened from each of the arms and services "to deduce the lessons of the war" for their specialties. In April 1919, Major General J.T. Dickman headed a GHQ Superior Board appointed "to consider the lessons to be learned from the present war insofar as they affect tactics and organization." Five general officers comprised the board, including General Drum, along with a smattering of colonels. They studied the reports prepared by the specialized minor boards, prepared a 185-page report, and submitted it to the AEF C-in-C on 1 July 1919.[65]

General Pershing disagreed with some fundamental conclusions in the Superior Board's report, chiefly its recommendation to retain the mammoth size and square structure of the AEF division. Drawing a different lesson, Pershing preferred the maneuverability afforded by lighter triangular divisions. To a large extent, he used a different perspective, looking at North American defense and not another war in European trenches. To a lesser but significant extent, Pershing had grown skeptical of the AEF division's effectiveness in the war. The resultant postwar division controversy soon led to a compromise that reduced the division's size by a quarter but retained the square configuration, an arrangement that lasted until WW II's triangularization.[66] The square-versus-triangular debate highlighted the serious attention afforded to the evaluation and application of recent experience.

In a related development, the Army's historical activities became formalized and permanent during this period and gained control of a future source of usable combat experience. The potential of the battle reports for transmitting experience went unexploited during the war because of the geographic containment of the AEF's combat and the reliance on G-5 inspector-observers. Battle report procedures remained unchanged virtually since the report's 19th century introduction. War

Department regulations prescribed submission of the reports through channels after every battle, a vague procedure that the AEF found necessary to supplement in France. GHQ required two daily reports from the divisions and corps: a brief situation report via telephone directly to the G-3 and a written report covering the events of the preceding 24 hours sent through channels. Additional reports were expected promptly and directly after important operations. Although nothing specifically indicated the experience-processing value or potential of the written reports, their historical value was clearly recognized and resulted in a slight but significant change in the War Department's postwar provisions for battle reports. In 1919 new instructions re-routed the final destination of the reports to the Army's new historical agency. After the battle reports served their immediate purpose, they went, along with other related documents of general historical interest, not to the Adjutant General's Office, as formerly, but to the Historical Branch, War Plans Division, General Staff.[67]

Established during the recent war, the Army's first agency to exclusively deal with historical activities survived postwar reductions and permanently became a part of the establishment. It staked an immediate claim on battlefield information by virtue of its basic mission to record the Army's history. Battle reports and related documents constituted prime source material for deriving operational history. Originally the new historical branch ambitiously intended to publish a multi-volume interpretive history on American participation in the war, but instead the branch's successor agencies let the sources speak for themselves by reprinting the major documents of the war, including many of the battle reports. Not until after the next war would official narrative histories be published.[68]

Having laid claim to battlefield documents, the Historical Branch soon saw the obvious marriage of historian and source material announced in *Army Regulations*. Issued in 1924, the first standing regulation devoted to official historical records and activities contained a familiar paragraph on battle reports but with an unfamiliar and ungraceful title "Action Against Enemy, Reports After."[69] By whatever name — "after-action report," obviously — the battle report henceforth belonged to historical activities and the

historians. A war or two later, another suitor for the battle report would challenge the historical claim and seek more immediate use of battle reports for processing combat experience into lessons, but for the time being, historical activities retained the primacy. The potential of the reports for transmitting usable experience to training or doctrinal agencies continued to go unrealized. However, if relegating the battle reports to historical records meant burial in dusty archives, it also promised eventual resurrection in a later historical monograph or collection of reprints.

Before the next war came, one such historical resurrection of the Great War's combat experiences took place in the mid-1930s at Fort Benning, Georgia, where the Infantry School produced *Infantry in Battle*, a unique historical presentation of small unit tactics. The book, which became a classic, drew exclusively upon experiences of the First World War to supplement standard tactical instruction and to provide surrogate battle experience for new combat leaders. Under the general direction of Colonel George C. Marshall, then assistant commandant, the school's Military History Section prepared a lengthy volume of nearly 400 pages. The Infantry Association published and sold the book commercially at cost. Within its covers appeared over 125 situational vignettes of combat action, most of which came from the personal experience monographs on file at the school. Following a brief description of each action, an analysis drew out conclusions and offered the lessons of practical principles for small-unit leaders.

This undertaking well expressed the idea of lesson learning historically approached. It represented, as then advertised, "fundamental doctrine analyzed in the light of actual battle experience of American, British, French, and German units." Fifteen years after the war, the Infantry School had historically resurrected the wartime experiences for analysis, lessons, and then-current application. The second edition of *Infantry in Battle*, published five years later, extensively revised the first edition and re-stated much of the tactical doctrine and technique presented earlier. Although many of the specific lessons in the book would not apply to the next war, notably those concerning stablized trench warfare, its idea of seeking and applying usable experience would certainly be available.[70]

NOTES

1. John J. Pershing, *My Experiences in the World War,* Vol. I (NY: Frederick A. Stokes, 1931).

2. Harold B. Fiske, "Training in the American Expeditionary Forces," typescript of lecture delivered at Army War College, 16 January 1922, pp. 8-9 (MHI's AWC file #215-70).

3. W. Bruce Lincoln, *Passage Through Armageddon: The Russians in War and Revolution, 1914-1918* (NY: Simon and Schuster, 1986), p. 242.

4. George C. Marshall, speech, 15 September 1941, in the *Papers of George Catlett Marshall,* ed. by Larry I. Bland, Vol. 2 (Baltimore: The Johns Hopkins University Press, 1986), pp. 606-607.

5. AEF, GHQ, report to WD on division training (11 Jul 1917), extract reprinted in US War Dept. Historical Division, *United States Army in the World War, 1917-1918 (USAWW),* Vol. 14 (Washington, DC: GPO, 1948), p. 315.

6. AEF, GHQ, *General Order No. 8* (5 Jul 1917), p. 9.

7. Letter, 1st Div CG to CIC, AEF (8 Oct 1917), in *USAWW,* Vol. 2, pp. 55-57.

8. Allan R. Millett, "Cantigny, 28-31 May 1918" *America's First Battles* (Lawrence, KS: University Press of Kansas, 1986), p. 154.

9. *The Intimate Papers of Colonel House: Into the World War* (Boston: Houghton Mifflin, 1928), pp. 268-269.

10. *Final Report of Gen. John J. Pershing, Commander-in-Chief, American Expeditionary Forces* (Washington, DC: GPO, 1920), pp. 13-14; US Army War College, Historical Section, *The Genesis of the American First Army* (Washington, DC: GPO, 1929), pp. 5-6. Robert L. Bullard, *Personalities and Reminiscences of the War* (Garden City, NY: Doubleday, 1925), p. 65.

11. *Pershing's Final Report,* p. 14; Pershing, *My Experiences,* Vol. I, pp. 151-154 and 265; Fiske, "Training," AWC lecture, p. 28.

12. James W. Rainey, "Ambivalent Warfare: The Tactical Doctrine of the AEF in World War I," *Parameters* XIII (Sep 1983), pp. 34-46; the quote comes from the AEF's statement of training principles (see note #5 above).

13. Fiske, AWC lecture, pp. 27-28; *American Military History,* p. 383; Donald Smythe, *Pershing: General of the Armies* (Bloomington: Indiana University Press, 1986), pp. 69-70.

14. Letter, AEF C-in-C to Chief of French Mission, 28 July 1918, in *USAWW,* Vol. 2, p. 554. See also Fiske, AWC lecture, pp. 4-5 and his article "General Pershing and His Headquarters in France," *Military Review* XX (Sep 1940), pp. 5-9.

15. See Edward M. Coffman, *The War to End All Wars; The American Military Experience in World War I* (NY: Oxford University Press, 1968), Chap VI; Smythe *Pershing,* Chap. 11.

16. US Army Special Staff, Historical Division, *Order of Battle of the United States Land Forces in the World War: Zone of the Interior* (Washington, DC: GPO, 1949), pp. 38, 44 & 60-63.

17. US WD, *Manual for Commanders of Infantry Platoons,* translated from French edition of 1917 (Washington, DC:

GPO, 1917); reprint of *Notes for Infantry Officers on Trench Warfare,* compiled by the British General Staff, 1916, and edited at [US] Army War College (Washington, DC: GPO, 1917); and reprint of *Notes on Recent Fighting,* issued by British General Staff, April 1918 (Washington, DC: GPO, 1918).

18. US WD, AWC, *Notes on Recent Operations, Nos. 1-3* (Washington, DC: GPO, 1917). *Nos. 1 & 2* were both dated July 1917; *No. 3* in Aug; and there was a *No. 4,* dated February 1919, which reprinted entirely *AEF Notes No. 4.* Incidentally, the terminology "notes" predates WW I and can be traced back in American military literature to the mid-19th century for occasional appearance in titles and the turn-of-the-century systematic usage by the new Military Information Division. "Notes" titles, however, became a flood during the world war, as a glance at the MHI card catalog will reveal.

On the British "lessons," see *Notes No. 1,* pp. 46-47 & 59, and pp. 77-80 on the German "lessons learned."

19. Training and Instruction Branch, War Plans Division, General Staff *Military Notes on Training and Instruction: No. 1* (Aug 1918), *No. 2* (Sep 1918), and *No. 3* (Oct 1918).

20. *Infantry Journal* XIV (Jan 1918), p. 546.

21. See, for example, "Notes on Tactical Employment of Field Artillery," *Field Artillery Journal* VII (Oct-Dec 1918), pp. 586-589, from AEF's *Combat Instructions No. 2.*

22. *Infantry Journal* XV (Oct 1918), pp. 349-350; see also pp. 288-289 same issue and XIV (Jan 1918), p. 473ff and (Feb 1918), p. 597ff.

23. *Ibid.* (Jul 1918), pp. 75-76.

24. WD *General Order No. 168* (29 Dec 1917), Sec. IV; *Infantry Journal* XIV (Jan 1918), p. 628 and XV (Oct 1918), pp. 349-350.

25. Allan R. Millett, "Cantigny," *First Battles,* pp. 149-156, nicely sets the doctrinal situation.

26. AEF training report (11 Jul 1917), *USAWW,* Vol. 14, p. 315.

27. Russell F. Weigley, *Towards an American Army: Military Thought from Washington to Marshall* (NY: Columbia University Press, 1962), pp. 224-225.

28. *Pershing Final Report,* pp. 14-15; AEF GHQ, "Final Report of Assistant Chief of Staff, G-5," 30 June 1919, in *USAWW,* Vol. 14, pp. 304-305 (see also p. 314 of same volume, Para. 4, which dates the AEF training principles statement in October 1917); a later AEF re-issue of the document, dated 9 April 1918, appears in *USAWW,* Vol. 2, p. 296. The statement accompanied each division's training schedule.

29. Pershing, *My Experiences,* Vol. 1, p. 266 and Vol. II, pp. 114-115; *Pershing Final Report,* p. 15; and cables, Pershing to WD, 8 Aug, 24 Sep & 20 Oct 1917 in *USAWW,* Vol. 14, pp. 305-306.

30. AEF GHQ, "Instructions on Tactical Disposition," directive (11 Jul 1918), Para. 1, in *USAWW,* Vol. 2, p. 521; see also AEF *General Order No. 35* (5 Mar 1918), Paras. 1-4 and Statement of AEF Training Principles, in *USAWW,* Vol. 2, pp. 304-305.

31. Allan R. Millett, "Cantigny," p. 159.

32. Timothy L. Lupfer, *The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World*

War, Leavenworth Papers No. 4 (Fort Leavenworth, KS: US Army Command and General Staff College, 1981), pp. 16-17; S.J. Lewis, *Forgotten Legions: German Army Infantry Policy, 1918-1941* (NY: Praeger, 1985), pp. 9-10.

33. Fiske, AWC lecture, p. 40; Virgil Ney, *Evolution of the US Army Division, 1939-1968*, Combat Operations Research Group Memorandum 365 (Fort Belvoir, VA: US Army Combat Developments Command, 1969), pp. 14-24.

34. AEF Assistant Chief of Staff, G-3, Final Report (2 Jul 1919), in *USAWW*, Vol. 14, p. 5; Memo, LTC Hugh A. Drum for AEF G-3 on division organization (18 May 1918), in *USAWW*, Vol. 2, pp. 406-412; Ney, *Evolution of Division*, pp. 24-30; Millett, "Cantigny," pp. 159-160; Rainey, "Ambivalent Warfare," pp. 39-40; and Coffman, p. 152.

35. Lupfer, *Dynamics of Doctrine* p. viii & 8-11; Lewis, *Forgotten Legions*, pp. 9-13.

36. *Notes by the German General Staff: Lessons Taught by the Attack of March 21* (1 April 1918), reprinted in US WD *Military Notes on Training and Instruction No. 3* (Oct 1918), pp. 63-64.

37. George C. Marshall, *Memoirs of My Service in the World War, 1917-1918* (Boston: Houghton Mifflin, 1976), p. 126.

38. Final Report, AEF G-3, in *USAWW*, Vol. 14, pp. 19-20; Coffman, *War to End Wars*, pp. 139-140 & 144-152 outlines the earlier trench indoctrination actions and Smythe, *Pershing*, pp. 107-108 & 111, covers nicely the Seicheprey raid.

39. Fiske, AWC lecture, pp. 39-40; Millett, "Cantigny," p. 180.

40. American Battle Monuments Commission, *American Armies and Battlefields in Europe: A History, Guide, and Reference* (Washington, DC: GPO, 1938), Chap. III; Paul F. Braim, "The Test of Battle," Ph.D. dissert., Univ. of Delaware, 1983, Chap. V. Coffman, pp. 263-283; Final Report AEF G-3, in *USAWW*, Vol. 14, pp. 32-39 (the quote is on p. 38).

41. German Army, GHQ, Intelligence, "Americans in a Major Operation (On 12 Sept. '18 against Army Unit 'C'.)," dated 22 September 1918, translated by US Army War College, Historical Section, 1936, as Document No. 9, "German Estimates of American Troops, 1917-1918," p. 17.

42. *American Armies and Battlefields in Europe*, pp. 167-171 and Chap. IV generally; Coffman, pp. X; Final Report G-3, in *USAWW*, Vol. 14, pp. 40-50; and Braim, "Test of Battle," Chaps. VI-VII.

43. Coffman, p. 345, mentions a few of the improvements; see also Millett, "Cantigny," pp. 180-182.

44. James G. Harbord, *The American Army in France, 1917-1918* (Boston: Little, Brown, 1936), 91-98; Pershing, *My Experiences*, Vol. I, pp. 150-151; Fiske, AWC lecture 1922, pp. 6-7. AEF *General Order No. 8* (5 Jul 1917) and *No. 31* (16 Feb 1918).

45. Fiske, AWC lecture, p. 40; AEF *GO No. 8* (1917), p. 9, and *GO No. 31* (1918), p. 8.

46. *Assembly* (Spring 1961), pp. 78-79; [*Cullum's*] Biographical Register of the Officers and Graduates of the U.S. Military Academy. . . Vols. VI-VIII (1920, 1930 & 1940).

47. Harbord, *American Army*, p. 98.

48. Letter, Marshall to Pershing, 24 October 1930, in *Marshall Papers*, Vol. 1, pp. 360-361.

49. Memo, G-5 to C/S, Subject: Training (4 July 1918), in *USAWW*, Vol. 14, pp. 303-304.

50. Fiske, AWC lecture, pp. 41-42; Final Report G-5, transcript version, Paragraph 67, (MHI—D570.36A4); *Cullum's Register*, Vol. VI A, p. 1078; and *DAMB*, p. 696.

51. Timothy K. Nenninger, "The Fort Leavenworth Schools: Postgraduate Military Education and Professionalization in the U.S. Army, 1880-1920," Ph.D. dissert., University of Wisconsin, 1974, pp. 350-354.

52. AEF *GO No. 8* (5 Jul 1917), p. 9.

53. Final Report G-5, *USAWW*, Vol. 14, p. 309.

54. Fiske, AWC lecture, p. 42; AEF GHQ *Combat Instructions* (29 Jun 1918), Para. 3, in *USAWW*, Vol. 2, p. 490; Final Report G-5, p. 307; Coffman, pp. 136-137 & 141-142; and Frank E. Vandiver, *Black Jack*, Vol. II (College Station: Texas Univ. Press, 1977), pp. 962-964.

55. Final Report G-5, p. 307; *Pershing's Final Report*, p. 15; Fiske received campaign participation credit with the 1st Div. at St. Mihiel and the 90th and 2d Divs in the Meuse-Argonne, according to *Cullum's Register*, Vol. VI.

56. AEF GHQ G-5, report on publications (30 Jun 1919), in *USAWW*, Vol. 14, pp. 329-333.

57. *Ibid.*; Final Report G-5, p. 307; McKenna, pp. 207-209; US War Dept., *Military Notes No. 2* (Sep 1918), a reprint of AEF's *Notes on Recent Operations No. 1* appears on pp. 62-67 (MHI—U323A4) and USAWC *Notes on Recent Operations No. 4* (Feb 1919), a reprint of AEF *Notes No. 4* (D530U53).

58. See AEF GHQ *General Order No. 4* (5 Jan 1918), *Bulletin No. 9* (7 Feb 1918), *Bulletin No. 30* (23 May 1918), *General Order No. 79* (27 May 1918), and "Instructions on Tactical Dispositions," directive (11 Jul 1918), in *USAWW*, Vol. 2, pp. 521-522.

59. AEF GHQ *Combat Instructions* (29 Jun 1918) and (5 Sep 1918), in *USAWW*, Vol. 2, pp. 490-495; G-5 report on publications, p. 331.

60. AEF *General Order No. 207* (16 Nov 1918).

61. AEF GHQ *Infantry Drill Regulations (Provisional), 1918*, 2 parts (Paris: Imprimerie E. Desfosses, 1918-1919); US WD, *Infantry Drill Regulations (Provisional) 1919* (Washington, DC: GPO, 1919); Fiske, AWC lecture, pp. 40-41.

62. Final Report, G-5, in *USAWW*, Vol. 14, pp. 307-308.

63. Jean R. Moenk, *A History of Large-Scale Army Maneuvers in the United States, 1935-1964* (Fort Monroe, VA: US Continental Army Command, 1969), pp. 2-3.

64. Final Report, G-3, AEF (2 Jul 1919), in *USAWW*, Vol. 14, p. 60.

65. AEF GHQ *General Order 68* (19 Apr 1919), Para. IX; AEF GHQ Board of Officers to Consider Tactics and Organization, report (1 Jul 1919), pp. 1-2.

66. Wrapper endorsement by John J. Pershing, appended to Report of AEF Superior Board; John B. Wilson, "Mobility Versus Firepower: The Post-World War I Infantry Division," *Parameters* XIII (Sep 1983), pp. 47-52.

67. AEF GHQ, *General Order No. 79* (20 Dec 1917) and *GO 196* (5 Nov 1918); US WD, *Changes to Army Regulations No. 93* (10 Sep 1919), Para. 816; Stetson Conn, *Historical Work in the United States Army 1862-1954* (Washington, DC: US Army Center of Military History, 1980), p. 40.

68. The 17 vols. of *The United States Army in the World War, 1917-1919 (USAWW)*, published by the Historical

Division of the Army Special Staff in 1948, are a collection of reprinted documents, in which Vols. 4-9 contain most of the battle reports included in the collection. Earlier, in 1928-1930, the Historical Section, Army War College, another successor of the original agency, reprinted wartime records of the 1st and 2d Divisions in 40 massive volumes. See also Conn, *Historical Work*, Chap. 2, and John E. Jessup, Jr., and Robert W. Coakley, "A Century of Army Historical Work," *A Guide to the Study and Use of Military History* (Washington, DC: US Army Center of Military History, 1979), pp. 285-287.

69. *Army Regulation 345-105* (31 Dec 1924), Para. 11.

70. US Army Infantry School, *Infantry in Battle* (Washington, DC: Infantry Journal, Inc., 1934) and 2d edition, 1939. See also *The Papers of George Catlett Marshall*, Vol. 1 (Baltimore: Johns Hopkins University Press, 1981), pp. 489-490; Forrest C. Pogue, *George C. Marshall: Education of a General* (NY: Viking Press, 1963), p. 255; and the back covers of *Infantry Journal* (Jul-Aug 1934) and (Sep-Oct 1934).

PART II

INSTITUTIONALIZATION AND CENTRALIZATION
1939 - 1953

You cannot create experience. You must undergo it.
> — Albert Camus, *Notebooks*, 1962, p. 1

To a very high degree the measure of success in battle leadership is the ability to profit by the lessons of battle experience."
> — Lucian K. Truscott, *Command Missions*, 1954, p. 533

'That's the reason they're called lessons,' the Gryphon remarked: 'because they lessen from day to day.'
> — Lewis Carroll, *Alice in Wonderland*, 1865, Ch. 9

During the period encompassing World War II and Korea, wartime lesson learning fully evolved. Its practice became widespread and routine among the field forces, and its processing increasingly centralized. Before the Korean War ended, the US Army established a formal system of managing its ongoing combat experiences. In other words, it learned how to learn lessons.

Its World War II effort included the use of foreign combat experience gathered abroad and training experience taken from large-scale maneuvers held in the United States. The spirit of lesson learning manifested itself most notably in the training use of observers and unit after-action reports — two important instruments of lesson learning. During the war, the observers and battle reports followed the field forces overseas to the diverse and far-flung battlefields to become the main transmitters of usable combat experiences. Managing that transmitted information became relatively centralized within the war's major training command, Army Ground Forces, although no formal guidance or directive specifically established this lesson-management activity. It arose inherently, almost naturally, out that command's assigned responsibilities and functions for training and doctrinal activities.

In like manner, the Operations Division of the War Department General Staff eventually assumed a central lessons management role because of its assigned function as a planning and coordinating body. It reviewed all the operational reports from overseas, which eventually led to its selectively sharing the reported experiences among the various theaters and with the individual combat soldier. Collectively, the procedures within Army Ground Forces and the General Staff constituted centralized lesson learning, which managed the ongoing combat experiences of World War II. When the war ended in 1945, so did the central management of lessons.

Five years later, finding itself unexpectedly in Korea, the US Army coped initially with new enemies and a strange war by the usual battlefield expediency based on costly firsthand experience. Later the lesson-learning inheritance of the previous war helped to re-establish specific responsibilities and comprehensive procedures for a new wartime lesson-learning system. They became codified for the first time in Army Regulations and the major training command received prime responsibility for processing and applying the ongoing combat experiences. The system further made all commanders specifically responsible for reporting their usable combat experiences. Lesson learning then pervaded the US Army for the remainder of the Korean War. It had become a centralized and institutionalized practice.

CHAPTER 3

WORLD WAR II:
LESSONS IN SEARCH OF A CENTER

Draw from other people's dangers the lesson that may profit yourself.
— Terence, *Heauton Timorumenos*

A state that has been at peace for many years should try to attract some experienced officers — only those, of course, who have distinguished themselves. Alternatively, *some of its own officers should be sent to observe operations, and learn what war is like.*
— Clausewitz, *On War*

The old saying 'live and learn' must be reversed in war, for there we 'learn and live'; otherwise, we die.
— US War Department, 1945[1]

For the United States, the Second World War began officially and abruptly on 7 December 1941, when the Japanese attacked Pearl Harbor. This American disaster lengthened the historical skein of similar military misfortunes that began with Braddock's defeat in 1755. Not since Custer's defeat in 1876 had the national psyche been so traumatized by unexpected military defeat. Although the wartime public did not learn the full extent of the Pearl Harbor damage a fully informed Congress investigated the Pearl Harbor experience for the explicit purpose of avoiding future repetition of the mistakes.[2] Its investigation of the experience and the conclusions reflected the war's lesson learning. For the US Army, the examination of experience became pervasive and gravitated toward central agencies.

Even so, other armies profitted sooner and more extensively from exploiting their own combat experiences. The German army, for one, was quick to evaluate its experiences in the campaign that crushed Poland in 1939, from which it drew lessons and made adjustments in organization, weapons, tactics and techniques. Later, after the successful 1940 campaign in France, each German division and higher headquarters received a detailed questionnaire for evaluation of their recent experiences. However, lessons learned by the German army from the Western Front did not necessarily apply to the Russian Front, leading one German soldier-scholar to the conclusion that "[t]here is no absolute war experience; war experience is true only with regard to a certain enemy."[3]

The British army, too, practiced early lesson-learning. A major influence in its development, apparently, was none other than General Bernard L. Montgomery. Some of the earliest British lessons literature came out of the North African battlefields where he commanded and it bore striking similarities in style with the tidy and precise analysis so characteristic of him. "Monty" delighted in offering lists of edifying lessons. Within a week of his famous El Alamein victory, he articulated its battle lessons to the Imperial General Staff. Later, the British War Office — equivalent to the US War Department — began distributing army-wide lessons publications prepared by the Imperial General Staff, which became well established periodical literature by early 1943. This suggests centralized lesson learning.[4] The British literature and the underlying concepts were available to reinforce the US Army's initial steps in the direction of the centralized learning of lessons.

Priming the Pump:
George C. Marshall

A key figure in stimulating American lesson learning was George C. Marshall, who became

56

Army Chief of Staff in September 1939. A new appreciation of learning from experience quickly followed. More than any other individual, he set the stage for an unprecedented degree of utilizing recent experience as a guide within the Army.

General Marshall's influence on the training value of previous combat experience actually began before his tenure as Chief of Staff. A few years earlier he had been associated with the Fort Benning Infantry School and its historical casebook *Infantry in Battle*. Much earlier, with the A.E.F. in France, 1917-1918, he witnessed American training unpreparedness firsthand, when training manuals had to be borrowed from the British army or translated from French in order to instruct raw American troops. Now, as uniformed head of the US Army, Marshall demanded preparedness training and relevant combat doctrine before American troops went into the battle zones. He ensured that the newly expanded peacetime Army trained hard, that it had training manuals containing the latest doctrine, and that the extensive maneuvers of 1939-1941 tested both the training and the doctrine.[5] In Marshall's view:

> The present maneuvers are the closest peacetime approximation to actual fighting conditions that has ever been undertaken in this country. But what is of the greatest importance, the mistakes and failures will not imperil the nation or cost the lives of men. In the past we have jeopardized our future, penalized our leaders and sacrificed our men by training untrained troops on the battlefield.
>
> The maneuvers also constitute a field laboratory to accept or discard new methods of applying fundamental tactical principles.[6]

Once the extensive peacetime maneuvers got underway, battle reporting was brought out of mothballed regulations and put to work. The after-action reports, required by commanders after completing operations against the enemy, became enlarged in scope to include the peacetime maneuvers and other training exercises, or "when prescribed by higher authority."[7] This allowed the reports to be used before the urgency of war and fog of battle complicated their preparation. Not only did commanders become familiar with reporting their experiences, but their reported maneuver experiences enabled peacetime lessons

to be drawn for inclusion in the new field manuals that Marshall directed the Army to produce. In describing the first two years of his tenure, Gen. Marshall repeatedly used the term "lessons learned" and reported that training was being revised "to disseminate to officers and men of the Army the lessons learned from the current war in Europe." He pointed out that recent large-scale maneuvers had been based on . . . "the lessons learned in the exercises conducted by Regular Army units during the preceding winter and spring." He also revealed that "Evaluation of lesson learning from current operations abroad and numerous changes in our organization and equipment have necessitated a wide revision of training literature for the Army."

General Marshall did not overlook relevant foreign combat experience, which became available on the day he assumed office, when Germany invaded Poland. The combat in Europe became another laboratory for US Army tactical principles, especially when the western front exploded in May 1940. The impressive display of panzer-led divisions slicing through France set off alarm bells clearly heard across the Atlantic. Marshall soon directed the War Department intelligence staff to "Please look into the question of submitting a periodic summary of the lessons being learned from abroad, tactical, organizational, etc." One week later came the first *Tentative Lessons Bulletin* prepared by the Military Intelligence Division. 170 additional issues followed over the next eighteen months and provided much useful information on foreign combat experiences. The bulletin, prepared by the Dissemination Branch of the US Military Intelligence Service,[9] later changed its title to *Information Bulletin* and it provided information for troop lectures.

Other expressions of early US interest in usable foreign combat experience included an unclassified published pamphlet that digested and analyzed the highly successful German campaign in Poland and an in-house Army War College Library bibliography entitled "Military Lessons of Two Years of War." The experiences of friendly armies were disseminated in a periodic publication exclusively devoted to data gathered by US attaches and observers.[10] Overall, the War Department's Military Intelligence Service and the general intelligence processes gathered a great

deal of useful experience from both hostile and friendly forces.

Occasionally the intelligence staff went beyond describing and analyzing the foreign experiences and ventured into lesson learning and doctrinal advocacy for the US Army. One of the early *Tentative Lessons Bulletins*, for example, after reviewing important changes in the German army, listed a dozen recommendations that were "submitted for the consideration of the War Department." None of the recommendations concerned intelligence matters; instead, they proposed the creation of a mechanized corps, development of new antitank weapons, and equipping infantry with close support artillery.[11] Such proposals normally did not concern the intelligence service, but at the time no other existing office or agency specifically managed combat experience and lessons for the entire Army.

The Operations (G-3) Division of the General Staff moved a step in the direction of central management in late spring 1941, when it solicited other War Department agencies for "outstanding lessons learned" from the ongoing European War and any corresponding corrective actions "now being taken by our Army."[12] Despite this attempt to take inventory on the stock of Army lessons, no central management of experience had emerged when the war came abruptly to the US in December 1941.

On the other hand, the Army became familiar with lesson learning and, thanks to Marshall's direction, had used peacetime maneuvers as an experience-processing and doctrinal laboratory. Battle-reporting procedures had been practiced as a medium for transmitting useful experiences to higher headquarters for evaluation. When the US Army entered the war, it took in no central mechanism for processing combat experience, but it went in primed, at least, for lesson learning.

Near the Center: AGFHQ

Once thrust into the war, the United States went all-out for victory, first against Germany, then Japan. The mobilization of American resources, especially economic, and the coalition of Allied nations achieved complete victory over the Axis forces four years later. Along the way, the US Army swelled to over eight million soldiers, fought in nearly fifty campaigns around the world, and learned many lessons. American soldiers learned lessons directly while experiencing combat themselves and indirectly from the evaluated experiences of others who had undergone the combat. In the latter case, procedures evolved to identify usable experience, process that information, and then make it available to inexperienced soldiers in the form of published advice, training programs, or field manuals. For the large wartime army fighting in far-flung locations, each a unique combat environment, any central management of its usable experiences presented a formidable challenge. In meeting that challenge, an executive agent of lesson-learning emerged near the Army's center.

The headquarters element of Army Ground Forces (AGFHQ) served as the US Army's first major management center for all of its usable combat experience. Battlefield data reached its offices, underwent administrative processing, then proceeded on to subordinate facilities for analysis, evaluation and application. Although outwardly the center of the overall lesson-learning effort, AGFHQ actually functioned as its epicenter, the surface location marking deeper activities less easily pinpointed.

AGFHQ became the logical agency for managing the Army's lesson-learning. Four months into the war, in March 1942, Chief of Staff Marshall streamlined the War Department and Army by a major reorganization that included the creation of three new major field commands: Army Ground Forces, Army Air Forces, and Army Service Forces. AGF was responsible for organization, training, and equipment. Additional responsibilities included the development of tactical doctrine.[13] Primarily, though, AGF was the training command. The wartime Army was built practically from scratch by AGF, which trained virtually every soldier expected to engage in combat.

From its headquarters at the unused Army War College facilities (now Fort McNair) in Washington, DC, AGFHQ supervised the overall training program by issuing directives, inspecting facilities, and then testing units at progressive stages in their training cycles. Additional supervisory controls extended over the publishing of

training literature by AGF's schools and agencies.[14] Although centrally responsible for all training in the ground arms, AGFHQ decentralized many functions, including the preparation of training literature at the branch schools and centers, where writers were considered closer to their subjects. However, AGFHQ reviewed all the school-produced drafts. Once approved, they received imprimaturs for publication as official guidance in the form of field manuals, training circulars, and other authorized literature.[15]

This decentralized policy stimulated the production of much training literature by the schools and specialized centers — too much, in fact. With enthusiasm and verbosity, the school writers poured a torrent of drafts on AGFHQ, where hard-pressed reviewers tried to cope with a flood of good intentions that included a great deal of poor writing and trivia. A review logjam resulted. The time-consuming process required to edit, coordinate, and eventually approve so many drafts encouraged the school writers to turn to a quicker alternative — unofficial school literature. Not meant for Army-wide dissemination, such local products did not require higher review or imprimatur. The unofficial school literature soon proliferated and was widely disseminated, to the detriment of central coordination and to the bewilderment of many readers who sometimes received poor and even conflicting information.[16]

The disseminated school literature also gave the appearance of official doctrine and thereby eroded the authority of AGFHQ for doctrinal development. AGF's charter explicitly made it responsible for developing tactical and training doctrine for the ground combat forces, as well as for reviewing tactical doctrine prepared by the Army Service Forces, and for developing air-ground doctrine in conjunction with the Army Air Forces.[17] Clearly, AGFHQ was intended to be the major doctrinal center of the Army. However, in doctrinal development, as in training literature, AGFHQ followed a decentralized policy and allowed each combat branch, school, and specialized command to develop its own material. It monitored this decentralized process by requiring that any literature purporting to change established doctrine be submitted for review and approval. But, of course, much of the prolific school literature intentionally bypassed the central monitoring and control.

In spite of such abuses, AGF's head, Lt. Gen. Lesley J. McNair, was unwilling to change the decentralization policy and concentrate the preparation of training literature and doctrine in Washington, DC. He held firm to the principle that such material should come from the grass roots and be formulated by those who taught and most directly experienced the subject. His decentralized approach remained in effect for the duration of the war, with adjustments made to speed up the review process and to limit the dissemination of unofficial school materials.[18]

General McNair himself warrants further attention. Although among the least known of the war's influential generals, his important contributions in organization and training should not be overlooked, nor his considerable impact on doctrine, especially in regard to tactical organization. Under him, for example, the square configuration of American divisions became fully triangularized, that is, the infantry regiments in a division were reduced from four to three, with corresponding reductions going all the way down to company level. This streamlining complemented McNair's own doctrine of lean and efficient combat forces. He did not want American infantry divisions encumbered with unnecessary men and equipment; instead, he preferred pooling specialized units, such as armored, anti-aircraft or anti-tank, at higher headquarters, where they would be available when needed.[19] In this and other doctrine, AGFHQ under McNair anticipated adjustments — lessons — from the impending test of battle. McNair, it will be recalled, had served in 1917-1918 on the AEF G-5 staff, the first US Army field agency to evaluate combat experience and incorporate it into doctrine and training. His personal experiences thus helped set the stage for incorporating WW II's usable experiences into AGF training programs and field manuals. To gather in the information, McNair appears also to have borrowed procedures from the G-5 staff of WW I — the dispatch of trusted observers.

The AGF Observer-Based System

Headquarters, Army Ground Forces prominently used observers, dispatching them to the scattered battlefields as sources of reliable information on actual conditions. The AGF ob-

servers provided vital data and served as a nexus between classroom and battlefield, doctrine and experience. It represented for the US Army a fresh approach to a well-established practice.

The dispatch of observers to report firsthand on foreign events and conditions was not new. Permanent observers in the form of military attaches routinely served on resident diplomatic staffs in foreign nations since the late 19th century. Earlier, individual observers or groups went on special missions to study foreign wars or armies, and the practice became common by mid-19th century. For example, American military observers went to study Europe's Crimean War in the 1850s and a few years later European military observers came to study America's Civil War. Notable among the hundreds of American observers who went abroad were Sylvanus Thayer (1815), Winfield Scott (1815), George B. McClellan (1854-56), Philip H. Sheridan (1870), and Emory Upton (1875-76). In 1904-05 two future Army Chiefs of Staff, Peyton C. March and John J. Pershing, studied firsthand the Russo-Japanese War. By the era of World War I, the function of ad hoc military observers had been supplanted by the permanent assignment of American military attaches to foreign posts.[20]

In World War II, the AGF observers represented in some respects a renewal of the old observer practice, with the major distinction of being sent overseas to study not foreign but their own field forces. Although US military intelligence observers abroad had been reporting on the British Eighth Army in North Africa and the Red Army in the Crimea in 1941,[21] AGF observers did not go to overseas battlefields until American troops did. Beginning in the fall of 1942, with the Northwest Africa landings, AGFHQ periodically dispatched its observers overseas to describe and evaluate the effectiveness of tactics, weapons, and equipment. Individually and in groups of three or four (variously called teams or boards), the observers operated in all theaters. Eventually they were consolidated into three major boards set up in the European and Mediterranean Theaters and the Southwest Pacific Area. The observers, after receiving stateside briefings on current developments and concerns, generally spent several weeks in-theater circulating through command echelons and dispatching personal

reports directly to AGFHQ, except in the Southwest Pacific Area (SWPA), where they reported through SWPA's Sixth Army headquarters.[22] Upon their return to the United States, the observers frequently visited training facilities where they imparted their firsthand information. Overall, they became AGFHQ's eyes and ears and its major source of battlefield information.[23]

One contemporary writer informally but accurately described the system as . . .

a rotating group of observers who wander into battle areas, peering inquisitively at everything, occasionally getting shot at, taking copious notes and, now and then, being coolly received by the fighting men they come in contact with, some of whom have an antipathy toward itinerant representatives of high headquarters. These observers have brought back a good many scraps of information which have helped in keeping the training programs in this country up to date.[24]

The AGF observers gathered "scraps of information" on a variety of subjects. By visiting headquarters, units and facilities, and through interviews, they came away with not only their own impressions but also source material, such as after-action reports, SOP's, and memos, all of which reached AGFHQ through the observers' reports. The subject matter in the reports reflected wide-ranging interest in tactics, weapons, equipment and procedures, including whether or not horse cavalry would have been useful in the Italian campaigns.[25]

The observers themselves, for the most part, were field grade officers, but included a heavy sprinkling of general officers, especially during the first US campaigns. Observers in Northwest Africa included the later notables Walton H. Walker, William H. Simpson, and Omar N. Bradley, who sent their reports to AGFHQ.[26] The most notable AGF observer of all, General McNair, toured the Tunisian battle areas in April 1943, where he was seriously wounded by enemy artillery.[27] After recovering, he continued as Commanding General of Army Ground Forces until July 1944, when he took on a new overseas assignment. Near St. Lo, France, he was observing the Allied breakout from the Normandy Peninsula when US bombers missed their assigned targets and caused hundreds of American casualties, among them the chief builder of the wartime Army.[28]

Long before McNair's departure, the pattern of observer reporting and information processing had been set. When the observer reports reached AGFHQ, they represented a great deal of combat experience, much of which had already been distilled into lessons or conclusions by the field forces themselves. Neither the overseas observers nor AGFHQ directly participated in the final lesson-drawing process. Essentially, they passed both raw and refined experiences along the collection pipeline to the schools and centers that actually completed the evaluation process. This pattern reflected McNair's emphasis on decentralization.

AGFHQ's role in the overall process can be seen in first test of tank destroyer doctrine. In Tunisia, American ground forces faced their German counterparts for the first time in the war and received hard lessons from them at Kasserine Pass in February 1943. Although leadership adjustments quickly followed this tactical setback, no adjustment of general tactical doctrine was considered necessary. Basic principles remained sound, according to a War Department assessment of the Tunisian experience:

> Failures or tactical reverses have resulted from misapplication of these principles, or from lack of judgment and flexibility in their application or from attempts to follow book rules rigidly without due consideration of their suitability to existing situations.[29]

However, tank destroyer doctrine had been discredited by German success at Kasserine. As one AGF observer specifically noted: "The tank destroyers have proved disappointing." Their doctrine, hastily developed in response to the German tactical successes of 1939-1940, sought to counter the new battlefield supremacy of the tank with a specialized antitank force. In concept, its tank destroyer battalions would aggressively — in the words of the new force's motto — "seek, strike and destroy" enemy tanks. Kasserine Pass taught otherwise. The antitank weapons and procedures proved inadequate for their intended role as tank hunters. While the Tank Destroyer Center and School at Camp Hood, Texas, revised its field manual on the basis of the Tunisian experience, field commanders worked out their own pragmatic "doctrine". They simply gave their assigned tank destroyer vehicles a new role as self-

propelled support artillery. Formal doctrine, however, never fully recognized this new role during the war.[30]

Because of the decentralized approach, adjustment of tank destroyer and other tactical doctrines did not take place at AGFHQ. The observer reports merely passed through the headquarters for administrative processing. Given identification numbers, the reports were "reproduced as received" and distributed within the command and to certain other headquarters and agencies. There is no indication of any major review or analysis within AGFHQ, which functioned as a conduit or distribution center for the reported experience. AGF's Assistant Chief of Staff, G-2, initially received the reports from overseas and then distributed the reproductions. This distribution included the War Department General Staff, notably its Operations Division.[31]

At Dead Center: OPD and Battle Reports

The Operations Division (OPD), containing the largest number of officers assigned to the General Staff, served as the Army's major planning and coordinating agency of the war (see Appendix B-2). It became Chief of Staff Marshall's command post for directing the global operations. Originally War Plans Division, it had been redesignated OPD in the March 1942 reorganization and given chief responsibility for strategic planning and the direction of operations.[32] By virtue of its central role, OPD evolved almost naturally into a lesson-learning focal point.

When distributing the reproduced observer reports, AGFHQ invariably sent copies to OPD, where specialists collected and disseminated information on the overseas operations. Although the AGF reports helped OPD keep the Chief of Staff, the rest of the War Department, and the White House abreast of the war's developments, OPD used them only as a supplemental source of information. It had other sources upon which to rely, such as its own overseas observers who were not affiliated with Army Ground Forces. Beginning in 1942, OPD rotated its own staff officers overseas for brief visits to coordinate with their counterparts in theater headquarters. They did not, strictly speaking, duplicate the information-gathering function of AGF's designated observers, but the OPD officers could hardly fail to note

theater conditions and bring back opinions and information.[33] OPD's major source of battlefield information, however, did not come from observers but from field commanders in the form of battle reports.

Army Regulations required battle or after-action reports from commanders after engagements with the enemy. In active theaters, practically any operational report prepared by a tactical unit constituted a battle report. Usable experiences and lessons appeared in these reports by at least the spring of 1943, following the North African fighting, in response to the theater command's specific request for such information. Allied Force Headquarters ordered special reports prepared for training purposes on recent combat experiences and battle lessons. The 1st Armored Division, commanded by Ernest Harmon, submitted a detailed report of its experiences and lessons that affirmed the basic soundness of established tactical doctrines and, in particular, armored doctrine, but found fault in their execution by inexperienced and insufficiently trained small-unit leaders. Among its specific criticisms, the division cited the inadequacies of antitank weapons and tank destroyer employment. Another division, the 9th Infantry, submitted in textbook fashion ten tactical principles based on its lessons of experience. Later that year the 9th included in its after-action report on Sicily a five-page annex entitled "Lessons Learned." In 1943, it seems, the field forces were learning how to report and assess their own usable combat experience.[34]

This new element of battle reporting reached beyond the Mediterranean and other theaters and into the War Department. According to regulation, after-action reports went forward through channels to the Adjutant General in Washington, DC.[35] Normally, the office of the Adjutant General reviewed the reports and informed the Army Chief of Staff of significant developments, but its many other administrative responsibilities precluded a timely or satisfactory review. This function soon fell to OPD as the Chief of Staff's executive and coordinating agency. At first, OPD's review of the battle reports was performed within its Executive and Logistics Group, but in February 1944 the function moved into a new group created solely for dealing with current overseas operations. Within this new

Current Group, reviewers prepared daily operational summaries for the War Department and a special White House edition.[36] One section dealt exclusively with combat lessons.

The Combat Analysis Section[37] reviewed incoming battle reports for usable experiences. Although ultimately destined for the Adjutant General's files, the battle reports and other unit historical records received by the War Department went to Combat Analysis for screening and possible incorporation into OPD literature. Representatives from major wartime commands, including AGF, along with other War Department staff, screened the incoming material daily. Afterwards the reviewed reports and records went to a central file administered by the Adjutant General's Office but under OPD supervision. A ready-reference index of subjects allowed quick access into this collection of stored experience material.[38]

The Combat Analysis Section's review of incoming reports determined in which OPD publication the usable information would appear. In addition to daily summaries and other in-house media, OPD prepared two publications that specifically disseminated combat experiences and lessons. One was a newsletter for higher commanders and general staffs, the other a series of booklets for individual combat soldiers. Each addressed a different readership and the material presented in one generally would have been inappropriate in the other, yet both were similar in sharing the experiences of other individuals, activities and units within the globally dispersed Army.

The one publication, *The Operations Division Information Bulletin (OPDIB)* served as the high-level medium of experience exchange. *OPDIB* resulted from General Marshall's direction to share information throughout the far-flung Army, and the first issue announced that the bulletin sought

. . . to insure the rapid interchange of ideas between the various theaters and the prompt dissemination of data of practical value to theater commanders and higher staffs as received from various sources by Operations Division, WDGS.[39]

Within 48 hours after final copy was written, the fresh issues of the bulletin went overseas by air to inform commanders and encourage them to

submit material and turn the bulletin into a forum of experience-tested ideas and techniques. However, in contradictory fashion, the commanders were also warned that the useful material presented in the bulletin did not constitute War Department authority for departures from established doctrine. *OPDIB* material received non-deliberative screening before its rapid dissemination.[40] The potentially useful experiences — lessons, in short — constituted possibilities, not directions. The disseminated lessons had not been incorporated into doctrine or otherwise institutionalized and represented lesson sharing more than lesson learning. Although the appearance of lessons did not constitute authority for doctrinal departures, it did not preclude "competent authority within the theaters" from assuming that responsibility. All thirty-two issues of the bulletin not only carried a caveat against construing appearance as authority, but also carried a discretionary clause that gave commanders leeway to adjust established doctrine to fit local situations. Despite disclaiming itself as doctrinal, the bulletin nonetheless easily lent the appearance of doctrinal adjustment.

The first issue of *OPDIB* did not appear until January 1944 and subsequent issues followed on the average of every two or three weeks until war's end. In its first year, the bulletin made regular biweekly appearances, but the rate slowed down the next year to make it more of a monthly publication. The thirty-second and last issue's appearance coincided with Japan's formal surrender. All *OPDIB* issues were classified SECRET, including nine supplemental issues that appeared between April-July 1945. Eight of these supplemental issues pertained to amphibious operations, attesting to that subject's importance and novelty. The regular issues of the bulletin averaged ten pages and contained information on a variety of subjects, ranging widely from technology to tactics and aimed at corps and division commanders. Extracts of reports and documents from all the theaters informed commanders about useful experiences, such as the defensive use of reverse slopes in Italy, liaison teams in North Africa, the proximity (VT) fuze in Europe, and the development of a candy assault ration for amphibious operations in the Pacific. Weapons, communications, intelligence gather-

ing, malaria prevention, camouflage, leadership and aircraft were not neglected either. The contents of this innovative medium of experience kept commanders and staffs informed.[41]

The other OPD lessons publication, a series of remarkable booklets called *Combat Lessons*, shared experiences with individual soldiers, expecially small unit leaders. The first booklet went to press early in 1944, soon after OPD established the Current Group with its Combat Analysis Section. Eight booklets followed, about one every other month into the summer of 1945. They targeted the front line soldier and sought to stimulate his interest in the practical problems of combat. Their format kept the target well in mind. Realizing that the average American soldier was "understandably reluctant to spend his leisure moments reading field manuals and training memoranda," OPD presented useful experiences and lessons "in a form appetizing enough to the literary appetite of G.I. Joe to insure his reading them."[42] This meant clear and simple prose, heavy on the vernacular and with a folksy style, plus plenty of cartoons in a pocket-size booklet. The first issue, for example, contained sections entitled "Notes on the Nips" and "Hints on the Heine." The subtitle of the *Combat Lessons* booklets reflected the pragmatic approach: *Rank and File in Combat; What They're Doing, How They Do It.*[43] Above all, the booklets contained a heavy dose of authenticity — "no bull," as G.I. Joe would have put it. Each booklet presented combat information — experiences, tips, lessons, even a few principles — in the form of battle-wise statements made by actual individuals and units. Nearly all of the usable combat experiences contained in the booklets appeared as directly quoted statements with the sources clearly identified. Some examples:

Sergeant William Van Houten, Infantry Squad Leader, 29th Division, France:

"One good lesson which I learned as squad leader is that when you're attacking and the enemy throws mortar and artillery on you, the best thing to do is lead your men forward and get close to the enemy. That is the safest place to be. Then you can drive him out."

1st Infantry Headquarters in the Southwest Pacific:

"Members of patrols have smoked while on patrol duty; this has in many cases proved fatal."

First Lieutenant Benjamin A. Blackmer, Company Commander, Infantry, Italy:

"When I say 'pull the bulk of the company back on the reverse slope' I don't mean to pull them back just behind the crest, but well back. The Germans will inevitably shell their former positions which are generally near the crest of the heights; this shelling will fall on both sides of the crest — some on your reverse slope, some on your forward slope. The whole idea of pulling the bulk of the company back is to get them out of the area of this shelling, so don't stay too close to the crest."

Third Army Rifle Company Commander, ETO:

"The following failings are common among replacements. They must be strictly and promptly eliminated if excessive casualties are to be avoided and combat efficiency obtained:

"Jumping at the sound of every outgoing and incoming artillery shell."

"Unwillingness to use the rifle. (Many have been told never to fire without direct orders for fear of revealing positions.)"[44]

The lessons booklets were intended for wide and timely distribution throughout the Army and commanders were enjoined to make them available in reading rooms, on troop transports, and in the field.[45] Each issue bore the signature of Chief of Staff George C. Marshall, whose introduction explained that the purpose was "to give to our officers and enlisted men the benefit of the battle experience of others." Furthermore, he wrote:

To be of maximum benefit these lessons must be disseminated without delay. They do not necessarily represent the carefully considered views of the War Department; they do, however, reflect the actual experiences of combat and, therefore, merit careful reading. . . lessons will be drawn from the reports as they are received from the theaters of operation and quickly disseminated so that others may apply them.[46]

All nine of the booklets contained the same introductory theme. The lessons presented did not constitute doctrine nor imply that established doctrine was unsound. They merely elaborated on subjects already covered in training literature but

which did not receive full application on the battlefield.[47]

Together, *Combat Lessons* and *OPDIB* disseminated usable battlefield experiences that had been selected, digested, and published in the top management division of the War Department General Staff. OPD's activity constituted lesson sharing at the Army's center, short of General Marshall's own office. Through its dissemination literature, OPD broadcast the combat experiences that it identified as usable and designated as lessons. Unfortunately, such lesson sharing was not necessarily fullblown lesson learning, in which the usable experiences, or lessons, became incorporated into training programs or existing doctrine. OPD lacked the requisite responsibility and functions; those belonged to the major training command, AGF. OPD's Combat Analysis Section, however, did evaluate battle reports, observer reports, and other sources that transmitted battle experiences,[47] and this evaluation went beyond AGFHQ's functioning as a mere conduit. Decentralization had diffused the AGF center of lesson learning. OPD, creating its Army-wide lessons literature, filled part of the role of central lesson learning that AGF diffused.

A Prevalence of Lessons

As the war progressed, experience reporting and lesson sharing, became increasingly practiced. Within the War Department, among the field forces, and throughout the Army, a growth industry in lessons peaked in the spring of 1945. This underdeveloped form of lesson learning had become widespread and fashionable at war's end.

OPD's lessons literature, begun early in 1944, did not cause this prevalence of lesson-learning activities. Certainly the dissemination of usable experience through *OPDIB* and especially the *Combat Lessons* booklets reflected the trend and helped promote it. Other media, however, had been disseminating lessons earlier. For example, beginning in May 1943, *Infantry Journal* produced a new reduced-size overseas edition that included an equally new feature, "Battle Facts for Your Outfit," an assortment of tips and techniques based on recent battle experiences. It complemented other individual articles that routinely appeared in that journal relating experiences and

lessons from the field. A number of these articles contained directly quoted comments by fighting men who gave practical advice to readers, the same testimonial approach that OPD's *Combat Lessons* booklets later used to good effect.

Another indication of the growing prevalence of lessons appeared in 1943, when the Army War College — its wartime non-teaching remnant — began filing source material under a new heading, "Lessons Learned in Campaigns, WW2," a collection intended for use in its postwar curriculum. The file consisted chiefly of observer notes and reports obtained, most likely, from the wartime tenants of the student-less War College, the AGFHQ.[48]

The unit battle reports evolved to reflect lesson reporting, despite no formal changes in the reporting requirements. No top-level directive prescribed a specific format for the "after-action" type report nor required lessons to be included in the reports. But they appeared nonetheless. As early as May 1943, reports on "Combat Experience and Battle Lessons for Training Purposes" emerged in the Mediterranean Theater.[49] In the same theater, it may have become standard procedure to attach a special lessons-learned annex to the required reports of combat operations.[50] A year later, OPD's *Information Bulletin* urged that

> . . . all commanders take steps to insure that unit operations reports and historical records include the factual reporting of significant detail on weapons, materiel, improvised methods and equipment, minor tactics, and lessons learned in combat.[51]

Not only lessons themselves but also lesson terminology became prevalent by the spring of 1944. Before then, observer and battle reports usually were called simply "reports" or "observations." They then changed into "experiences of combat," "lessons from combat," "combat lessons," and "lessons learned" — all used interchangeably.[52] This terminology change coincided, significantly, with the early dissemination of OPD's lessons literature. It also presaged the cross-channel invasion.

In anticipation of D-Day, the European Theater of Operations (ETO), on its own initiative, redirected a new Army-wide program of troop information and converted it into a medium for combat orientation based on recent experience. The Army-wide program, called Information and Education (I&E), had begun the preceding autumn as a morale activity under Army Service Forces (ASF), the support command complementing AGF. Under ASF, orientation on the war's political causes, events and meaning was disseminated through the media of motion pictures, radio, and various published literature. The magazine *Yank*, the *Stars and Stripes* newspaper, and the *Why We Fight* film series represented I&E's most widely recognized media. In addition, I&E required all enlisted personnel to be given a special orientation course during their basic training and thereafter attend a weekly training period of orientation conducted in their units. As might be expected, overseas field units did not usually fulfill the weekly orientation requirement. In Britain, however, where the US forces gathered for the coming invasion, the required orientation program was adapted to the local circumstances and took on a pragmatic turn to combat orientation. The theater's own I&E publication, *Army Talks*, a weekly pocket-size pamphlet first issued in September 1943, changed from a discussion leaders handbook on civics to a widely distributed guide to European combat conditions. Beginning in May 1944, it became the ETO's periodic combat lessons literature.[54]

The transformation of *Army Talks* reflected the preferences of ETO's top commanders for providing American soldiers with practical benefits of recent combat experience, i.e., lessons, rather than explanations on the war's causes. The 31 May 1944 issue of the reoriented booklet, entitled *Achtung*, advertised itself as "combat stuff right out of a combat soldier's mouth." Much additional "combat stuff" followed the GI's as they fought across France to the Rhineland and eventually into Germany. In France the weekly *Talks* gave them practical tips on "some of the lessons we're learning in Normandy." By the time, they reached the Siegfried Line, the pamphlet continuously offered "the lessons of individual conduct in warfare," with a regular feature called "Combat Tips" contained in every issue. One issue explained bluntly why the periodical emphasized combat lessons: ". . . to kill Germans and stay alive to kill more Germans."

At the headquarters of General Omar N. Bradley's 12th Army Group, another lessons

publication disseminated combat experiences on a near-daily basis. The first issue of *Battle Experiences* appeared on 12 July 1944, five weeks after D-Day, and appropriately discussed hedgerow fighting. The brief newsletter shared fresh combat experiences undergone by the fighting troops in Europe. Directly quoted statements allowed the participants to speak for themselves and added the touch of authenticity. Readers were warned, however, that the experiences and lessons presented did not necessarily apply to all situations; consequently, the newsletter solicited "reports of corroborative or contrary experience" from readers. This field dissemination of experience continued for 90 issues into November 1944, at which time ETO headquarters — its G-3 Combat Lessons Branch — took over as publisher.[55]

Meanwhile, the Mediterranean Theater of Operations (MTO) disseminated less frequent digests of "American combat experience and battle lessons" in Italy. Headquarters, MTO used its periodic training directives to occasionally disseminate compilations of usable experiences gathered from unit and observer reports. These lessons were then presented to the combat troops during a special training period of about four weeks, which each major unit of Fifth Army underwent over the winter of 1944-1945. The units came off of the lines for combat veterans to learn new techniques and brush up on older ones, while recent replacements received more basic orientation. A 600-page compendium of local lessons was published for training within the theater.[56]

Elsewhere, digests of combat lessons became fashionable during the closing spring and summer of the war. The War Department's OPD published a digest of selected contents of *Combat Lessons*.[57] The ETO prepared two special brochures entitled *Battle Experiences*, the last of which, published in May 1945, contained lessons derived from combat against the Japanese and aimed at the units earmarked for redeployment from the ETO to the still-active Pacific Theater. Those divisions could take along also to the Pacific an extra infantry regiment, thanks to the prevalence of lessons.

Re-squaring the Infantry Division

Wartime adjustments in the structure of US infantry divisions reflected strength in lessons

emanating from the field forces but also weakness in centrally evaluating and applying those lessons. Lacking a true power center for lesson learning, the Army belatedly and incompletely adjusted its divisional structure. Near war's end, in May 1945, the War Department approved an AGF recommendation of several months earlier to add a fourth infantry regiment to the standard infantry division. This approval was limited, applying only to those divisions already in Europe and scheduled for redeployment to the Pacific.[58] Ironically, the addition represented a throwback to the old "square" divisional structure used in the First World War. Although actual re-squaring was never completed in the Second World War, the authorization for it illustrates the helpful but limited lesson learning that had evolved.

Behind the AGF recommendation for re-squaring lay the experience of over two years of American combat and its disproportionate toll of infantry strength. By the beginning of 1944, concern arose that the Army's infantry was wearing out — even *before* the invasion of northwestern Europe began. Intense ground fighting in the Pacific and Italy already had revealed to field commanders and AGF observers the drain of infantry from veteran divisions. Rifle-strength casualties ran at unexpectedly high rates and enemy weapons did not account for all of this increase. Sickness and exhaustion, both physical and psychological, sapped infantry strength at a rate directly proportional to the length of time units underwent combat conditions. After more than thirty days in the lines, noted one major field commander, ". . . everybody gets tired, then they get careless, and there are tremendous sick rates and casualty rates."[59] Commanders and observers reported the same problem and the need for more infantry staying power or depth, which led to the first raising of a proposal in the War Department to add a fourth infantry regiment to the divisions. However, the proposal became entangled and lost in the overall replacement issue and debate over unit or individual rotation. The fourth regiment idea resurfaced a year later, after the Allied drive toward Germany had stalled in the infantry-intensive combat along the Siegfried Line that autumn, especially in the Huertgen Forest. The pre-invasion expectation of a 70% loss rate in the combat forces had been revised upward to over 80% during the hedgerow experience, and

continued to climb higher. Individual infantry replacements were committed to combat before adequately oriented and sometimes, tragically, died in action before anyone in their units even learned their names.[60]

In Italy, infantry division, in fact, became re-squared briefly out of theater-level expediency. In November 1944 the 92d Infantry Division, an all-black combat unit, had been augmented soon after entering combat by the attachment of a "fourth hand," the 366th Infantry Regiment, another all-black unit. One purpose behind this Fifth Army arrangement was to maintain the 92d's strength so it could effectively remain in the defensive lines but, at the same time, rotate one of its regiments for temporary attachment to veteran divisions, allowing their infantry units relief while the new black infantry acquired more experience. In effect, this constituted an experiment in unit rotation relief and a temporary squaring of infantry divisions. Moreover, it fell within the resource-pooling approach of Lesley McNair, who, had he remained alive and in command of AGF, would likely have approved. Unfortunately, additional augmentations, internal reorganizations, and racial problems soon obviated the initial re-squaring experiment and probably marked the experience as a doubtful precedent, but it may have exerted some influence on AGF's early 1945 recommendation to re-square all infantry divisions.[61]

The precipitate decline in combat strength led to various expedients to funnel infantry replacements into the hard-pressed line divisions, and included arguing with the general success of the triangular division structure. The three-regiment division had proven itself adaptable and effective in the geographically diverse battlefields of the global war, from North African deserts to Italian mountains and from Pacific jungles to settled European countryside. Nonetheless, AGF recommended a return to the former square configuration in order to provide more infantry staying power. It allowed the line regiments within the division to rotate, so that one could always rest or recuperate and thereby prevent the disabling exhaustion. In truth, General Marshall had long held reservations about standardizing the triangular structure but realized that it represented a long-studied and "carefully considered product

of some of the best minds in the Army." To avoid dangerous delay in mobilization, he had approved the triangular structure in 1939, satisfied that if problems arose "it would be very easy to alter matters."[62] The experience of war revealed problems that caused structural alterations to be proposed and initiated.

Interestingly, efforts to restore the fourth element did not reflect a consensus. The view from the field on the addition was not everywhere enthusiastic. In the ETO, many combat commanders favored more infantry depth but preferred improvements in the individual replacement system, preferably by assigning a replacement battalion to each division. A November 1945 conference of the theater's combat commanders, presided over by Gen. George S. Patton, analyzed the infantry division and reached general agreement on a replacement battalion but not on a fourth platoon for each rifle company or a fourth regiment for a division. No recommendation for the additional regiment came out of this postwar assessment of the European campaigns.[63]

Lessons in the Hedgerows

During the war, a striking illustration of tactical lesson learning took place completely in the field — to be precise, in the hedgerows. The unforeseen difficulties of hedgerow fighting in France presented theater forces with the op-portunity—not particularly welcomed—to adapt doctrine, develop new techniques, and learn from costly experience. From this experience emerged the technological expedient of the hedgerow cutter, a familiar story of the war, and the less familiar techniques of small-unit combined arms.

In the French provinces of Normandy and Brittany, directly in the path of the liberating American and British armies, lay the bocage region. Its marshy terrain naturally impeded the swift cross-country advance of the highly mechanized Allied forces. The region's man-made hedgerows, however, proved even more im-peding, especially when skillfully defended by a determined enemy. The hedgerows themselves were simply dense thickets of trees and bushes atop centuries-old earthen embankments. They functioned as fences, enclosing each small field

and orchard in quilted pattern across the countryside. The maze-like hedgerows did more than limit vision and channel cross-country movement; each became a formidable military obstacle. Hedgerow banks alone averaged four to six feet high, higher if a cut road passed alongside, with up to a ten-foot base. Each hedgerow, if well defended by mutually supporting fires, constituted a bastion that took much time, effort, and casualties to overrun. Once a defended hedgerow was cleared, another one waited a few hundred feet away. The bocage battlefield became compartmentalized into piecemeal assaults and small unit actions. The long-planned Allied Second Front and the largest single field army ever assembled by the United States soon bogged down in frustrating and bloody hedgerow fighting. The colossus waited while young lieutenants and platoon sergeants directed the clearing of deadly hedgerows, one by one.[64]

The hedgerows caught the Allies by surprise. No one imagined beforehand their formidable defensive potential. American combat troops entered bocage country without specific training or doctrine for the unique style of hedgerow combat. They had no special equipment or techniques to call upon, either. It fell to trial and error, plus the basic school-taught principle of fire and maneuver, to evolve a combined-arms approach that proved reasonably effective but at a painstaking rate of clearance — sometimes one hedgerow a day — accompanied by a costly casualty rate, often exceeding 80%.[65] Tank losses ran high, too, because the hedgerows channeled them into waiting German anti-tank guns. To avoid the traps, the tankers tried smashing through the hedgerows, but it required several head-on power crashes by 33-ton Sherman tanks before passage could be cleared through the tangled roots and packed earth. Such hedgerow bashing, of course, alerted German anti-tank crews, whose gun sights framed the tank as soon as it emerged. Another tactic, to go over the top, took less time but still alerted the enemy and, worse, exposed the tank's soft underbelly to enemy guns. Expanding the combined arms approach brought in engineers to work closely with an infantry-armor team and blast passageways through the hedgerows. Closer

artillery and air support took the approach further and reached its effective limits.[66]

Two technological solutions seemed promising. One was the tankdozer, a combat tank fitted with a bulldozer's movable earth-pushing blade, which could clear a passage through the smaller hedgerows. Unfortunately, too few of this hybrid vehicle existed and even a dozer blade had difficulty with the entangled hedgerow roots. Something better than hedgerow bashing was needed.

The other technological solution came from the units and individuals fighting in the hedgerows. They originated various expedient devices for cutting through the hedgerow roots. The most publicized device came from a tanker sergeant and was dubbed the "rhinoceros," an attachment of four horn-like blades that curved upwards from the front of a tank. The blades easily penetrated deep into the tangled roots, keeping the tank's hull down and allowing a quick breakthrough that caught defenders by surprise. In a special demonstration, the rhino-model hedgerow cutter impressed General Bradley, who ordered its immediate mass production in the field. Ironically, the on-hand steel girders from German beach obstacles soon turned into the rhino blades. Within a week, in time for the Allied breakout from the Normandy bottleneck, most American tanks bristled with the new hedgerow cutters. Although it would be pleasing to conjure, subsequently, an image of "rhino tanks" slashing through hedgerows and unleashing the Allied armies across northern France, the event proved otherwise. The successful breakout attack at St. Lo enabled the Allied mechanized columns to pour out along the roads without any need to advance cross country through the bocage. The improvised hedgerow cutters certainly boosted morale and instilled confidence, but they did not achieve the breakout.[67] That, of course, is beside the point.

Hedgerow cutters and, more importantly, the combined arms techniques that emerged from the bocage fighting represented the informal, field-expedient approach to lesson learning that utilized the normal command links and responsibilities inherent in any military force. Lessons can be so derived from ongoing combat experience and quickly applied on the spot without the need to

involve the top levels of the Army or special agencies back in the United States, which the hedgerow cutter illustrates nicely. The combined arms experience in the hedgerows was a more valuable lesson, but the quick technological fix received the most immediate attention, in keeping, perhaps, with American self-pride in inventive genius. The wartime press acclaimed the rhino device's inventor, SGT Curtis G. Culin, Jr., 102d Cavalry Reconnaissance Squadron, as "the immortal Yankee," that great tinkerer whose mechanical aptitude never failed.[68] However, a postwar assessment of the hedgerow fighting placed the cutter in the perspective of combined arms tactics.

> While nothing particularly new was developed as to use of weapons, special formations and combinations of arms were developed to advance through this unique type of terrain.
> The most effective method of attack proved to be by combined action of infantry, artillery, tanks and engineers with some tanks equipped with dozer blades or large teeth in front to punch holes through the hedgerows. . . . [T]his type of fighting brought out the importance and necessity of perfect teamwork and cooperation of the various combined arms.[69]

Field Historians: Emergence and Portent

Historical activities should not be overlooked in the context of the war's contemporaneous lesson-learning effort, even though they played no significant role. They did develop an innovative method for gathering information that portended much for future lesson learning.

In recognition of the military value of history, the World War II Army established a new historical branch within the General Staff intelligence function (G-2) and, for the first time, dispatched uniformed historians into the field to preserve and supplement the historical record even while it was in the process of creation. The first historical teams went to North Africa, followed by other teams to all the theaters, most levels of command, and many major activities. Theater historians served as staff advisors to the theater commander and supervised the activities of the historical teams assigned within the area of operations.[70]

One of these new field historians, in particular, helped shape the historical program and procedures: the other Marshall, Samuel Lyman Atwood Marshall, or simply SLAM. Recruited from civilian newspaper writing, he introduced and developed the group after-action interview used in the Central Pacific and later in the European Theater, where he became chief historian. His innovative interview technique sought to elicit the nitty gritty of combat from participants and penetrate the fog of battle to reach unprecedented accuracy and detail. Some considered his achievements "a revolution in military fact-finding and analysis."[71] In theory his technique was simple enough: gather a small group immediately after an action and discuss at length the events. Although similar to a mass debriefing, the technique required skillful guidance by the interviewer to encourage full participation and yet ferret out the hidden, embarrassing details. The interviewer's success depended on the willingness of all participants, from commander to private, to testify openly about their behavior and perceptions. Out of this search for tactical truth emerged elaborate, often trivial, details that enabled a historian to minutely reconstruct the episode. Beginning with his first interview on Kwajalein Island in January 1944, SLAM employed the technique hundreds of times by the end of the war.[72]

Incidentally, the technique could take on a life of its own. Brutally frank interview sessions sometimes evoked intense personal feelings in participants and exposed individual weaknesses, mistakes, and pent-up emotions. The sessions also revealed to the group how it collectively coped with its mission. This self-catharsis and critique in shared knowledge and understanding that could promote unit cohesion and improve individual performance.[73]

Marshall, however, searched for accurate combat facts, not a psychological basis of group solidarity. He believed that his interview techniques provided the means to unprecedented historical accuracy, and he claimed — with characteristic overstatement — that "We have learned more of the truth of battle through these company interviews on Kwajalein than had ever been learned before in the histories of armies and wars." He also believed that the interview "is not the time for teaching battle lessons." Participants

in the emotionally intensive interview sessions should be treated "objectively and even sympathetically." To take advantage of their openness by corrective instruction in front of the others "will defeat all of the purposes of the interview." To SLAM, the after-action interview served exclusively for fact-gathering. Lessons for its participants were incidental and personal. However, usable experiences could be carried away from the session by the interviewer for later incorporation into the impersonal procedures for evaluating and sharing lessons.[74]

After the war Marshall published some of the lessons he personally derived from his interviewing, most notably in the 1947 classic, *Men Against Fire*, which asserted that an extremely low ratio of combat soldiers (15-25%) actually fired their weapons at the enemy. His conclusions have never been fully accepted because such assertions are not easily proven and Marshall's tendency toward hyperbole did not help matters. As a long-time associate and friend of SLAM admitted:

> Marshall wasn't a military scientist. When he used statistics they were an adornment, not the message. I've known him to invent statistics to "prove" a point. Marshall's insights were intuitive, the distilled truths of a searching mind. They were stated bluntly, without reservation or doubt. For all of this, they were rooted in fact, nourished by contemplation, and universal in concept. One wondered that each idea hadn't been thought of before. Often it had, but he gave it cogency.[75]

Right or wrong, or somewhere in between, SLAM's assertions are beside the point here and should not distract from his innovative group-interview technique, which served as a model for Army historical teams covering small-unit actions.[76]

The pity is that the war's imperfect lesson-learning system was not pervasive enough to encompass the new historical field activities and process interview material. A more comprehensive system might have drawn lessons from the detailed experiences recorded by the historians. That system, however, awaited fuller development in the next war. Meanwhile, the ongoing war at least brought about organized historical activities and a new breed of field historians to help preserve and create source materials — the stuff of which history is literally made. Out of this activity, historians became competitors with other Army

activities, notably lesson learning, for battlefield information and its means of transmission.

Aftermath

Immediately following the end of fighting in Europe, the US theater forces established a general board to assess the "strategy, tactics and administration" employed during the conflict. When completed, the board had produced 131 individual reports on chiefly the administrative and organizational aspects of the European campaigns, plus a few on tactics and virtually nothing significant on strategy.[77] Nevertheless the undertaking approximated a comprehensive analysis of the war effort, at least as seen from and experienced by the ETO.

One report pronounced basic tactical doctrines and principles set forth in the Field Service Regulations as sound and proven successful in European combat. It admitted, however, that the degree of success depended upon the individual commander's ability to apply "properly" those doctrines. Combat records and reports studied by the board did reveal "several lessons of tactical significance which warrant discussion. . . ," but that discussion produced no fourth infantry regiment — only a division replacement battalion. Air-ground liaison, infantry-tank coordination, and hedgerow fighting were cited specifically as the chief lessons, along with the general need for an aggressive combat spirit. The study concluded that the lessons required no significant changes in established tactical doctrines. It also concluded and recommended that tactical doctrines, methods, and techniques "must be continuously reviewed in the light of new developments," which reflected awareness of the need for managing usable experience.[78]

Another reflection of lesson-learning consciousness developed during the Second World War, fittingly drew upon the same event, or experience, that began the war for the United States — the Pearl Harbor attack. Congress thoroughly investigated the causes of the national disaster during the war, searching for both blame and lessons. The investigators uncovered both. The results, published soon after the war, included a list of twenty-five "deficiencies" that Congress recommended to the Army and Navy for consideration. These deficiencies, also termed

"principles," were of a supervisory, administrative and organizational nature; they did not involve tactical or strategic matters. Derived from unhappy experience, they constituted lessons that ranged from pragmatic rules of thumb — when in doubt whether to send information to an outpost, send it — to vague and cryptic generalities: "There is great danger of being blinded by the self-evident." The Army presented these principles in the next edition of its basic operational manual, *FM 100-5*, still known then as Field Service Regulations, where they were listed and discussed in a special appendix, "Lessons of the Pearl Harbor Attack."[79] Thus, lesson learning explicitly became part of the Army's basic doctrine, fittingly as an appendage.

The World War II Army developed a pervasive sense of experience sharing and re-evaluated much experience. Unfortunately, it never formally institutionalized the procedures nor fully centralized the actual application of lessons. The dissemination of lessons literature by the War Department's Operations Division marked centralized experience-sharing but belatedly so, more than two years after Pearl Harbor. Headquarters, Army Ground Forces did not fully exploit its central role in training and doctrinal matters, preferring instead to localize the development of specialized doctrines and their subsequent adjustments based on the lessons of experience. Withal, US Army lesson learning had come far but still not far enough.*

---

* Compare with the Red Army's system in WW II, described in Appendix D-1.

NOTES

1. Clausewitz quote appears in the Michael Howard translation, *op. cit.*, p. 122; italics added. The War Department quote is in its *Lessons Learned and Expedients Used in Combat: Pamphlet 20-17* (Jul 1945), p. iii.

2. US Congress, Senate, Joint Committee on the Investigation of the Pearl Harbor Attacks, *Report*, 79th Cong., 2d sess., 1946.

3. S.J. Lewis, *Forgotten Legions: German Army Infantry Policy, 1918-1941* (NY: Praeger, 1985), pp. 86-98, 105-114 and 125-126; Generaloberst Dr. Lothar von Rendulic, "Mistakes in Deducing War Experiences," report (draft of English translation), *Foreign Military Studies*, MS #P-118 (Historical Division, US European Command, 10 Oct 1951), pp. 3-4.

4. (British Army), *Lessons from Operations, Oct. and Nov. 1942*, Middle East Training Manual No. 7 (n.d.) and 21st Army Group, *Some Notes on the Conduct of War . . .* (Belgium, Nov 1944); Nigel Hamilton, *Monty: The Making of a General* (NY: McGraw-Hill, 1981), pp. 712-713 and *Master of the Battlefield: Monty's War Years* (NY: McGraw-Hill, 1983), pp. 48-49. Examples of British War Office lessons literature are *Notes from Theaters of War: No. 11* (Feb 1943), which dealt with an aspect of the Dieppe raid and its *Current Reports from Overseas: No. 17* (Sep 1943), a compilation of various experiences and lessons.

5. Forest C. Pogue, *George C. Marshall: Ordeal and Hope, 1939-1942* (NY: Viking Press, 1965), pp. 90-91.

6. Speech, 15 September 1941, Milwaukee, WI, *The Papers of George Catlett Marshall*, ed. by Larry I. Bland, Vol. 2, (Baltimore: The Johns Hopkins University Press, 1986), pp. 606-607.

7. US War Department *Circular No. 91*, (17 Aug 1940), Sec. III, revised Paragraph 10 of the 1929 edition of AR *345-105*, which was still current then. The formal revision of the after-action paragraph was published as Change 2 on 15 January 1943, and was worded exactly the same as the 1940 circular.

8. Quoted passages are from US War Department, *Biennial Report of the Chief of Staff of the United States Army, July 1, 1939, to June 30, 1941, to the Secretary of War* (Washington, DC: Government Printing Office, 1941), pp. 20-22.

9. Memo, Marshall to Miles, G-2, 14 May 1940, in *George Marshall Papers*, Vol. 2, p. 213; and US Military Intelligence Service, *Information Bulletin No. 11* (15 Apr 1942).

10. US War Department *The German Campaign in Poland, September 1 to October 5, 1939* (Washington, DC: GPO, 1942); Army War College Library bibliography, 1942, MHI-Z6721A74; and *Military Reports on the United Nations Nos. 1-20* (15 Dec 1942- Jul 1944) becoming thereafter *Military Reports*.

11. US MID, *Tentative Lessons Bulletin No. 9* (5 Jul 1940), pp. 14-15, contains the dozen recommendations.

12. War Dept., General Staff G-3 memo, 31 May 1941, and enclosures, William B. Donovan Papers, Box 69A, Item #407, MHI Archives.

13. US War Department, *Circular No. 59* (2 Mar 1942), pp. 3-4.

14. US Army Ground Forces, "Principles and Methods of Training in Army Ground Forces: Draft Study No. 10," mimeographed draft (Historical Section, AGF, 1946); see specifically pp. 4-5. Overviews of the AGF have been published in *The Army Almanac* (Washington, DC: GPO, 1950), pp. 258-63, and *Report of Activities, Army Ground Forces, World War II* (Washington, DC: AGF, 1946). Details of AGF functions appear in two "Green Books" in the official *United States Army in World War II series: Organization of Ground Combat Troops* (Washington, DC: Historical Section, Department of the Army, 1947) and *Procurement and Training of Ground Combat Troops* (Washington, DC: Historical Section, DA 1948). Additionally, 37 studies, including the above cited *No. 10* draft, were prepared by the AGF Historical Section during 1946; although *No. 2* is a short history of AGF to 1942, there is no similar account for 1943-45 period.

15. AGF Draft Study No. 10, pp. 16-21.

16. *Ibid*.

17. *WD Circular 59* (2 Mar 1942).

18. AGF Draft Study No. 10, pp. 16-21.

19. No scholarly study or satisfactory biography of McNair has yet appeared. E. J. Kahn, Jr.'s, slim biographic tribute, *McNair: Educator of an Army* (Washington, DC: Infantry Journal Press, 1945), written soon after McNair's death, first appeared in the *New Yorker Magazine* in October 1944, and provides an anecdotal portrait of the man and general; see pp. 28-38 especially. Brooks Kleber has done two brief pieces on McNair, which draw heavily on Kahn's biography but cite additional sources; see *Army* (Jul 1980), pp. 50-54, and *The Dictionary of American Military Biography*, Vol. II (Westport, CT: Greenwood Press, 1984), pp. 695-699 On McNair's organizational philosophy, see *Organization of Ground Combat Troops*, pp. 273 and 276.

20. Dale Floyd, "US Army Officers in Europe, 1815-1861, *Proceedings of the Citadel Conference on War and Diplomacy* (Charleston, SC: The Citadel Development Foundation, 1979), pp. 26-30; Alfred Vagts, *The Military Attache* (Princeton: Princeton University Press, 1967), Chap. 10; and Peter D. Skirbunt, "Prologue to Reform," Ph.D. dissert., Ohio State, 1983, Chaps. II-III.

21. MID, *Tentative Lessons Bulletin No. 36*.

22. SWPA's commanding general, Douglas MacArthur, carefully guarded control of his Pacific fiefdom and was wary of outsiders operating in his territory, especially those whose authority came from Washington, DC. For example, he did not permit Office of Strategic Services (OSS) agents within his command and relied on his own staff and resources for strategic intelligence. See D. Clayton James, *The Years of MacArthur*, Vol. II (Boston: Houghton Mifflin, 1975), pp. 510-511.

23. AGF observer information was drawn from AGF's Report *of* Activities, World War *II*, pp. 18; Army *Almanac*, pp. 260 & 262; AGF Study No *34* by Maj. D.L. McCaskey, pp. 20-21; and Federal Records of World War *II*, Vol. II, by the National Archives and Records Service (Washington, DC:

GPO, 1951), pp. 251-252. The subject has not been well recorded or accounted for in standard literature and periodicals.

24. Kahn, p. 31. Chief Warrant Officer Ely Jacques Kahn, Jr., was drafted into the Army from the staff of the *New Yorker*. During his service he produced many articles on soldier life and the Army, which appeared in service periodicals, such as *Infantry Journal*, and commercial magazines, such as *Saturday Evening Post* and the *New Yorker*.

25. Nearly 700 observers' reports are on file in MHI, arranged by theater and the numbers originally assigned them at AGF HQ. This collection, hereafter cited as "Reports of Observers, WW II," is a major source of data and inference on the system. The number of reports in this collection is roughly equal from the three theaters: MTO, 204 reports; ETO, 250; Pacific, 228. The original numbering system reveals that not all the reports are in MHI's collection and suggests that perhaps 2,200 reports may have been received by AGF HQ.

Incidentally, the observer who explored the horse cavalry potential in Italy, and who shall be identified only as a cavalry officer, submitted seven reports on file in the collection. The reports contain the opinions of various commanders on several subjects: close air-ground support, pack animals, and whether or not horse cavalry would have been operationally effective. It is unknown if the last subject reflected genuine interest by AGF HQ or was on the observer's own initiative. Whatever, the results of his survey on horse cavalry were favorable, 6-to-1. See MTO reports, A-series, Nos. 374, 383, 411, 412 & 414.

26. See "Reports of Observers, WW II," MTO, Vol. 2, Series A, Nos. 20, 27 & 32.

27. This was not his first stint as a military observer. In 1913, he witnessed French artillery training for seven months. See Cullum's Register of USMA *Graduates*, Vol. VI, pp. 1077-78.

28. In July 1944, General McNair was given command of a "ghost" army group in England, playing a role in the continuing grand deception by the Allies to convince German intelligence that the main invasion of Nazi-occupied Europe had not yet taken place, despite the fact that it already had occurred a month earlier in Normandy. See Kahn, p. 50; *DAMB*, pp. 695-699; and Martin Blumenson, *Breakout and Pursuit* (Washington, DC: Office of the Chief of Military History, 1961), pp. 234-36.

29. US War Department, *Lessons from the Tunisian Campaign, 15 Oct 1943* (Washington, DC: GPO, 1943), pp. II & 1-2 (AWC Curricular Material #309-5, MHI Archives). See also Martin Blumenson, "Kasserine Pass," *First Battles*, pp. 226-265, especially p. 262, and George F. Howe, *Northwest Africa* (Washington, DC: OCMH, 1957), pp. 671-673.

30. The quoted observer is MG Walton H. Walker whose 10-page report was edited and mimeographed at AGFHQ on 12 Jun 1943, filed in the 1st Armored Div box, UH Coll (#05-1AR-WW II), MHI. See also Christopher R. Gabel, *Seek, Strike, and Destroy: US Army Tank Destroyer Doctrine in World War II*, Leavenworth Paper No. 12 (Ft. Leavenworth, KS: Combat Studies Institute, US Army Command & General

Staff College, 1985), Chaps. 3-4, and two studies prepared by the AGF Historical Section in 1946: Emory A. Dunham *Tank Destroyer History*, AGF Study No. 29, pp. 53-55, and Robert R. Palmer, *Organization and Training of New Ground Combat Elements*, AGF Study No. 9, pp. 28-31.

31. Based on examination of "Reports of Observers, WW II." A few reports retain their original letters of transmittal from the observers and are addressed to the AGF Asst C/S, G-2. Additionally, many of the reports include the routing letters of Dissemination Division, G-2 Section, HQ, AGF.

32. Ray S. Cline, *Washington Command Post: The Operations Division* (Washington, DC: Historical Division, Dept. of the Army, 1951) is a detailed monograph on the organization and function of the agency. A noteworthy one-page description appears in US National Archives and Records Service, *Federal Records of World War II*, Vol. II, (Washington, DC: GPO, 1951), p. 121.

33. *The Papers of Dwight David Eisenhower: The War Years*. Vol. I (Baltimore: The Johns Hopkins Press, 1970), pp. 340-341; Cline, *Command Post*, pp. 141-142.

It should be noted, at the risk of confusion, that in addition to having at least two sets of observers in the theaters, there is a possibility of a connection between them in the ETO. As revealed in the "Observers Reports, WW II" collection, ETO observer reports after March 1945 bore the heading *War Department* Observer Board, not Army Ground Forces. It is unknown why the name change occurred, but it is a fact that the reports continued to be sent to AGF HQ as usual, where they continued to be referred to as AGF observers reports. If there was a merger of the two systems or a War Department takeover, as the name change might suggest, it does not appear to have affected the way that the AGF system functioned.

34. 1st Armored Division's "Report on Combat Experiences and Battle Lessons for Training Purposes," dated 13 Jun 1943, is in the George H. Howe File, Unit History Collection (05-1AR-WW II), MHI, along with subordinate unit reports. The 9th Infantry Division's "Reports on Combat Experiences and Battle Lessons for Training Purposes," 21 Jun 1943, and its "Report on Operations," 15 Aug 1943, Annex 2, are in AWC Curricular Archives, File #309-B/2, MHI.

35. US WD *Circular No. 91* (17 Aug 1940), Sec. III; *AR 345-105*, Change 2 (15 Jan 1943).

36. Cline, pp. 130-133 & 192-195; Otto L. Nelson, *National Security and the General Staff* (Washington, DC: Infantry Journal Press, 1946), pp. 490-496; and Hewes, *Army Organization*, pp. 77-78.

37. In charge of OPD's Combat Analysis Section were a succession of three Field Artillery colonels, each a graduate of West Point. The first head of the section was Colonel William A. Walker, who served nearly a year, from its establishment in February until December 1944. He had previously commanded a tank destroyer battalion in Tunisia and Sicily before assignment to OPD, within which he remained until long after the war. His successor in the Combat Analysis Section was Colonel Byron L. Paige, who headed the section for six months, until June 1945. The last wartime head was Colonel

Bernard Thielen. See Cline, *Command Post*, pp. 370-371; obituaries of Walker and Thielen in *Assembly* (Fall 1966) and (Summer 1968).

38. US WD, *Operations Division Information Bulletin*, Vol. I (No. 8, 24 Apr 1944), pp. 1-2. See also Cline, *Command Post*, pp. 130-133, 192-194 and 370-371.

39. US War Department, General Staff, *Operations Division Information Bulletin*, Vol. I (No. 1, 20 Jan 1944), p. 1.

40. *Ibid.*, and Vol. I (No. 8, 24 Apr 1944), pp. 1-2; Vol. III (No. 7, 13 Dec 1944), p. 1

41. *OPDIB*, 5 vols. (20 Jan 1944-4 Sep 1945), with 9 supplemental issues. See Vol. I (No. 6, 28 Mar 1944), pp. 7-8, on reverse slopes; Vol. I (No. 1, 20 Jan 1944), p. 5 and (No. 8, 24 Apr 1944), p. 8, on liaison teams; Vol. IV (No. 2, 23 Feb 1945), pp. 2-4, on proximity fuzes; and Vol. III (No. 1, 18 Aug 1944), p. 11, on the candy ration.

42. *OPDIB*, Vol. III (No. 5, 27 Oct 1944), p. 6.

43. US WD *Combat Lessons Nos. 1-9* (Washington, DC: GPO, 1944-1945). *OPDIB*, Vol. I (No. 1, 20 Jan 1944), p. 1, mentions the first issue of the booklets had just gone to press.

44. *Combat Lessons No. 5*, p. 19; *No. 6*, p. 30; *No. 3*, pp. 14-15; and *No. 7*, p. 11

45. *OPDIB*, Vol. III (No. 5, 27 Oct 1944), p. 6.

46. *Combat Lesson No. 1*, Introduction.

47. *Combat Lessons No. 1* & No. 9, Introdutions.

48. AWC Curricular Index, File 309-5, MHI Archives. The term "Army War College," at this time was used synonomously and quite properly for the educational institution, the building it occupied, and even the surrounding grounds.

49. Letter, Allied Forces HQ, 14 May 1943, cited in US 9th Infantry Division report, 21 June 1943, File #309-B/2, MHI Archives, and Note 7, this chapter.

50. At least for the 9th US Infantry Division. See its operational report on the Sicilian campaign, addressed to the US II Corps, dated 15 August 1943, in File #309-B/2, MHI Archives, and Note 34, this chapter.

51. *OPDIB*, Vol. I (No. 8, 24 Apr 1944), p. 2.

52. Based on analysis of Reports of Observers, WW II. The new lessons terminology appeared most in the ETO and MTO reports.

53. War Department, *Orientation, Information, Education: Circular 360*, (5 Sep 1944); F.H. Osborn, "Information and Education Division," *Military Review* XXIV (Dec 1944), pp. 22-26; US Forces in the European Theater, General Board, "The Information and Education Program in the European Theater of Operations: Study No. 76" (USFET HQ, n.d.), pp. 5-8.

54. *Army Talks* Vol. I (No. 1, 29 Sep 1943) and Vol. II (No. 22, 31 May 1944). Also *Army Talks*, Vol. II (No. 27, 5 Jul 1944); (No. 36, 6 Sep 1944), and (No. 41, 28 Oct 1944); Vol III (No. 6, 10 Feb 1945).

55. The first 14 issues of *Battle Experiences* were published by Headquarters, First US Army Group (FUSAG), which changed to 12th [Allied] Army Group in August 1944. All 90 issues, despite the change, came from Gen. Bradley's headquarters. The 90th and last issue by his headquarters, dated 11 Nov 44, is an index on subjects in the first 89 issues. See #02-12-1944, UH Coll, MHI.

56. US MTO, *Lessons From the Italian Campaign: Training Memorandum No. 2* (MTO HQ, 15 Mar 1945), cites an earlier training memo dated 10 Mar 1944 as containing the same digested material; Chester G. Starr, ed., *From Salerno to the Alps: A History of the Fifth Army, 1943-1945* (Washington, DC: Infantry Journal Press, 1948), p. 376; 15th Army Group, HQ, *Military Encyclopedia* (1945).

57. US WD *Lessons Learned and Expedients Used in Combat: Pamphlet No. 20-17* (Jul 1945).

58. Bell I. Wiley, "The Role of Army Ground Forces in Redeployment: Study No. 37" (Historical Section, AGF, 1946), pp. 30 & 33. This monograph also appears complete in *The Organization of Ground Combat Troops* (Washington, DC: Historical Division, Dept. of the Army, 1947); see pp. 482-483. The WW II division is covered in Virgil Ney, *Evolution of the US Army Division 1939-1968* (Fort Belvoir, VA: US Army Combat Developments Command, 1969), pp. 30-56.

59. Ltr, Lt. Gen. Jacob L. Devers, CG No. Africa Theater, to McNair, 4 Feb 1944, in *Procurement and Training of Ground Combat Troops*, p. 227 and pp. 226-228.

60. *Procurement and Training*, pp. 228-230; Omar N. Bradley, *A Soldier's Story* (NY: Henry Holt, 1951), pp. 444-446.

61. Ulysses Lee, *The Employment of Negro Troops* (Washington, DC: Office of the Chief of Military History, 1966), pp. 557-560 & 572-575; Bernard Nalty, *Strength for the Fight: A History of Black Americans in the Military* (NY: The Free Press, 1986); Paul Goodman, "A Fragment of Victory," special study on 92d Division (US Army War College, 1952), pp. 62-65 and 203-206.

62. Memo, Marshall to BG James L. Collins, 4 Oct 1939, *Marshall Papers*, Vol. 2, pp. 71-72.

63. USFET, General Board, "Organization, Equipment and Tactical Employment of the Infantry Division: Study No. 15" (HQ, US FET, n.d.), pp. 12, 15-16, Appendix 13, and Appendix 15, especially pp. 5-6 and 14-15; and "Types of Divisions—Post War Army: Study No. 17" (HQ USFET, n.d.), pp. 8-9.

64. Martin Blumenson, *Breakout and Pursuit* (Washington, DC: Office of the Chief of Military History, 1961), pp. 10-13; US WD *Combat Lessons No. 4* (Washington, DC: GPO, 1944), pp. 5-8; memo, First US Army, HQ, "Armored Notes: Lessons From Combat in Normandy," 19 June 1944, in AGF Observer Report, ETO, No. C-110, 4 August 1944; and William E. DePuy, *Changing an Army: An Oral History of General William E. DePuy, USA Retired* (Carlisle Barracks, PA: US Army Military History Institute, 1986), pp. 24-31.

65. AGF Observer Report, ETO, No. 171 (13 Aug 1944); DePuy, *Changing an Army*, p. 13; US Army Command & General Staff College, *Combined Arms Actions Since 1939* (Fort Leavenworth, KS: C&GSC, 1975), Chap. 5, pp. 3-6; Blumenson, *Breakout*, pp. 13, 41-43 and 177-178; the casualty rate is cited in Bradley, *Soldier's Story*, p. 445.

66. *Ibid.*; see also USFET, General Board Study No. 15, pp. 13-14.

67. *OPDIB*, Vol. III (No. 1, 18 Aug 1944); Lida Mayo, *The Ordnance Department: On Beachhead and Battlefront* (Washington, DC: OCMH, 1968), pp. 253-255; Blumenson,

Breakout, pp. 205-207 & 331-332.

68. *New York Times,* 17 Oct 1944, p. 5 and 18 Oct 1944, p. 20.

69. USFET, General Board Study No. 15, p. 14.

70. Richard A. Hunt, "The Military History Detachments in the Field," *Guide to Military History,* pp. 311-312; Stetson Conn, *Historical Work in The United States Army 1862-1954* (Washington, DC: US Army Center of Military History, 1980), Chap. 4.

71. *Newsletter of the S.L.A. Marshall Military History Collection* contains articles by John C. Westover (No. 12, Winter 1985-86), pp. 1-3 and Martin Blumenson (No. 14, Winter 1986-87) p. 2; Hugh M. Cole, "S.L.A. Marshall (1900-1977): In Memorium," *Parameters* VIII (Mar 1978), pp. 34; and "SLAM," *Combat Forces Journal* 1 (Jun 1951), pp. 10-12, which provided the "revolutionary" quote.

72. "S.L.A. Marshall at Fort Leavenworth, 1952 to 1962: Five Lectures at the US Army Command and General Staff College" (Fort Leavenworth, KS: The Combined Arms Center, 1980), Lecture II, pp. 57, and Marshall's *Bringing up the Rear,* Chaps. 7-8. The results of Marshall's first group after-action interviews were published through arrangement with the new Historical Branch as *Island Victory: The Battle of Kwajalein Atoll* (Washington, DC: Infantry Journal Press, Jan 1945), which describes the theory and conduct of the interview in the opening chapter and an 8-page appendix; see Conn, *Historical Work* pp. 94-95, on the publishing arrangement.

73. *Island Victory,* p. iii.

74. *Ibid.,* pp. 6 & 115.

75. John G. Westover, *SLAM Newsletter* (No. 13, Summer 86), p. 2.

76. Hunt, "Military History Detachments," p. 313, and Conn, *Historical Work,* pp. 90-93.

77. USFET, General Board "Studies 1-131" (mimeographed, USFET HQ, n.d.).

78. USFET, General Board Study No. 15, pp. 12-16.

79. US Congress *Pearl Harbor Attack Report,* pp. 252-254; Dept. of the Army, *Field Service Regulations, Operations: FM 100-5* (15 Aug 1949), pp. 264-274.

CHAPTER 4

THE KOREAN WAR:
ESTABLISHMENT OF A CENTRALIZED SYSTEM

There is nothing new except what is forgotten.
      attributed to Mme. Bertin, millin·· to Marie Antionette, c. 1785.

Don't forget nothing.
      Robert Rogers, *Standing Orders*, 1756.

They have learned nothing, and forgotten nothing.
      Talleyrand, 1796, in reference to the deposed Bourbons.

Five years after World War II, the next war came abruptly and from an unexpected quarter. In 1950 American troops went to the battlefields of Korea, taking with them the organization, materiel, and tactical doctrine of the previous war. Although major doctrinal lessons had been identified during World War II, notably in combined arms, air-ground coordination, and armored warfare, the Army had not yet reorganized its force structure or developed new weapons to assimilate those lessons.[1] Even if it had, the immediate consequences probably would have remained the same — a costly adjustment of minor tactics and techniques to the new battlefield.

In Korea, Americans encountered unfamiliar enemy tactics along with rugged terrain that hampered full employment of the World War II mechanized doctrine. North Korean tactics, and those of the Chinese, differed from the European-style warfare to which Americans had grown accustomed. The more fluid enemy tactics in Korea resembled aspects of guerrilla warfare, notably in extensive use of infiltration and night attacks. The US Army, on the other hand, had become conditioned to the European battlefield, orienting doctrine, organization and weaponry in that direction. American soldiers had grown road bound and dependent upon extensive artillery support, elaborate communications, and endless supplies. Korea's rugged mountains, few roads, and harsh climate helped obstruct the effective employment of superior American military power. Indeed, the Army's situation in Korea during the summer of 1950 drew this analogy from a distinguished military historian: "Its habitation to European war sometimes put the American Army in Korea approximately in the condition of Braddock's Regulars on the Monongahela."[2] Extending the analogy further, we find that the American army in the hills of Korea, like the earlier British army in the forests of North America, learned valuable lessons.

American troops soon learned by bitter experience to adjust school tactics to the new geography and enemy. After encountering infiltrating North Koreans, for example, American units learned to respond with all-round perimeter defenses, fighting withdrawals, and night attacks. Later, against Chinese mass attacks, Americans learned to use fight-and-roll attrition tactics. In general, lessened mobility in Korea led to a reliance on massive firepower and on defensive tactics, changes that constituted, in effect, a major shift from the World War II doctrine.[3] Korea became a major learning experience as considerable effort went into adapting combat doctrine and techniques to the new war.

Coping with the new conflict led to manpower rotation. Individual soldiers served in Korea for a limited pre-set time, unlike the open-ended service in the two world wars. Under rotation, begun in the spring of 1951, a soldier served only six months of Korean combat duty. Soon a credit-point system extended the combat tour to an average of 10-11 months.[4] The resultant high turnover rate of personnel in line units required continual training

of individual replacements. Lessons learned on the Korean battlefields needed to be continuously passed on to stateside training centers and doctrinal agencies. Fortunately, both the training and newly emergent lesson-learning responsibilities fell under the same command.

OCAFF and Its Observers

Re-alignment of the national military establishment in 1947-1948 redesignated the War Department as the Department of the Army, brought about major organizational changes, but left doctrine development responsibilities and procedures essentially the same. The Assistant Chief of Staff, G-3, Operations, remained responsible for developing policies on organization, operations requirements, training, and the supervision of operational matters. Furthermore, that office was specifically charged with establishing policies concerning all fundamental doctrine appearing in the Field Service Regulations and other publications.[5] The working center of doctrine adjustment for the combat lessons of the Korean War lay in a streamlined version of World War II's Army Ground Forces.

The reorganization changed Army Ground Forces (AGF) into Army Field Forces (AFF) and allowed it to concentrate more on training. Its headquarters relocated from the capital to Fort Monroe, Virginia, and became the Office of the Chief, Army Field Forces (OCAFF). It retained the primary training mission of the old AGF but within a formally decentralized system. Commanders of the new Continental Armies commanded the facilities and activities that actually carried out the training programs, thus relieving OCAFF of a major administrative burden. However, more than a major training command headquarters, OCAFF served as a field operating agency of Department of the Army for the general supervision, coordination and inspection of all individuals and units in the continental field forces. Included among its broad responsibilities and functions was the development of field doctrine for individuals, units, and equipment, and it had broad authority to communicate directly with all Army schools and activities on these matters.[6] Although actually commanding less than its AGF predecessor, OCAFF gained a more specialized role in training

matters and served, in effect, as part of the Army Staff, not simply as a major command.

As the Army's undisputed training and doctrinal center, OCAFF showed immediate interest in Korea's lessons and established a special section for "collecting, screening and evaluating all available reports bearing on tactics, techniques and doctrine." The evaluated and disseminated information was intended to "keep training abreast of developments in combat operations peculiar to Korea and generally applicable elsewhere."[7] To collect its early field data, OCAFF, like its AGF counterpart in World War II, relied largely on its own overseas observers, dispatching them to bridge the gap between training center and battlefield. The first OCAFF observer team arrived in Korea a few weeks after the initial entry of US ground troops. Other teams followed periodically throughout the war, at first almost monthly but then at six-month intervals once the war stalemated. Eight observer teams were dispatched by OCAFF during the war, followed by a ninth one several months after the armistice. While the earliest teams spent only a week or so in-theater, the later ones each stayed a month.[8] According to their instructions:

> The primary purpose of sending OCAFF observer teams to Korea is to obtain prompt firsthand information of the lessons being learned in combat and to improve the training of our units Army-wide by disseminating these lessons to the field and stressing, in training, matters which experience shows require increased attention and greater emphasis. Observations regarding personnel, organization, equipment and tactics, therefore, all fall within the scope of the mission of the observer teams.[9]

The procedures of the observer teams generally followed those of their World War II counterparts — visiting headquarters and line units, conducting interviews, collecting material, and making personal evaluations — but OCAFF's observer-reporting system was more tightly structured than had been AGF's. Lengthy and detailed questionnaires accompanied them to Korea to guide their inquiries.[10] Individual team members might follow separate itineraries once in-country, but all reassembled to prepare a final report formally submitted as a team effort. In contrast, the World War II observers had submitted individual and much less elaborate reports,

each normally on a single topic. Each OCAFF observer team comprised about a dozen officers from various combat arms, schools and centers and was headed by a general officer. (Team No. 7 boasted three general officers, including the Chief of Army Field Forces, General John R. Hodge, a situation reminiscent of Lesley McNair's personal overseas visits in World War I.) Upon return to the United States, the observer teams submitted their consolidated reports directly to OCAFF, although draft copies or oral briefings were given beforehand to the commanding generals of Far East Command and Eighth US Army in Korea (EUSAK). In processing the final observer reports, OCAFF evaluated the contents and added commentary before reproducing and distributing them. About 150 copies of the evaluated reports went to Department of the Army staff agencies and major schools.[11]

The eight consolidated team reports covered a multitude of subjects, ranging from the technical details of sniperscopes to the new policy of racial integration, and included much combat-experience information for training.[12] From first to last, these reports confirmed for OCAFF the basic soundness of established tactical doctrine. Evaluation of the first report "reaffirms current thought that the doctrine pertaining to tactics and techniques developed in the past and refined during World War II is sound." Evaluation of the last wartime report

> . . . confirms previous observations that our present combat arms organizational structures and basic tactical principles are sound. It also reemphasizes the opinion that the Korean experience should not be used as the basis for radical changes in Tables of Organization and Equipment or in tactical doctrine.[13]

Throughout the war, OCAFF consistently defended the basic viability of established doctrine, but conceded room for minor improvements in technique and procedure, especially in small unit operations.[14]

Other Observers

The Korean peninsula, not much larger in area than Kansas, attracted many observers. In addition to OCAFF teams, a new type of scientific observer or analyst appeared representing chiefly the Operations Research Office (ORO), a nongovernmental organization operating under Army contract since 1948. ORO analyzed problems of ground warfare and provided a scientific basis for technical and tactical decisions. It dispatched about 150 field analysts to the Korean battlefields for research, making Korea truly a ground combat laboratory.[15]

Among these other, non-OCAFF observers was a familiar figure, S.L.A. Marshall. The veteran field historian and popular military critic went to Korea in November 1950 under contract with ORO, remaining there until the following spring.[16] He practiced in the cold Korean winter of 1950-51 his method of historical research pioneered earlier in the Central Pacific battlefields. Much of the material gathered from his Korean after-action interviews resulted in popular histories published commercially after the Korean War.[17] He also used his findings to directly advise Eighth Army staff and prepare several wartime studies for the Operations Research Office that eventually reached OCAFF. One study included his reconstruction of the only bona fide American bayonet assault of the Korean War.[18] Two additional studies drew upon his interview material and offered a variety of battle lessons. OCAFF considered his studies valuable source material on Korean combat, along with the other ORO studies submitted to it.[19] Some of Marshall's material reached OCAFF directly through its observers in Korea, including the observation that

> . . . many hours were wasted on TI&E lectures, that could be devoted to a serious discussion of combat problems. Men in combat units want to talk about the war and local or small unit fights or battles, and are not particularly interested in worldwide nonmilitary matters. I suggest that a pamphlet entitled, Combat Comments, containing actual examples from combat in Korea, be used in lieu of the present TI&E material.[20]

Marshall more fully developed his ideas on combat indoctrination in a later ORO study,[21] but meanwhile, unknown to him, certain developments already were underway to share Korea's combat experience and lessons. This combat information would not be derived from Marshall's interview technique, which served primarily as a historical tool. The Army's wartime field historical activities, inaugurated in World War II, contributed little to Korean lessons despite the lesson-learning potential of the group-interview

technique. In fact, the first historical detachments never even reached Korea until February 1951, nine months into the war. Eventually eight detachments, manned in part by qualified reservists and in part by whomever was available, operated on the war-torn peninsula under EUSAK's control. Their efforts concentrated on creating source material for the postwar preparation of official histories. There is no indication of combat experience material significantly entering the war's lesson-learning mainstream directly from the historical observers. To the contrary, the Army's Chief of Military History resisted the operations research approach that increasingly contributed to making use of combat experience.[22]

Operations research and the scientific analysis of battlefield data represented the future, with the Korean laboratory serving as the first appreciable application to American land warfare. Indirectly the ORO analysts in Korea functioned as observers for OCAFF, which eventually received their field data and derived conclusions. The many wartime ORO studies submitted to OCAFF reflected the scientific approach in their documentation, tabulated data, and methodological models. Although S.L.A. Marshall held an ORO contract, he did not fully represent this scientific methodology or even the Army's historical activities. He belonged to neither. Part analyst and part historian, Marshall as observer was chiefly himself — unique, outspoken and hard to avoid because of his prolific writing and unabashed involvement in combat matters, especially as self-appointed spokesman for the GI's. His opinion of Army's troop information, for example, touched upon that program's problems and potential.

Troop Information Approach

Like historical activities, the lesson-learning potential of the troop information program failed to be fully exploited. Troop Information and Education (TI&E) was the military jargon of the Korean War era for two separate Army-wide programs that collectively sought to promote efficiency through greater knowledge and understanding. The education part of TI&E concerned nonmilitary academic and vocational instruction. The troop information part, however, constituted Army training, which involved

required attendance for soldiers at a weekly session.[23]

Troop information in the Korean War continued the basic policies established in World War II, when the Army Orientation Course became the Troop Information Program, with the same objective of informing the soldier on military-related matters. A minimum of one hour training time per week was scheduled for platoon or company size groups, and active discussion was encouraged. After the war, the Army tightened its TI&E programs and made troop information a command responsibility under the staff supervision of the Office of the Chief of Information. For most soldiers, this only meant that the weekly activity was now called the Troop Information Hour, which continued as an organized discussion period to motivate and inform them of their responsibilities as soldiers and citizens. The Chief of Information selected and distributed the weekly subject matter, but the Chief, Army Field Forces, and the theater commanders could make recommendations. Explicitly excluded from the weekly sessions were political partisanship and attacks on the American form of government; furthermore, "no poll of opinions will be taken and no resolutions will be passed." Amid national frustrations over the Cold War and the then-currently pervasive charges of communism in government, the Army did not intend for its discussion sessions to serve as potential cells of revolution or mutiny. Permissible for discussion during the appointed hour, renamed Command Conference in 1951, were national and military policies, military operations, and other subjects on which surveys revealed the troops to be less than fully informed.[24]

Criticism of troop information presented in wartime Korea focused on the irrelevancy of the subject matter to combat troops, who needed practical information on combat more than they needed debate on international affairs. The subject matter, in fact, did grow more pragmatic and relevant as the program shifted toward the dissemination of combat-related information based on experience. Beginning early in 1951, not long after the Chinese entered the war, a series of pamphlets, Army Troop Information Discussion Topics, came from the Office of the Chief of Information for Army-wide distribution. Of the 29 pamphlets that eventually appeared more-or-less

monthly, about one-third pertained directly to combat or training for it. Most of these combat issues appeared in the period February-August 1951 while heavy fighting continued on the Korean battlefields. One of the pamphlets, aptly entitled *The Soldier in Combat*, stated explicitly its purpose: "to give the soldier advance information — based on actual experience — about what combat is like."[25] It compared favorably with the WW II lessons literature published by the War Department.

The troop information approach, however, received limited lesson-learning use. Much potential remained. To rectify that, one writer in the influential *Combat Forces Journal* (later *Army*), suggested that commanders use troop information to build more combat efficient units. On the front lines, he explained, the troops should periodically discuss the local military situation with their unit commander and combat veterans should relate actual experiences of combat, especially to the new arrivals.[26] In fact, the divisions in Korea were passing on combat experience and lessons to incoming personnel.

Theater Replacement Training

Lessons from the WW II experience helped instill combat experiences at the division level of the Army's replacement system during the Korean War. Each division had an organic replacement company with about 40 authorized personnel to receive and process new personnel. Their standard procedures included opportunities for sharing combat experience and the lessons the unit had learned. New arrivals stayed with the company for a minimum of 72 hours, during which time they underwent administrative processing along with an orientation conducted by "carefully selected combat-experienced personnel." The 2d Infantry Division, for example, processed an average of 1,800 replacements per month through its replacement company in 1951-52, and had rotated more than 35,000 men out of the division since arriving in Korea. (An infantry division's authorized strength at that time was only about 19,000.) The 2d Division retained its replacements for only 48 hours within the replacement company, then provided a week of refresher training in Korean-oriented combat at their assigned regiments.[27]

This emphasis on combat orientation appears to have been an adaptive response to the local situation. No higher directives prescribed or recommended it.

The division replacement companies of the Korean War stemmed from the unsatisfactory experiences with replacements in World War II, after which commanders wanted a replacement *battalion* organic to the divisions but, instead, had to settle for a company. Nevertheless, the approach was a lesson passed from one war to the next, which proved indispensable under the Korean War's personnel rotation policy. The division replacement companies ensured an orderly entry into combat for the "green kids" who arrived apprehensively at division headquarters in Korea. There they received an orientation based on experience and important emotional preparation before going to battalion assignments on the front lines.[28]

An interesting comparison can be made with the British forces in Korea, who employed a battle training organization and procedure that specifically transmitted lessons from combat units to incoming replacements. Attached to each British brigade was a Battle Training Team (BTT), a small instructional detachment that visited frontline infantry battalions, noted the tactical lessons experienced, then passed the same tips and techniques directly to British replacements arriving in Korea.[29] Functioning like a combination of OCAFF observer team and division replacement company, it omitted the middlemen and transmitted tactical experiences and lessons within the theater and battle zone.

Battle Reporting: The Command Report

Although both the replacement training procedures and the troop information program contributed to Korea's lesson learning, major reliance fell on the traditional battle reporting system. The after-action report, which had performed yeoman service in World War II, remained the major source of combat experience in Korea. Its name was changed to Command Report and it was re-structured explicitly to report combat information used for lessons and doctrinal adaptation. While OCAFF observer teams contributed significantly to the gathering and

evaluation of Korean combat experience, the Command Report predominated, if only because of volume — each tactical unit submitted the report at least monthly.

Ironically, this battle report requirement began the war as a historical activity and responsibility. The year before Korea exploded, revised regulations completely transferred battle reporting to the historians and thus consummated the earlier marriage of the after-action report to Army historical activities. (See Appendix A-1). Since the 1920s, provisions for battle reporting had appeared as a single paragraph within the regulation on historical reports. In 1949, the battle report provisions expanded into an entire regulation of its own. According to the new directive, battle reports served primarily as historical reports,[30] a viewpoint that seems to have confused priorities and time. As the directive explained, the purpose of historical records was to "permit prompt conversion of most recent experiences into appropriate changes in organization, doctrine, training, and materiel." During peacetime — when the regulation first became effective — "narrative reports" were to be prepared at least annually and forwarded directly to the Historical Records Branch of the Adjutant General. During wartime, which began the next year, battle reports in the form of the "war diary" and "activities report" went through the chain of command monthly to the Adjutant General, while two copies went forward directly and expeditiously to him.[31]

Historical activities and battle reporting had become intimately joined in the new regulations. The 1949 directive reads in places like a historical methodology handbook, as in the following guidance to combat commanders on preparing their wartime reports:

> The maximum value that can be derived from experience, as well as the accuracy of the Army history, depends upon historical reports that are complete, exact, objective, and detailed. The nature of the mission of each headquarters will largely determine the content and treatment of the required report.[32]

If hard-pressed combat commanders experienced difficulties in preparing their reports (or treatises?), the regulations promised guidance from trained historical officers at appropriate levels of command.[33] Seemingly, a major purpose of the

reporting was to create a near-perfect document for later historical research and incidentally allow the immediate evaluation of recent combat experience. This marriage of battle reporting and the historical program lasted the honeymoon period of the remaining peacetime and fell apart quickly in Korea. In October 1950, only three months into the conflict, a major revision of the regulation completely did away with the heavy historical overtones and concentrated on making the battle report serve the immediate function of transmitting usable combat experiences.

The new Command Report sought to provide "a periodical narrative summary of events from the point of view of the commander." It replaced the older after-action report, as well as the more recent historical reports, and served as

> . . . the medium through which the commander of a unit or headquarters may record, review, and evaluate the overall activities of his command. In it he may recommend to higher headquarters changes in doctrine, organization, training, tactics, technique, administration and equipment believed justified as a result of experience.[34]

In afterthought, the war-revised regulations mentioned that the new report might also aid historical research. The formerly prime historical purpose of the report became quite secondary to the immediate reporting of usable experience.

The new purpose was reflected in the prescribed procedures. Command Reports were to be prepared at least montly by commanders of tactical and support units down to separate battalion level. All commanders below joint level forwarded the report through channels to the Adjutant General; however, the first next higher headquarters was expected to endorse one copy of the report and dispatch it expeditiously to the Adjutant General "for evaluation and further action" by the Army Staff. This created an information "hot line," with expedited copies of the reports routed through the Chief of Army Field Forces, who extracted and processed pertinent material before passing them on.[35] Meanwhile, along the chain of command, the new procedures enjoined field army headquarters to analyze the monthly reports submitted by their subordinate commanders and periodically recommend necessary changes in doctrine, tactics, etc. A

specially designated section in the report's format encouraged all commanders to transmit "discussion, comments, evaluation, conclusions, and recommendations" for consideration by the Department of the Army. Another section was reserved specifically for responses to possible DA-level surveys.[36] Thus, unlike the World War II after-action reports, the Korean War report specifically required the recording of lessons. Underlining the importance of the new report and its contents, a requirement made the commander himself, not his adjutant, sign it.[37]

The battle reporting system as prescribed allowed the methodical processing of Korean combat experience to begin at the regimental or separate battalion level and work up through command echelons to HQDA. Meanwhile, matters of immediate interest reached the highest level by means of the expedited copies sent directly from the submitting unit's next higher headquarters. In Korea the actual practice seemed to work that way, and more so. Combat units in Korea not only evaluated and forwarded the required reports but also disseminated their own combat lessons through replacement instruction programs and even their own lessons literature. Corps and division headquarters in EUSAK began publishing internal combat information bulletins by early 1951.[38] Meanwhile, at HQDA, central processing of combat information began to occur at about this same time, reflecting the development of an operative system for deriving contemporaneous lessons from Korean combat experience.

Central Processing of Lessons

A milestone directive appeared in mid-February 1951. It prescribed definite procedures "to ensure the rapid and effective collection, evaluation, and application of specific lessons learned in combat operations." It unequivocally recognized the importance of evaluated ongoing experience to "training, organization, weapons and equipment, tactics and techniques, and doctrines and procedures." With publication of *Special Regulation 525-85-5*, entitled *Processing of Combat Information*, a central system of learning contemporaneous lessons became institutionalized.

The new system received formal recognition under HQDA supervision, with the Assistant Chief of Staff, G-3, responsible for coordinating lessons of training and operations, while the other assistant chiefs of staff were responsible for coordinating lessons within their respective spheres. The Chief of Army Field Forces acquired the specific responsibility for applying combat lessons "directly and immediately" to troop training and for coordinating equipment testing. Additionally, observer teams, for the first time, received explicit attention in Army Regulations as a vital OCAFF function, while other administrative and technical agencies were encouraged to dispatch similar teams of observers to the war zone.[39]

Although not specifically mentioned in the directive, the Command Reports obviously formed an important part of the processing system, since they contained the major sustained source of information on the current combat operations. OCAFF, already reviewing the forwarded copies, considered them important and showed concern over commanders not being familiar with the requirements of the report. One overseas observer even recommended that instruction on battle reporting be given at the branch schools.[40] From its review of these command reports, as well as from its own observers' reports, OCAFF selected combat information and then disseminated it in two serial publications.

OCAFF's *Training Bulletin* transmitted company-level combat information gathered from Korea. Initially sub-titled "Lessons Learned," the bulletin soon became "Combat Information." It appeared approximately monthly at first but less frequently after mid-1952. At least 20 issues appeared, reproduced at first by mimeograph, then by local printing, and finally by the US Government Printing Office. Its special distribution aimed chiefly at AFF training and command components and HQDA agencies. Copies also went to overseas commands.[41] The bulletin presented excerpts from various sources on actual experiences observed or undergone in Korea. Predominantly, these selected experiences dealt with combat techniques and came initially from OCAFF observer teams. One early bulletin contained "An Infantryman's Experience," written in Korea by a former Infantry School instructor who related his battalion's combat experiences and the nine "lessons" they had learned. In processing the letter, OCAFF writers at Fort Monroe briefly

commented on each of the nine "lessons" — actually, mere observations on enemy behavior. Their response, for example, to the Chinese practice of attacking mainly at night was to use battlefield illumination and "make night like day." To the lesson or observation that the Chinese were adept at close-in fighting, OCAFF writers recommended indoctrination in close combat and bayonet fighting and the advice to "kill the enemy by fire before they can close in." If these OCAFF responses seem self-evident, realize that *Training Bulletin* did not address the combat soldiers already in Korea but the stateside trainers and trainees who would soon go there, presumably better prepared after reading the training bulletin to cope with the Chinese tactics. In the later issues of the bulletin, material came chiefly from the battle reports of EUSAK units and occasionally from accounts prepared by military history field detachments in Korea. A few of the OCAFF bulletins were entirely devoted to a single combat action and extended commentary on it.[42]

OCAFF's other medium carried the appropriate title *Dissemination of Combat Information*. Reminiscent of World War II lesson literature, it contained verbatim extracts from battle reports, with source and date identified. A compilation of 25 or so extracts, filling about 20 pages, went forth "for evaluation and necessary action" or simply for information. First published in September or October 1951, nearly a year after the initial appearance of OCAFF's other bulletin, the published extracts appeared biweekly at first but soon became a more-or-less monthly occurrence. Reproduced initially by mimeograph, 200 copies went to 45 addressees, chiefly HQDA agencies

responsibilities. The sole processing agency, OCAFF, in combination with revised battle reporting, formed a centralized lesson-learning system that responded to ongoing combat operations. However, by the time the system became completely functional in the spring of 1951, much of the war's heaviest fighting had already taken place. After nearly a year of sustained combat up and down the Korean peninsula, experience processing finally emerged as a comprehensive system. Meanwhile, during the same interval, casualties mounted. Most of the American casualties in the war were sustained while this lesson-learning system evolved. Well over half of the Army's total battle casualties occurred during the eventful first year of the three-year war, including nearly two-thirds of its battle deaths.[44] One may wonder how many of the casualties resulted from inexperience, mistakes, or tactical inadequacies. How many were preventable by more timely introduction of usable experience and by a lesson-learning system operational at the beginning of the war, not in the middle?

Decentralized Doctrine Adjustment

Delays in becoming fully operational were not the only shortcoming of Korea's lesson-learning system. Despite establishment of centralized processing of usable combat experiences at OCAFF, combat doctrine adjustment remained largely decentralized. The lessons material collected, evaluated, and disseminated by OCAFF went to the various service schools for consideration and possible incorporation into

the continental United States.

Overall, lesson-learning procedures had improved over those of World War II, becoming more comprehensive in scope and with fixed

the impact of Korean combat experiences on doctrine, as reflected in their professional journals.

The wartime application of combat lessons to doctrine is well illustrated by the journal of the

Infantry School at Fort Benning, Georgia. A doctrinal seedbed and clearinghouse for infantry matters, the school's faculty and students prepared Army field manuals and other literature that incorporated usable experiences from the World War II and Korean battlefields.[45] Its professional journal disseminated those experiences and lessons. The *Infantry School Quarterly*, according to the Army Chief of Staff J. Lawton Collins, served as "a splendid medium for reaching infantry officers." The wartime issues of the journal contained numerous combat accounts that drew attention to successful applications of tactics and techniques, along with an abundance of observations, impressions, and itemized practical suggestions for the unblooded infantry leader. A regular feature, "Combat Tips," offered various "bread and butter ideas" submitted by battlewise veterans or taken from OCAFF's published lessons literature.[46]

Beyond transmitting experience, the Fort Benning journal, like those of the other schools, allowed discussion and the interchange of ideas. The contributing writers did not need to conform with officially promulgated doctrine; in fact, contradictory material made many appearances, accompanied, of course, by suitable editorial disclaimers that such views did not represent official doctrine or school thought. Seeking to stimulate doctrinal thinking, the editors solicited and paid for personal accounts of combat. Reader contributions constituted 90% of the quarterly issues. "Don't sit on your 'doctrine,' " encouraged the editors, ". . . you're making history. Why not write it?" As they explained:

> . . . we will not all agree with the lessons learned or the action taken in every such experience. However, we concluded that disagreement frequently gives birth to serious thought — and what is more valuable to the Army than a thinking infantryman?[47]

It is hard to argue against thinking soldiers and leaders of any branch — unless time is a factor. The stimulating exchange of experiences and views via journals consumed time and, as in World War II, sometimes muddied the doctrinal writers. Most school journals were published bimonthly or quarterly — a long wait for vital lessons. This academic-like approach to lesson learning required the luxury of time that ongoing combat operations

might not allow without high cost. Take, for example, the case in the *Infantry School Quarterly* of the regimental commander on the Korean ridgeline. Going against conventional wisdom and standard doctrine, a "thinking" infantry commander in Korea, June 1951, ordered his unit to occupy a defensive position on the top — the geographic crestline, not the forward slope — of a prominent ridge south of Kumsong in order to obtain better fields of fire. This nonstandard tactic — a noteworthy experience and potential lesson — appeared in the journal more than six months after its occurrence. The presentation of the episode in the journal was not intended as a lesson per se but as a stimulant to further thinking. The author of the article (the regimental commander himself) and the editor both carefully and prominently disclaimed any unsoundness of standard defensive doctrine, which specified occupation of the forward slope, but they both also suggested that unique circumstances created special cases and that experience counted heavily as a guide.[48]

In the ridgeline article and other accounts appearing in the journal, actual experiences revealed actions at variance with prescribed doctrine yet paradoxically upheld the soundness of basic doctrine. If local unique circumstances may justify deviation from the standard, it begs the question of how many such deviations make sound doctrine unsound. One way around this problem was to make a distinction between doctrine and technique, attributing mistakes to faulty technique and classifying doctrinal deviation as local technique. Using that distinction, the Infantry School uncovered from the experiences in Korea few if any doctrinal deficiencies but found many mistakes in applying the doctrine. For an army to actually learn lessons from its experience, however, should mean that the lessons become institutionalized, which implies incorporation into its body of doctrine.[49]

Learning and Re-learning Lessons

Clearly, the US Army operated a central system for processing its Korean War experience. Less clear, however, was the system's impact on tactical doctrine. The Secretary of the Army reported that much doctrinal adjustment had occurred. In describing the Army's efforts to

minimize casualties in 1952, Secretary Frank Pace, Jr., noted that

> . . . the Army's tactical doctrines are so shaped that maximum effect can be obtained with minimum casualties, and they are constantly being revised and perfected in the light of actual combat experience.[50]

A year later, on the eve of the cease-fire agreement, Secretary Pace again reported on casualty prevention measures:

> Combat is undeniably a hazardous occupation. The hazard, however, can be reduced by means of thorough and realistic training, the provision of supporting services, *the continual refinement of tactical doctrine* [italics added], and the development of more efficient weapons and equipment.[51]

Contrary to the Secretary's perception of tactical doctrine being continually revised and perfected in the light of recent experience, the Army's doctrinal and lesson-learning center, like the schools, upheld the soundness of established doctrine and procedures. OCAFF's lesson literature carried front page disclaimers denying any doctrinal revision or need for it. From the earliest issues, OCAFF's *Combat Information* consistantly noted that "often, the extracted item serves to reaffirm our doctrines and techniques." OCAFF's *Training Bulletin* prominently carried a boxed credo on the front covers of most 1951 issues that proclaimed "The mass of material from Korea . . . reaffirms the soundness of US doctrine, tactics, techniques, organization and equipment." Moreover, OCAFF had redesignated its *Lessons Learned* publication as *Combat Information* because "the fighting in Korea had provided few items that could be so described [as lessons learned]." The re-named publication disseminated experience material merely for "illustrative anecdotes in the lectures, talks and discussion of trainers."[52] According to OCAFF, Korea's experience offered only "one great lesson that can be learned," namely: to apply "vigor, imagination, and intelligence to the situation encountered." Readers were advised to consult standard texts and established doctrine, because:

> For every weakness reported against some small part of our troops, there is somewhere in our training literature a guide for its correction; for every strength reported for the enemy, an indicated countermeasure is already provided.[53]

Later OCAFF literature softened the defense of doctrinal adequacy. The boxed credo disclaiming any lessons worth learning disappeared in 1952 issues of *Combat Information*. In the March 1953 bulletin, General Hodge, Chief of Army Field Forces, a combat veteran of two wars, who earned the nickname "Patton of the Pacific", introduced the issue himself:

> Lessons learned from past campaigns must not be forgotten, only to be relearned through bitter and costly experience. Some of the more important deficiencies in our infantry operations in Korea are brought out in this bulletin. . .

It contained "Important Infantry Lessons From Korea" based on material from the Fort Benning Infantry School. A dozen deficiencies appeared therein, each acknowledged as a "weakness." They included certain aspects of weapons employment, night operations, assault technique, foot patrols, and terrain utilization. Comments following each weakness described the corrective measures taken and cited pertinent training literature. Even so, the weaknesses were not perceived as fundamental:

> . . . it is apparent that Korea has not indicated any major changes in our basic tactical doctrine. It has, however, vividly shown certain areas needful of greater emphasis in our training and school instruction. We must learn and practice the hard-earned combat lessons in training, not await the costly instruction of future battles.[54]

Improper technique, not faulty doctrine, received the blame, with General Hodge adding this revelation:

> Although we should use caution in revising our training based on the impact of Korea, there are nevertheless many fundamental lessons we have learned in Korea, or more often relearned, that will apply regardless of the type of terrain or operation. Therefore, we can profit greatly from analyzing our deficiencies in Korean combat and placing appropriate stress on those subjects in training. Many of these deficiencies are not peculiar to Korea — they can be found in historical studies from World War I and World War II. We are still making mistakes that are 35 years old.[55]

The Infantry School, too, had discovered that the lessons being learned in Korea were the same ones identified — not "learned" — in the battle reports of World War II.[56] Therefore, it was time to go back to teaching basics. Chief of Staff J. Lawton Collins himself turned doctrinal instructor in the January 1953 issue of *Infantry School Quarterly* and reviewed the fundamentals of small-unit attack doctrine and the reasons behind the principles. The uniformed head of the Army re-teaching basic doctrine to small unit leaders reflected, perhaps, that the lesson-learning system established during the Korean War merely enabled the Army to re-learn what it had forgotten.[57]

* * * * *

Whether the Army learned or re-learned lessons in Korea is still debatable, as is the question of doctrinal soundness and the impact of the war's lessons. Undeniably, however, Korea saw the emergence of systematic reporting and processing procedures for combat experiences. Usable information became purposefully collected from the battlefield, centrally evaluated, and then disseminated with unprecedented coordination and comprehensiveness. A formalized system of lesson learning emerged and functioned under a single, top-level agency. It came late, to be sure, and the delay cost casualties, but once established the new system saved lives and promoted combat efficiency by making usable experience available to trainers and leaders. It enabled battlefield information to be systematically reported for the purpose of higher-level evaluation and application. As such, the system outshone the disparate lesson-learning procedures of World War II. Moreover, this exploitation of combat experience was codified in wartime regulations. After the war, however, the lesson learning system ceased to function. Serving no recognized peacetime purpose, it was put in mothballs to await the next war. The two separate Army Regulations embodying the system remained and constituted a blueprint for the reconstruction of experience processing in the next war, which was already taking shape in Indochina.

NOTES

1. Major Robert A. Doughty, *The Evolution of US Army Tactical Doctrine, 1946-76* (Fort Leavenworth, KS: Combat Studies Institute, US Army Command and General Staff College, 1979), pp. 2-7. See also Captain Jonathan M. House, *Towards Combined Arms Warfare: A Survey of Tactics, Doctrine, and Organization in the 20th Century* (Fort Leavenworth: Combat Studies Institute, US Army Command and General Staff College, 1985), pp. 146-150.

2. Russell F. Weigley, *History of the United States Army*, enlarged ed. (Bloomington, IN: Indiana University Press, 1984), p. 519.

3. Doughty, pp. 7-12.

4. Norman A. Skinrood, "Combat Rotation System for the Army," thesis (US Army War College, Mar 1954), Chap. 2 and pp. 42-45; *National Guardsman* (Mar 1952), pp. 2, 4 & 6.

5. *Special Regulation 10-5-1* (11 Apr 1950), Para. 38 and *SR 10-130-1* (3 Nov 1950), Para. 22.

6. US Department of the Army *Circular 64* (Mar 1948), pp. 10 & 17-19; *Army Almanac*, p. 264; Jean R. Moenk, *A History of Command and Control of Army Forces in the Continental United States, 1919-1972* (Fort Monroe, VA: Historical Office, US Continental Army Command, 1972), pp. 25-31; *SR 10-5-1*, Sec. IV. Commanding the Army Ground Forces and Army Field Forces were Generals Jacob Devers, 1945-59, Mark W. Clark, 1949-52, and John Hodge, 1952-53.

7. Comments by Chief, AFF, Mark W. Clark, dated 16 August 1950, on the final report of OCAFF Observer Team No. 1, p. 18. The section referred to probably was, or became, the Combat Information Branch of the G3 Division, AFF.

8. Reports of the Army Field Forces Observer Teams in the Far East Command, 1950-53, MHI. The nine teams were in FEC and Korea as follows:

Team No.			
	1, Aug 1950	6, Feb-Mar 1952	
	2, Sep-Oct 1950	7, Oct-Nov 1952	
	3, No report on file	8, Apr-May 1953	
	4, Mar 1951	9, Nov-Dec 1953	
	5, Jul 1951		

9. Report of AFF Observer Team No. 4 (Mar 1951), Tab D, p. 1, contains OCAFF's letter of instructions to the team.

10. AFF Observer Team No. 8 included in its report a 263-page annex consisting of summarized answers to over a thousand questions on matters of concern.

11. AFF observer team reports on file MHI.

12. Observer Team No. 4 Report, p. 10, reveals that several commanders expressed a desire for mule or pack units to be used for supply and medical evacuation in the Korean mountains. This is reminiscent of the WW II AGF observer reports mentioned in Chap. 3, Note #25.

13. Reports of Observer Teams No. 1 and No. 8 contain the quoted matter.

14. Report of Observer Team No. 8, p. 1.

15. Ney, p. 94; Operations Research Office, *A discussion of the ORO Work Program* (Baltimore: The Johns Hopkins University, 1958), p. 3, and its brochure *ORO Today* (Jan 1955), pp. 3-4.

16. S.L.A. Marshall, *Bringing Up the Rear: A Memoir* (San Rafael, Calif,: Presidio Press, 1979), Chaps. 17-19.

17. *The River and the Gauntlet: Defeat of the Eighth Army by the Chinese Communist Forces, November 1950, in the Battle of the Chongchon River, Korea* (New York: Morrow, 1953) and *Pork Chop Hill: The American Fighting Man in Action, Korea, Spring, 1953* (New York: Morrow, 1956).

18. The account of the bayonet assault, conducted by Co. E, 27th Infantry Regiment, on 7 February 1951, appears in *Combat Forces Journal* (Jun 1951), pp. 22-32 and *ORO Study T-7*, pp. 45 & 68-81. A transcript of the after-action interview is in the ORO study.

19. *Commentary on Infantry Operations and Weapons Usage in Korea, Winter of 1950-51: ORO Report R-13* (Operations Research Office, The Johns Hopkins University, Feb 1951) was received by OCAFF in October 1951 but not disseminated until early 1953, well over a year later. Another ORO study, *T-190*, by Marshall on the capture of Hill 440 in February 1951, was received in May 1952 and not reviewed until the following October. See also ORO R-13, pp. 133-135, and Herbert Yahraes, "The Mysterious Mission of ORO," *Saturday Evening Post* (1952), p. 10, reprint in MHI files.

20. "Notes From Colonel S.L.A. Marshall, Tokyo, Japan" in OCAFF's "Notes on Combat in Korea," a mimeographed miscellany, dated 16 April 1951. "TI&E" stood for Troop Information and Education.

21. ORO R-13, Chap. XXI.

22. Hunt, "Military History Detachment," pp. 314-315; Stetson Conn, *Historical Work in the United States Army* (Washington, DC: CMH, 1980), p. 187.

23. Department of the Army, *Troop Information and Education: AR 355-5,* (May 1949) and later editions of January 1951 and March 1953.

24. War Department *Circular 18* (18 Jan 1946), Sec. II, and *Circular 100* (3 Apr 1946), Sec. IV; *Troop Information Program: AR 355-20*, editions of 1949, 1950, 1951 & 1953, and *Special Regulations (SR) 355-20-1*, editions of 1949, 1951 and 1953; *Military Training: Field Manual (FM) 21-5*, (2 Sep 1950), Chap. 9; *Army Forty Hour Discussion Leaders' Course: Department of the Army Pamphlet 20-125*, (Jun 1950 and Apr 1951).

25. *DA Pamphlets 20-132* through *20-160;* the quoted material is from *DA Pam 20-135* (Apr 1951), p. 1.

26. Bryce F. Denno, "You Can Make Troop Information Pay Off," *Combat Forces Journal* (Jun 1951), pp. 34-37.

27. *Staff Officers' Field Manual, The G1 Manual: FM 101-1* (Jul 1951), pp. 69-72, and *The Second United States Infantry Division in Korea, 1951-1952* (Tokyo: Toppan Printing, 1952), pp. 198-199; Robert J. Daniels, "Army Replacement System," *Infantry School Quarterly* 40 (Jan 1951), pp. 36-50.

28. Daniels, pp. 44-46.

29. Ellery Anderson, *Banner Over Pusan* (London: Evans Brothers, 1960), p. 23.

30. In view of the regulation's provisions, there was no longer an after-action" report by name; there were only "war diaries," "activities reports," and "narrative reports," all of which were "historical reports" or "historical records." See War Department, *Historical Reports: AR 345-105* (1924, with changes to 1949); *Special Regulation 345-105-1* (3 February 1949). Incidentally, Special Regulations (SR) were published

between 1948-1954 as the medium for detailed administrative procedures, usually as supplements to the basic policies announced in Army Regulations (AR).

31. *SR 345-105-1* (Feb 1949), Paras. 2 & 6a.

32. *SR 345-105-1* Para. 2.

33. *AR 345-105* (Feb 1949), Para. 3.

34. Change 1, dated October 1949, to *AR 345-105* redesignated the reports as Command and Unit History Reports before the war began, but retained the original historical emphasis. The major revision was *AR 345-105* (3 Oct 1950).

35. *AR 345-105* & *SR 345-105-1,* Korean wartime editions.

36. Department of the Army, *Combat Operations, Command Report: SR 525-45-1* (24 Mar 1953) superseded *AR 345-105* but did not alter any basic provisions of the earlier directive.

37. Change 1, dated 24 August 1951, to *AR 345-105*.

38. OCAFF Training Bulletin No. 3 (Jul 1951) cites several such bulletins as sources of information. Additionally, a copy of the 3d Infantry Division's Combat Bulletin No. 2, dated 4 February 1951, appears as an enclosure in OCAFF's "Notes on Combat in Korea" (16 Apr 1951).

39. *SR 525-85-5* (14 Feb 1951) Paras. 4c, 4d & 5b.

40. *AR 345-105* (Oct 1950) Para. 1b; OCAFF Observer Team No. 5 Report, p. 36; Team No. 7's report contains a letter from GEN Hodge to the Chief of Staff dated 2 December 1952, in which information on the revised regulation appears; *SR 525-45-1* (24 Mar 1953).

41. OCAFF Training Bulletins Nos. 3-4, 1950; Nos. 1-9, 1951; Nos. 1-7, 1952; and Nos. 1-5, 1953, MHI.

42. *Ibid.,* especially Bulletin No. 1 (12 Mar 1951), pp. 1112.

43. OCAFF, *Dissemination of Combat Information,* periodic reports without serial numbering, November 1951-December 1953. The reports, containing compiled extracts of command reports, were reproduced on OCAFF Form No. 73 and attached to an OCAFF cover letter for distribution. Each extract in the compilations was given a sequential number by which it was determined that MHI has a complete run of the reports from 7 November 1950 to 9 December 1953, missing only the first 3 or 4 issues likely to have been distributed in October 1950.

By February 1951, OCAFF's Plans Division was absorbed by the G3, which "prepares analyses of and disseminates lessons learned from combat in overseas theater." The division's Combat Information Branch may have been the center of the operation. See OCAFF's handbooks, *Organization and Functions* (May 1950, Feb 1951 and Jul 1952).

44. Statistics derived from time-sequence listing in the interim report of the Adjutant General's Office's "Battle Casualties in the Army," dated 30 September 1954. Over 18,000 soldiers died on the battlefield or from wounds received on it, while another 46,000 were wounded, missing, or captured.

45. See, for example, *Tactics and Techniques of Infantry,* Vol. 1 (Harrisburg, PA: Military Service Publishing Co., 1953).

46. Later it became *Infantry* magazine. Collin's quote appears in *Infantry School Quarterly* 42 (Jan 1953), p. 7.

47. *Infantry School Quarterly,* editorials in issues of January and July 1953.

48. Gines Perez, "On Top of the Ridgeline," *Infantry School Quarterly* 42 (Jan 1953), pp. 56-63. The author commanded the 21st Infantry Regiment.

49. See, for example, Frank T. Mildren, "What Has Korea Taught Us?" *Infantry School Quarterly* (Oct 1953), pp. 6-13, and Charles B. Hazelrigg, "The More We Get Together," *Infantry School Quarterly* (Jan 1953), pp. 41-46.

50. "Semiannual Report of the Secretary of the Army, January 1 to June 30, 1952" in Department of Defense, *Semiannual Report of the Secretary of Defense . . .* (Washington, DC: GPO, 1952), pp. 106-107.

51. Secretary of the Army's Semiannual Report, January-June 1953, p. 115.

52. OCAFF Training Bulletin 2 (11 Apr 1951), the first to bear the boxed credo.

53. *Ibid.*

54. OCAFF Training Bulletin No. 1, 1953, pp. 910; also John R. Hodge biographic file, MHI.

55. *Ibid.,* p. 1.

56. US Army Infantry School, "Lessons From Korea, 1954," study for instructional purposes, Fort Benning, GA, 1954, p. 2.

57. "Don't Forget the Fundamentals," *ISQ* (Jan 1953), pp. 6-17.

PART III

NEW APPROACHES AND OLD LESSONS
1953 - 1973

. . . we must review the causes of our failures and of our successes to ensure
that the lessons which we bought so dearly with our dead not remain locked
away in the memories of the survivors.
— GEN Paul Ely, French CIC, Far East, 1955*

I'll learn him or kill him.
— Mark Twain, *Life on the Mississippi*, Ch. 8

Where have all the soldiers gone?
Gone to graveyards, everyone.
Oh, when will they ever learn?
— Pete Seeger, *Where Have All the Flowers Gone?*

In the 20-year period following the Korean War, two additional American wars influenced and, to a lesser degree, were influenced by US Army lesson learning. The Cold War not only kept alive the spark of lesson-learning procedures but also further stimulated use of a new scientific approach for deriving lessons. The unique ideological and diplomatic struggle between the United States and the Soviet Union involved a new US policy of containment against the spread of communism, and its military application in Korea had resulted in the 1950-1953 war. In broader context, the Cold War brought about an unprecedented development in the United States: permanent military mobilization and a large standing military establishment. This strange war-in-peace situation gave new meaning to the term preparedness, as American military forces received the mission and resources to remain continuously combat ready. For lesson learning, this meant new reliance on research and development activities for operational as well as technological guidance.

Meanwhile, the Cold War also kept the Korean War's lesson-learning spirit and procedures alive. The system codified in that war remained current in Army Regulations, while the US conducted two relatively major but brief contingency operations in Lebanon, 1958, and the Dominican Republic, 1965. Both operations represented reminders for evaluating operational experiences. Additionally, in the growing assistance and advisory effort in South Vietnam, a local lesson-learning program had been initiated by the US military command

there (MAAGV, 1962-1964). Before the next American war began, the Cold War helped sustain and nourish ways of learning combat lessons.

When the next war came in Vietnam in 1965, it was not unexpected. Unlike the sudden thrust into Korea in 1950, the US eased gradually into the Vietnam War after a decade of involvement that peaked with the introduction of US Marine and Army ground combat units. The Army that went to war in Vietnam should have been fully prepared. In some ways, such as in lesson learning, it may have been more than prepared, because Vietnam's operational experiences produced an unprecedented outpouring of lessons that critics charged as unmanageable, banal and unusable.

Several factors account for the abundance or super-abundance of Vietnam lessons. The most obvious were the seven-year length of the war and the constant personnel turnover; the least obvious, perhaps, was the coexistence of two approaches to evaluate the war's experiences. New analytical methodology and the old reporting procedures stimulated high production of lessons and helped process the vast store of reported information under new central management agencies. There were many lessons, to be sure, but they resulted in much learning, too.

However, it required well over a year into the US ground-force war to get all the reporting and processing procedures fully operational and functioning smoothly. Fortunately, in-theater procedures, especially by the field units themselves, evaluated experiences and drew lessons

89

during that delay. Once firmly established, both local and centralized systems for learning lessons functioned continuously for the rest of the war.

In contrast, the French Army in the earlier Indochina war had no similar mechanisms and, moreover, waited too long to thoroughly examine operational experience. The long and frustrating French effort, often overlooked or forgotten by the US Army, deserved better. It contained lessons that the French themselves belatedly discovered in 1955, after the war, when their army took stock and comprehensively studied its Indochina experiences. Based on 1,400 after-action reports, the self-assessment filled three volumes* and contained tactical lessons worthy of American consideration. Unfortunately, no English translation existed until 1967, in the middle of the Second Indochina War. Although Americans seemed late in considering what the French had learned in Indochina, the French, for their part, had been even later. They found their Indochina lessons in history, after the war ended. What if they had continuously and thoroughly studied their combat experience *during* the war?

---

* French Army, *Lessons of the War in Indochina*, 3 vols, translation for the Rand Corporation (RM 5271-PR, May 1967); the introductory quote by General Ely appears in his letter accompanying Vol. 2.

CHAPTER 5

THE ANALYTICAL APPROACH
IN PEACE AND WAR

It is best to do things systematically, since we are only human, and disorder is
our worst enemy.
— Hesiod, *Works and Days* (8th century, B.C.)

Though this be madness, yet there is method in't.
— Shakespeare, *Hamlet*

War is much too serious a matter to be entrusted to the military.
— Talleyrand (1754-1838), who served the French
Republic, Napoleon, and the restored monarchy.

Lesson learning received the support of scientific methods after World War II. Beginning with the Korean War, the contemporaneous and historical approaches to processing combat experience were augmented by another approach that did not need to rely upon ongoing events or even historical accounts of them. This new scientific approach could even anticipate experience. Using probability theory, empirical deduction, and research analysis, it reached conclusions about future needs and ways to meet those needs. It seemed to offer a way to develop doctrine and improve combat efficiency *before* the next battle and avoid paying the usual high price of initial surprises and mistakes on the next battlefield. This promise enticed the Army to undertake, along with the rest of the military establishment, intensive operations analysis and research for combat developments.

The ensuing programs of the 1950s-1960s anticipated future needs by providing doctrine, organization, and materiel. The pentomic and ROAD divisions, for example, were prime products of the new analytical approach, which began operating as part of the Army's mainstream structure by the eve of the Vietnam War. The approach was available for ongoing application in that conflict, where both the Defense Department and the Department of the Army conducted much analytical research. Although not employed as a coherent system, quantitative and systems analyses were widely applied to the Vietnam

battlefields. The application resulted in few major adjustments to current doctrine and organization but did produce a host of refinements in techniques, tactics, and equipment. The addition of a fourth maneuver company to the tactical battalions illustrated what the approach could accomplish.

The analytical methods applied to the Vietnam operations became another form of contemporaneous lesson learning. The data that underwent analysis served as distilled combat experience. Collected from the battlefields and transformed quantitatively into charts and statistics, such data revealed, under analysis, the trends and patterns of operational experience. Conclusions thus drawn constituted lessons.

Analytical Beginnings

The analytical approaches used to evaluate ongoing Vietnam experience stemmed from overall research and development activities and, in particular, the phenomenon of combat developments. The term "combat developments" encompasses a series of activities related to the research, development, testing, and integration of new doctrine, organization, or materiel for operational use. Essentially it is a planning function; its inspiration and source material comes from future probabilities, not from past experience. It anticipates what will be needed for combat efficiency in the wake of rapid

technological advances and changing patterns of warfare. The probable requirements of the next war rather than lessons from the last one determine this approach to shaping doctrine and related matters.[1]

Combat developments activities arose out of the operations research conducted during World War II by the British, the US Navy, and, to a lesser extent, the US Army. Operations research, like combat developments, defies simple definition. Both involve the objective and systematic study of a problem, usually by quantitiative means, to determine its most efficient solution. Academic physicists, statisticians, social scientists, and other experts conduct studies and then provide data and evaluations to the responsible military commander. Postwar need for such interdisciplinary expertise led to the military affiliation of private research groups and "think tanks." The Rand Corporation so served the US Air Force. The US Army in 1948 contracted with Johns Hopkins University for civilian research assistance and its first "brains trust," the Operations Research Office (ORO). Over the next generation, ORO and similar agencies employed scientific methods and techniques for the improvement of Army operations.[2]

At first, ORO conducted scientific studies under the direction of the Logistics (G-4) Division of the Army General Staff, but soon its direction and supervision came from the Operations (G-3) Division. Proposals for ORO research projects were considered by an advisory committee comprised of representation from the entire General Staff and various agencies and commands. During the Korean War, ORO dispatched numerous analysts to Korea for firsthand observation and collection of data. Those analysts, it will be recalled, included S.L.A. Marshall on assignment with ORO's Project Doughboy, which studied infantry organization, tactics, and weapons. Other wartime projects of the new research agency included measuring the combat effectiveness of riflemen and researching the techniques of field artillery, guerrilla operations, and psychological warfare. Some of the resultant studies published by ORO were widely distributed within the Army. During its first decade of Army affiliation, ORO produced about 1,500 studies, most of which dealt with tactical operations and logistics.[3]

During the 1950s, the Army contracted the services of additional civilian researchers and agencies that responded either to the General Staff or a major command. (See Appendix A-2.) The Combat Operations Research Group (CORG), a splinter organization of ORO, was created in 1953 to apply the analytical techniques to organization, tactics, and doctrine. The Combat Developments Experimental Center (CDEC) appeared in 1956 with a sizable staff of civilian researchers. Two other contract agencies conducted research exclusively in the social and behavioral sciences: The Human Resources Research Office (HUMRRO) under George Washington University and the Special Operations Research Office (SORO) under American University.[4] These affiliations contributed to the evolution of Army doctrine, organization, and materiel. At the same time, they spearheaded and reflected the growing importance of scientifically approaching military problems and needs. Operations research became an indispensable tool for projecting new experience based on probability theory and the quantification of actual experience.[5]

Peacetime Application and Structure

Between the Korean and Vietnam Wars, the development of Army doctrine, organization, and materiel owed more to the analytical-based future-oriented research programs than to lessons from past experience. Operational doctrine had been judged fundamentally sound in Korea, needing only minor refinements in tactics and techniques. The major changes that occurred in the following decade of peace were chiefly research and development responses to new national policies and military strategies.

Soon after the Korean War, the Eisenhower Administration realigned military policy for massive nuclear retaliation under the rhetoric of a "new look." Based on American nuclear superiority, the new policy intended to prevent another Korean-type peripheral war. For the Army, the "new look" meant much more than a changeover to new green uniforms; it meant reorganization and rethinking for operating on a nuclear battlefield. Enthusiasm ran high over the prospect of tactical nuclear warfare, because it gave the ground forces a major role in strategy and

planning, previously dominated by the Air Force with its long-range delivery system. However, there was no direct historical experience or lessons to draw upon in developing operational doctrine, organization, and weapons for the prospective atomic battlefields. In the absence of traditional guides, the analytical approach filled the breach. Operations research and developments procedures were called upon to plan and organize for the new warfare. One of the resulting products in tactical organization was a new configuration, the pentomic division. Designed for wide dispersal on an atomic battlefield, its five battle groups radically restructured the triangular configuration of three regiments used since 1940. The new structure symbolized the application of the new analytical approach and developments procedures.[6]

By the mid-1950s, scientific research and development became increasingly accepted by all the armed forces as standard procedure, and the Army fully accommodated the new approach within its organizational structure. For weapons and other "hardware" developments, the creation of a new Assistant Chief of Staff for Research and Development in 1955 was a structural capstone. A similar capstone for operational developments, however, took longer. The first combat developments program had been initiated in 1952 under the supervision of the Office, Chief of Army Field Forces (OCAFF). While an internal developments structure evolved, Army Field Forces became reorganized as Continental Army Command (CONARC). CONARC was a throwback to the Army Ground Forces of World War II in that, unlike its immediate predecessor, OCAFF, it commanded US-based units, installations, and schools. This made Headquarters, CONARC, the nerve center for Army development of operational and training doctrine. Furthermore, the new command inherited from OCAFF the responsibility for combat developments. The alignment of these responsibilities and functions was a remarkable concentration in one command for the development and application of operational doctrine and, by implication, lessons. The concentration was never be tested by war, however, becoming broken up shortly by a major Army reorganization. (See Appendix A-2)[7]

The 1962 reorganization streamlined the

General Staff and unburdened it from an accumulation of operational functions, thus restoring the primacy of its original planning and policymaking role. The concurrent abolishment of most technical services allowed the operational functions of executing General Staff plans and policies to be performed by the newly created field commands, notably CONARC for training, Army Material Command for major weapons and equipment, and the Combat Developments Command (CDC) for organization and doctrine. (See Appendices B-4, 5, & 6). A new General Staff element appeared, the Assistant Chief of Staff for Force Development (ACSFOR), and held responsibility for the overall development of Army forces, including doctrine, training, organization, and equipment. Based on the guidance provided by strategic estimates and plans, ACSFOR coordinated and supervised the specialized field commands.[8] Under ACSFOR, the Combat Developments Command, with headquarters at Fort Belvoir, Virginia, capped the evolution of operational developments by aligning all elements of the Army's combat developments system. CDC's mission was to formulate current doctrine and organization and to determine future needs. It asked long-range questions about how the future Army should be organized and equipped and how it should fight; it sought answers through study programs, operations research, war gaming, and field experimentation. Its recommendations, given in five-year increments for the next 20 years, formed the basis of new tables of organization and standard doctrine.[9]

CDC's establishment coincided with major requirements for developing new doctrinal and organizational concepts. National defense policy was again reshaped in the early 1960s and the Army responded with a new division structure. Under the Kennedy Administration, policy shifted from reliance on massive nuclear retaliation to a more flexible response. Directed by Secretary of Defense Robert S. McNamara, policy was reoriented to challenge Communist military power anytime or anywhere, either by nuclear or conventional means. For the Army, this meant a buildup in strength along with a reorganization to achieve the necessary tactical flexibility. In 1963-1964, the pentomic division was discarded in favor of a new divisional structure (ROAD), which

accommodated a flexible number of maneuver battalions and could effectively fight on a nuclear or conventional battlefield in either a major or "brush-fire" war.[10] CDC responded to the new policy and, in addition, faced what it perceived as a serious "doctrine gap." This gap was measured not against the Soviet Army but against the US Army's own previous concentration of developmental effort on the design of weapons and equipment and not on the equally important operational usage of the hardware. For example, air mobility concepts and doctrine fell behind new improved helicopters. Under CDC's direction, the development programs of nearly two dozen agencies went to work to reduce the internal doctrine gap and to provide doctrinal responses to the new defense policy. In 1964, its first full year of operation, the command completed 67 studies, 126 statements of materiel objectives, 323 tables of organization and equipment, and 83 field manuals.[11]

Under CDC, the Army's doctrine development process came of age. Relying on the analytical approach, directed by a specialized General Staff office (ACSFOR), and coordinated within a specialized command (CDC), scientific doctrinal development became a centralized Army activity. It had come a long way from the unstructured, institutionless, and individualized practices of Baron von Steuben at Valley Forge or Emory Upton in the 1860s. Using the new analytical techniques, the Army anticipated its needs for the next war.

Wartime Application, McNamara-Style

Unfortunately, the next war came ahead of schedule. The new developments programs had barely begun to work on future requirements when they were pressed into service for contemporary needs. Drawn deeper into the instability of Southeast Asia by the Kennedy-McNamara challenge to communism, the US commitment passed beyond materiel and advisory assistance into limited war. Beginning in mid-1965, US ground combat units were introduced into South Vietnam, followed by a buildup of forces that peaked at over half a million in 1968. In applying superior American firepower and logistics against

the Viet Cong guerrillas and North Vietnamese regulars, the techniques of operational research played a significant role. The Vietnam War was fought and analyzed at the same time. This resulted not only from the pre-existing developments structure but also from a new top-level management philosophy.

Any attempt to examine the way in which the US fought in Vietnam must take into account the controversial methods and style of Robert S. McNamara, Secretary of Defense from 1961 until 1968. Appointed by President Kennedy, McNamara continued in the office under President Johnson, with whom he eventually disagreed over Vietnam policy. When he departed government at the end of February 1968, the war in Southeast Asia over which he had presided was only at its chronological midpoint. However, McNamara's shaping influence over its direction and tone continued to be manifested in the new analytical methods he introduced into the military establishment.

In essence, the McNamara style combined strong civilian control with efficient management techniques. The two elements were inseparable; controversy arising over one spilled over to the other. As an activist Secretary of Defense, McNamara fully exploited the legislated authority of his office to take the initiative in overall defense policy. He was determined to implement the new flexible response policy by building the necessary force structure, but, at the same time, he tried to hold down costs in the unavoidable spending increases.[12] To increase security as economically as possible, McNamara sought to upgrade the efficiency of the military establishment through modern management techniques and cost effectiveness. The former president of Ford Motors introduced into the complexities of defense budgeting the primary management tools of centralized planning and programming, as well as systems analysis. A specialist himself in the managerial application of statistical analysis, McNamara relied upon the analytic support of quantitative procedures for decision making. His new management techniques sought to rationalize the decision-making process by giving it an objective, empirical basis, instead of the traditional approach of expediency, politics and prudence. This functionalist approach lessened reliance on

advice from the uniformed military and, coupled with his assertive leadership in general, contributed to controversy and McNamara's unpopularity among service leaders.[13]

Systems analysis was a vital element in the new approach. Secretary McNamara concentrated its employment in a select group of mostly civilian staff under Alain G. Enthoven, a distinguished operations research analyst, who became in 1965 Assistant Secretary of Defense for Systems Analysis. Enthoven's Systems Analysis Office in the Pentagon provided the Secretary of Defense with analytical studies of military strategy, requirements, and force structure that were independent of the parochial interests reflected in similar studies done by each of the separate armed services. Enthoven's office also served as "analytic policeman" by monitoring the studies done by the services and their contracted think tanks, in order to ensure overall compatibility of methods and assumptions.[14]

Not surprisingly, the intrusion of this civilian-based quantified management into the services' proposals for weapons systems and force requirements caused much resentment and bureaucratic friction. Moreover, once committed to the Vietnam War, the activist Secretary of Defense intruded still further into previously exclusive uniformed prerogatives. Unlike his predecessors, McNamara actively managed the operational side of the war, not contenting himself with merely overseeing logistical matters. In so doing, with his emphasis on systems analysis, he set the tone for statistically monitoring the war effort and defining success as something quanitifiable. It led to an outpouring of statistics from Vietnam and focused attention on statistical indices, such as a reliance on body counts to measure progress.[15]

Although the prolific use of statistical data characterized the US effort, quantification of the Vietnam War did not result solely from the proclivity of the Secretary of Defense; it also stemmed from the unique nature of the war and filled a void that appeared in the military effort. Military operations — only one side of the multi-dimensional war effort — were conducted by small units scattered over fragmented battlefields against an elusive enemy. Atypical of the conventional warfare embodied in established doctrine, warfare in Vietnam offered no standard

campaigns, few major battles, and no front lines. Its conflict was continual and everywhere; hundreds of small combat actions and related activities occurred daily and constituted the military effort. This situation lent itself to quantitative analysis for monitoring the myriad activities and determining trends. How else could progress be measured? In a war without front lines, maps failed to show the geographic advance or retreat of forces. Statistical indices filled the void and substituted for the traditional geographic measures of progress. With data as the main measure, collecting and presenting it became an all-consuming field activity. Analyzing the data assumed major importance, intensely so in the Office of the Secretary of Defense.[16]

Lessons via DOD Analysis

Ironically, despite Secretary McNamara's operational management of the war and his penchant for a statistical base in decision making, the DOD Systems Analysis Office under Assistant Secretary Enthoven did not directly play a prominent role in the Vietnam War. Overall war policy and military performance lay outside its charter, although Enthoven's group did conduct a few limited evaluations, notably in deployment, aircraft attrition, and pacification studies. Additionally, his Systems Analysis Office prepared a number of "pilot studies" on narrow aspects of the war, many of which appeared in the *Southeast Asia Analysis Report*, an informal publication of the Southeast Asia Analysis Division of Enthoven's office. Its monthly distribution of several hundred copies went to the Office of the Secretary of Defense, the military departments and certain commands, plus the State Department, CIA, and the White House staff. The classified report disseminated information and stimulated discussion.[17] Essentially it was lessons literature.

Two of the pilot studies prepared by the Systems Analysis Office on 1966 combat operations in Vietnam illustrate operations research on Pentagon desk tops. One of the studies compared the effectiveness of small long-range patrols vis-a-vis battalion search-and-destroy sweeps. Based on the statistical analysis of unit after-action reports, the DOD study concluded that patrols killed more of the enemy

and resulted in fewer friendly casualties. Appearing in the June 1967 *Southeast Asia Analysis Report*, the study evoked a rebuttal by the Army's General Staff (DCSOPS) carried in the next month's issue. Disputing the DOD findings, the Army's main argument rested on the inappropriateness of comparing the dissimilar missions of the patrols and the battalions. The latter involved securing territory and capturing enemy equipment, which lessened the potential kill ratio and exposed personnel to enemy ambush and mines. The exchange of views on the subject continued in several following issues, with DOD analysts suggesting an increase in patrol activities and the Army explaining the difficulties in coping with the variety of unique local situations. Although discussion on the matter had been stimulated by the DOD pilot study, it led to no resolution of the differences or direct change in Army patrol or battalion operating procedures. The lesson derived by the DOD analysts was simply not accepted by the Army.[18]

The other illustrative pilot study by the Systems Analysis Office examined the utility of unobserved air and artillery strikes. Based on admittedly incomplete evidence, the study suggested that such strikes killed a mere 100 of the enemy in all of 1966 but left behind 27,000 tons of dud explosives that could be reused in enemy mines and booby traps to kill a potential 1,000 American soldiers. Although no Army response appeared in the *Southeast Asia Analysis Report*, it may not be entirely coincidental that USARV, in 1968, ordered a reduction in the use of harassment and interdiction (H&I) artillery fires and required intelligence justification, in addition to map or aerial reconnaissance, for such remaining usage. The term for the practice itself was modified to "intelligence and interdiction" (I&I). This analytically derived DOD lesson may have struck an Army nerve.[19]

The DOD pilot studies and other occasional evaluations did not constitute a major source of lessons, acceptable or otherwise, for the Army, nor did they give the DOD Systems Analysis Office an appreciable role in the war's direction and conduct. Not surprisingly, the wartime head of the office maintained that the US war effort had been insufficiently analyzed. The deluge of statistics concerning Vietnam, he felt, were underutilized not for want of ability but because of the high political costs of further friction with the uniformed military. In Enthoven's view, the Pentagon did not overmanage the war, as many critics charged, but actually undermanaged it from the systems analysis standpoint. In his words:

> There was no systematic analysis in Vietnam of the allocation of resources to the different missions of the war and no systematic analysis of the effectiveness and costs of alternative military operations. Little operations analysis was being conducted in the field or in Washington. . . .US military commanders need, but for the most part either do not have or have and do not use, operations analysis organizations that provide them with a systematic method of learning by experience. . . . US military operations in Southeast Asia have been notable for a lack of systematic learning by experience.[20]

Another voice from the same DOD office echoed the contention that the war was long on statistics but short on analysis. Thomas C. Thayer, who headed the Southeast Asia Division under Enthoven and who labored ten years on his personal prospectus of the war, concluded: "The problem was that quantification became a huge effort but analysis remained a trivial one." He went further and specifically charged that the Army's unsystematic statistical reporting forced the DOD analysts to rely on the simplest obtainable measure of all, the body count.[21]

The criticisms from the Systems Analysis Office reflect dissatisfaction over its circumscribed role in the war. However, the denial of Army efforts to systematically analyze and learn from experience is exaggerated. In fact, the Army learned lessons analytically and quantatively in Vietnam. To be sure, the systems analysis approach was used less extensively than the DOD analysts wished, but its use in learning lessons cannot be denied.

Army Analytical Lessons

To a limited but unmistakable extent, the Army applied the techniques of operations research and analysis to its ongoing Vietnam operations throughout the war. As a direct result of developments programs and the use of analytical methodology, a number of innovations and adjustments contributed to the improvement of operational procedures, organization, and equipment used in the conflict.

When the first Army combat units arrived in South Vietnam in 1965, they came equipped with the sophisticated hardware produced by the research and development programs of the previous decade. Prepared in organization, doctrine, and training for conventional or, if need be, nuclear war against the Soviet Army in western Europe, they were ill-suited for the counterinsurgency war in Southeast Asia. Operational adjustments followed and US tactical operations were reoriented from linear to area coverage and from large-scale to small unit operations. A new emphasis emerged on reconnaissance and ambush to locate the elusive enemy in order to allow superior American firepower and mobility to finish him.[22] This adjustment of combat tactics in Vietnam required innovations and other refinements, some of which resulted from applications of analytical methods, such as air assault doctrine.

The analytical approach provided the initial US air assault doctrine taken into the war. Army combat developments programs since 1962 included the research and testing of airmobility concepts, some of which involved analysis of early experiences in Vietnam's stability operations. When the CONUS-based test air assault division was hastily deployed to Vietnam in 1965, being redesignated as the 1st Cavalry Division (Airmobile), the only available doctrine for its employment were the tentative texts prepared for the abruptly terminated testing exercises. Subsequent operational usage in Vietnam adjusted air mobility doctrine to conditions, but its introduction to the battlefield resulted from the combat developments programs.[23]

Although combat developments programs focused on future needs, compelling problems in the ongoing Vietnam operations sometimes refocused their attention to current needs. The Combat Developments Experimental Center (CDEC), for example, normally dealt with concepts 10 or 20 years ahead of their planned implementation but was given the immediate problem of helicopter vulnerability in Vietnam, where increasingly effective enemy ground fire threatened the viability of air assault operations. CDEC's testing and analysis contributed objective assurance that helicopters would survive — conventional wisdom to the contrary — and

influenced the decision to increase helicopter operations. Subsequent events, along with more studies and appropriate countermeasures, demonstrated the soundness of that decision: the helicopter loss rate to ground fire was lower in 1968 than in 1962.[24] When called upon, the analytical methodology of the future-oriented combat developments program delivered contemporary lessons.

In fact, Combat Developments Command (CDC) re-oriented an appreciable portion of its resources and effort to Southeast Asian combat operations. US Army, Vietnam (USARV), the administrative and logistical field headquarters, transmitted its doctrinal needs and problems to Fort Belvoir through a CDC liaison team permanently located in Vietnam. Several CDC programs continuously operated in Vietnam, collecting and evaluating data on such matters as ammunitions expenditure and target acquisition. Furthermore, CDC at its Fort Belvoir headquarters reviewed battle reports and other experience-based data coming out of Vietnam and acted directly upon organizational and doctrinal matters.[25] The US Military Assistance Command, Vietnam (MACV), the highest military headquarters in-country, generally assisted Department of the Army combat developments by identifying problem areas and advising the CONUS-based developments agencies. Within its limited capabilities, MACV also conducted its own operations research beginning in 1964, when the problem of aircraft losses to enemy ground fire led MACV to set up a temporary research group. Later the group became permanent as MACV's Office of Operations Research and Systems Analysis with the mission of conducting in-depth studies and monitoring the command's analytical efforts.[26]

Generally supporting the application of analytical techniques to Vietnam combat experience was a body of articulate professional opinion. Expressed in numerous articles appearing in service-oriented journals, notably the influential *Military Review*, numerous writers endorsed the analytical approach and explained its applicability to military problem-solving and decisionmaking.[27] One analytical enthusiast showed its pragmatic application to the operation of an actual Special Forces camp in Vietnam. He described how simple field analysis — without computers or trained

researchers and by the mere recording and organizing of data — uncovered optimum allocation of the camp's resources, demonstrating how operations research could be reduced to its simplist definition of quantified common sense and applied to field situations.[28]

The most unabashed advocate of quantified common sense among Vietnam's field commanders was General Julian J. Ewell, who commanded the 9th Infantry Division, 1968-1969, and II Field Force, 1969-1970. After the war he co-authored a monograph in the official *Vietnam Studies* series that served as a testament to his faith in the analytic approach for the improvement of combat operations. The publication of his analytically-derived tactical refinements and innovations aimed, in part, to counter the claim by Dr. Enthoven that the Army conducted no systematic analysis of its Vietnam operations. Ewell conceded the claim's validity with regard to the full use of systems analysis and cost effectiveness; the war's complex and variated nature, he said, defied useful results from such high-level techniques. Instead, he maintained: "Simple, straight-forward operations analysis, while not easy to use, posed less of a problem and was used extensively." Citing not only his own efforts but those of other commanders and special study groups, General Ewell rested his case on the widespread use in Vietnam of what he coined as "combat analysis."[29]

Although lacking features that purists and professional analysts demanded of operations research methodology, Ewell's simplified combat analysis still represented the analytical approach. It should be recognized, however, as a pragmatic version — quantified common sense assisted by simple mathematics and a few charts. No matter how crudely or imperfectly the analytical techniques may have been practiced in the field, they were extensively exploited by Ewell and others as a means of evaluating their experiences and adjusting measures to improve performance. It was a form of lesson learning.

A Lesson Learned: Squared Battalions

One major lesson derived from the Army's use of analytical methodology resulted in an old but new combat structure — the square configuration. The triangular organization of three companies in a maneuver battalion (and three battalions in a regiment and three regiments in a division) had proved workable in the linear warfare of World War II and Korea. In Vietnam it worked less well. The unique nature of the conflict demanded wide area coverage that strained the resources of the triangularized battalions. Adding a fourth line company to each battalion came out of a major study of Vietnam operations.[30]

In October 1965, the Army Chief of Staff suggested the need for a comparative study of the combat effectiveness of the several types of maneuver battalions engaged in Vietnam operations. As a result, the Combat Developments Command dispatched early in 1966 a small evaluation team headed by Brig. Gen. George L. Mabry, Jr. Once in-country his team swelled to about 60 officers and 6 operations research analysts from the Combat Operations Research Group (CORG). With assistance provided by USARV and the Army Concept Team, Vietnam (ACTIV), the Mabry group collected information under combat conditions and critically appraised it in the tradition of operations research methodology, involving validated data, comparative analysis, statistical synthesis, and so forth. After more than three months of effort, the group's nine-volume report, *Evaluation of US Army Combat Operations in Vietnam (ARCOV)*, appeared in late April 1966.[31] As its first major conclusion the ARCOV team generally determined: "Current doctrine as contained in field manuals and training texts does not include lessons learned in Vietnam." Other conclusions listed specifically those elements of doctrine, organization, and technique that the group's analysis found adequate or inadequate in the Vietnam environment. Notably, the rifle strength of the infantry battalion was considered inadequate. To correct the inadequacy, the ARCOV study recommended that the maneuver battalion in Vietnam be reorganized to contain four rifle companies.[32]

Final approval of the ARCOV reorganization proposal took half a year. First, General Westmoreland, as Commander of USARV, commended the ARCOV team's work and recommended approval of its principal findings. In

98

particular, he strongly endorsed its recommendation for the addition of a fourth rifle company to each maneuver battalion; it would provide more combat power, flexibility and security. CDC, in turn, considered the ARCOV study definitive and its conclusions valid. CDC especially praised the study's concept of Tactical Area of Responsibility (TAOR) and Area Operations (AO), which it felt supported the restructuring of infantry battalions to include a fourth rifle company. Finally, at Headquarters, Department of the Army, ACSFOR approved the additional rifle company for Vietnam implementation. However, the Army-wide squaring of battalions was not approved. Although agreeing that current Army doctrine should incorporate the lessons of the Vietnam experience, ACSFOR stipulated that doctrinal changes should be made only where Army-wide applicability was confirmed.[33] In other words, the square battalion lesson was localized and warranted only a local adaption of, or exception to, established doctrine.

In Vietnam, in the meantime, some impatient battalion commanders had already squared their units by utilizing existing resources. Nevertheless once officially approved, Maj. Gen. Julian Ewell, commanding the 9th Infantry Division in Vietnam, fully appreciated the addition of the newly authorized fourth company. Conducting sustained operations with only three companies per battalion had been for him "a real nightmare" of shuttling the companies back and forth among his battalions. The new four-company battalion structure provided needed depth: "Three can fight and one rest, train and pull security."[34]

Inspired by the ARCOV study, approval soon followed for similar field research and analysis of the effects of Vietnam's terrain and climate on the movement of armored vehicles. A team of over 100 officers and analysts assembled in Vietnam and conducted an evaluation from January to March 1967. They found no substantial hindrance to the use of armor in Vietnam's jungles and swamps; they found, in fact, that armor was being successfully employed albeit contrary to established doctrine. Adjust tactical doctrine and organization accordingly, the study concluded. Furthermore, the study of mechanized and armor combat operations in Vietnam (MACOV) specifically recommended the addition of a fourth

line company to the armored and mechanized battalions. General Westmoreland considered this study a reaffirmation of the earlier ARCOV findings. CDC concurred with him and recommended the addition of a fourth tank company for use in Vietnam and throughout the Army. However, ACSFOR approved half of the CDC recommendation, concurring only in its Vietnam, or local, application and instructing CDC to implement it.[35]

Unlike the other two basic combat arms, field artillery in Vietnam underwent no major field analysis that resulted in the squaring of its battalions. There was no need, apparently. Depending on the local situation, some artillery battalions had sufficient internal flexibility or outside support to preclude the need for a fourth firing battery. Other battalions, chiefly division artillery providing direct support, added a fourth battery when needed by reorganizing internal resources and reducing the firing tubes in each battery from six to four. Many field artillery battalions in Vietnam were required by 1968-1969 to have contingency plans for reorganizing into a square configuration on short notice.[36]

It should be noted that the Army analysts arrived at their "squared" conclusions on the basis of a methodological analysis of ongoing US experience in Vietnam. They did not consider earlier French experience in Indochina, which had also squared the configuration of maneuver battalions. The French army had developed a special mobile group, approximating a US combined arms task force or a regimental combat team, which contained special "Far East" infantry battalions. They differed slightly from their European-based counterparts in being lighter and by comprising four rifle companies, which, as the French concluded

. . . permits three to be used for fixing, covering, or maneuvering, while the fourth company can be held in reserve ready to exploit or, if necessary, to counter an unexpected development. Four rifle companies are essential for area operations.[37]

Furthermore, the French Far East companies often comprised four platoons and the platoons four squads. If troop strengths did not fall too low, the square configuration proved an efficient field adaptation. Although the American army followed

the French army physically into Southeast Asia, it did not follow French examples. Little was learned from the French because Americans perceived the French as losers, a stigma which tainted their lessons. The French experience and lessons of eight years of war in Indochina were shrugged off and the US Army went on with its own equally long war, duplicating French errors and short-comings or, in the case of the infantry battalion's structure, scientifically re-inventing a "square" wheel.[38]

Observers and Neo-Observers

The Vietnam War, like the Korean War, attracted swarms of observers who represented the missions and functions of various agencies and commands back in the United States. Observer missions falling under the Army's responsibility were coordinated by the Assistant Chief of Staff for Force Development (ACSFOR) in order to prevent overlap and duplication of effort. ACSFOR also served as clearinghouse for the appropriate dissemination of the observer reports.[39] Many of the Army's Vietnam observers represented research and developments programs. As such, they functioned as agents of the analytical approach and constituted a new breed of observer.

One of the distinguishing characteristics of the neo-observers was their relative permanency in-country. Instead of one-time or periodic visits to the theater of war, the new observers served complete tours of duty in Vietnam while assigned to a permanent field office of the concerned agency. Together, personnel and field office, they provided a continuous link for the flow of observer-derived information to the Continental United States (CONUS) agencies and commands. As early as 1962, well before the main war developed, CDC personnel had been observing the US advisory effort and evaluating Special Forces equipment in Vietnam. With the establishment of a permanent CDC detachment there, the need for special observer missions from CONUS became unnecessary. The CDC personnel assigned to the field detachment were designated as liaison officers, a name change that more accurately reflected their sustained activities in-country. Otherwise, the CDC liaison officers functioned in the traditional manner of observers: visiting units

and places, questioning key personnel, and collecting documentary materials. Their reports were prepared for and by the head of the CDC Liaison Detachment in Vietnam, a full colonel, who forwarded the gathered information and assessments in trip reports to the liaison coordinator at CDC's Fort Belvoir headquarters.[40]

Some of the new observers served as more than representatives and were analysts themselves. The Army Concept Team in Vietnam (ACTIV) added in-theater operations research to the usual observer role of visiting and reporting. Created in 1962 as a Department of the Army field activity, ACTIV performed its mission in the Vietnam environment, evaluating new or improved concepts, doctrine, tactics, and materiel under actual field conditions. At first operationally controlled by MACV, it became part of USARV in 1966 but responded directly to ACSFOR. Based on guidance and requirements funneled to it through ACSFOR, the team's mix of nearly 60 officers, enlisted men, and contract scientists collected and evaluated field data. Unlike the ARCOV and MACOV studies that entailed one-time evaluations of broad-based subjects, ACTIV evaluated narrower subjects on a permanent basis and produced in excess of 600 studies in its decade-long existence. Some of the projects were exotic, such as "people sniffers" and footprintless shoes, while a were quite mundane, such as a 1969 study concerning the effectiveness of a non-powered hair trimmer. ACTIV directed most of its attention at weapons and equipment but included tactical techniques, such as enemy tunnel operations. Its activities went beyond observation and into operations research and analysis.[41]

Another group of analysts-observers in Vietnam worked for the Human Resources Research Office (HUMRRO), an Army contract agency operating out of George Washington University. In the fall of 1966, while investigating ways to improve counter-insurgency training, three-man HUMRRO teams conducted 182 interview sessions with nearly 500 members of 29 companies representing the various types of tactical battalions. The teams used tape recorders and discovered that oral interviewing gathered information more effectively than written questionnaires. Transcribed into 11 roughly edited volumes, the small-unit combat-action interviews were distributed to appropriate agencies.[42]

There was still room in Vietnam for non-scientific ad hoc observers. Both CONARC and CDC dispatched such groups for firsthand observations. One high-level team from CDC included its commanding general, Ben Harrell, who carried forward the tradition of personal overseas trips begun by Lesley McNair in World War II. Harrell's 1966 group, however, never reached South Vietnam, being turned aside by political turmoil in Saigon and diverted to other parts of Asia to observe logistics instead.[43]

Included among the traditional type of observer roving Vietnam's battlefields was a familiar figure in a familiar role: S.L.A. Marshall recording the details of combat experience and extolling the virtues of the American soldier. SLAM made three extended trips into the war zones during the 1966-1968 period in the capacity of a private citizen and journalist, but once in-country he operated de facto as a privileged back-channel soldier, thanks to his reputation and to the fact that, on at least one of his trips, he claimed to personally represent Army Chief of Staff Harold K. Johnson. Provided access to combat troops, he covered in his inimitable interview fashion nearly 50 actions, resulting in at least one official publication and five commercial ones on Vietnam's combat.[44] In recalling his early trips, SLAM noted: "Our army in Vietnam at that time had no system for recording what happened during battle." He was particularly struck by the absence of systematic means "for collecting and collating combat data other than the raw statistics on body and weapons counts."[45] In this assessment, Marshall was more early than correct. In fact, a system for collecting, evaluating, and applying combat data had been implemented, but its impact had not yet become apparent. When it did, the Army began to more fully exploit its Vietnam combat experience by using the older approach of battle reporting and lesson drawing.

NOTES

1. *Dictionary of Army Terms: AR 320-5* (Nov 1958, Apr 1965 & Oct 1982); Armour Research Foundation, *Operational Study of the Combat Developments Systems* (Washington, DC: US Army Signal Supply Agency, 1958), Part 1; Department of the Army, *Combat Developments: AR 71-1* (1964-1968).

2. Florence Trefethen, *The History of Operations Research* (Baltimore: The Johns Hopkins University, 1954), pp. 1-5; Edward M. Parker and David B. Parker, "Trial By Combat," *Combat Forces Journal* (May 1951), pp. 13-17; Lynn H. Rumbaugh, *A Look at US Army Operations Research — Past and Present*, report, McLean, Va., Research Analysis Corporation, Apr 1964, pp. 5-7, 9 & 16. The "brains trust" label was used in Jack Anderson's column appearing in the *Washington Post*, 21 August 1967. For official definitions of operations research, see *SR 320-5-1* (1950) and *AR 320-5* (1958); for a clear explanation, see Joseph P. D'Arezzo, "Systems Analysis in the Army," *Military Review* (Jul 1967), pp. 89-92.

3. *Operations Research Office: SR 705-5-5* (Jan 1949) and *AR 15-480* (1951-1952); ORO, *A Discussion of the ORO Work Program* (Baltimore: The Johns Hopkins University, 1958), p. 3; ORO, *Semiannual Report* (31 Dec 1951), pp. 64-65 and (31 Dec 1953), pp. 10-11. See also Emmette Y. Burton, Jr., "The Role of Operations Research in the Army," thesis (US Army War College, 14 Mar 1955), pp. 2-20.

In 1961, ORO's contract was withdrawn amid problems concerning research freedom and breaches of security and a new one awarded to the Research Analysis Corporation (RAC) of McLean, VA. RAC absorbed many ORO personnel and provided the Army with an ORO-RAC *continuum* through the 1970s. See Lynn Rumbaugh's report and *New York Times,* 21 May 1961, p. 1.

4. See Rumbaugh, *US Army Operations Research*.

5. Lynn D. Smith, "Facts, Not Opinion," *Army* (Dec 1969), pp. 25-26 & 31.

6. See *American Military History*, edited by Maurice Matloff (Washington, DC: Office of the Chief of Military History, 1969), Chap. 26, for an official account, as well as *Department of the Army Manual FY 82* (Washington, DC: GPO, 1982), Chap. 5, p. 27; also Virgil Ney, *Evolution of the Army Division 1939-1968* (Ft. Belvoir, VA: Combat Operations Research Group, 1969), pp. 70-75. Critical coverage of the same material appears in Russell F. Weigley, *History of the United States Army* (Bloomington: Indiana University Press, 1984), Chap. 21. See also Doughty, pp. 12-19, and the in-depth critical analysis presented in A.J. Bacevich, *The Pentomic Era: The US Army Between Korea and Vietnam* (Washington, DC: National Defense University Press, 1986).

7. Armour Research Foundation, *Operational Study*, Part I, pp. 1-2 & Part II, pp. 53-56 & 60; Moenk, *Command and Control*, pp. 32 & 36; James E. Hewes, *From Root to Mc-Namara: Army Organization and Administration, 1900-1963* (Washington, DC: CMH, 1975), pp. 217 & 259.

8. Matloff, pp. 605-606; Weigley, pp. 551-552; *AR 10-5* (1964-1972) and *AR 71-1* (1964-1968).

9. *US Army Combat Developments Command: AR 10-12* (1963-1968); *AR 71-1*; Mary C. Lane and John P. Kelly,

Today's Vision — Tomorrow's Victory: A Brief Survey of Army Combat Developments (Ft. Belvoir, VA: USACDC, 1966), Chap. 5.

10. *DA Manual FY 82,* Chap. 5, p. 28; *American Military History*, Chap. 27; Weigley, Chap. 22; and Ney, *Division*, pp. 75-92.

11. Harry W.O. Kinnard, "Vietnam Has Lessons For Tomorrow's Army," *Army* (Nov 1968), p. 78; Dwight E. Beach, "Report on the Half Life of CDC," *Army* (Nov 1964), p. 79; and *Military Review* (Oct 1962), p. 100.

12. Robert S. McNamara, *The Essence of Security: Reflections in Office* (New York: Harper & Row, 1968), pp. x-xi & Chap. 6; Douglas Kinnard, "McNamara at the Pentagon," *Parameters* X (Sep 1980), pp. 22-31; Matloff, pp. 605-606; Weigley, pp. 550-551.

13. McNamara, *Essence of Security* and "Managing the Department of Defense," in *A Modern Design for Defense Decision*, edited by Samuel A. Tucker (Washington, DC: ICAF, 1966), pp. 11-19: For scholarly assessments of the new defense management, see James M. Roherty, *Decisions of Robert S. McNamara: A Study of the Role of the Secretary of Defense* (Coral Gables, FL: University of Miami Press, 1970), especially Chap. 2, and Gregory Palmer, *The McNamara Strategy and the Vietnam War: Program Budgeting in the Pentagon, 1960-1968* (Westport, CT: Greenwood Press, 1978), Chap. 3.

14. Alan C. Enthoven and K. Wayne Smith, *How Much is Enough? Shaping the Defense Program, 1961-1969* (New York: Harper Row, 1971), Chaps. 2-3 in general and especially pp. 60-61, 73-75 & 106-108.

15. Douglas Kinnard, "McNamara" and *The War Managers* (Hanover, NH: University Press of New England, 1977).

16. See Thomas C. Thayer, *War Without Fronts: The American Experience in Vietnam* (Boulder, CO: Westview Press, 1985), as well as Enthoven and Smith's *How Much is Enough?* See also BDM Corporation, *A Study of Strategic Lessons Learned in Vietnam,* Vol. VI, Bk 2 (McLean, VA, May 1980), Chap. 15.

17. Enthoven and Smith, pp. 270-271, 292 and 303-306; Thayer, *War Without Fronts*, pp. 259-261. The *Southeast Asia Analysis Report* appeared from 1965-1972, 50 issues in all. The JCS was hostile to it, believing its information incorrect or misleading, and attempted to have its distribution limited to OSD only.

18. Enthoven and Smith, pp. 305; *A Systems Analysis View of the Vietnam War*, edited by Thomas C. Thayer, Vol. 4 (Office of the Assistant Secretary of Defense for System Analysis, 1975), pp. 36-45. This compilation includes most issues of the *Southeast Asia Analysis Report*.

19. *Ibid.*, pp. 305-306; *System Analysis View*, Vol. 4, pp. 217-227. David E. Ott, *Field Artillery 1954-1973* (Washington, DC: USDA, 1975), pp. 187-188, reports that LTG Frank T. Mildron, Dep CG, USARV, ordered the reduction.

20. Enthoven and Smith, pp. 306-308.

21. *War Without Fronts*, pp. 5 & 56; see especially Chap. 6.

22. John H. Hay, Jr., *Tactical and Materiel Innovations* (Washington, DC: Department of the Army, 1974), Chaps. I & XVI; Doughty, pp. 29-40. See also Richard G. Stilwell,

"Evolution in Tactics — The Vietnam Experience, *Army* (Feb 1970), pp. 15-23 and Zeb B. Bradford, Jr., "US Tactics in Vietnam," *Military Review* LII (Feb 1972), pp. 63-76. A recent study by Andrew F. Krepinevich, Jr., *The Army and Vietnam* (Baltimore: Johns Hopkins Press, 1986), argues that nothing meaningfully distracted from the European orientation during the Vietnam War.

23. Ney, *Field Manuals*, p. 107; US Army Concept Team in Vietnam, "Operational Evaluation of Armed Helicopters, 16 October 1962 — 15 March 1963," report (South Vietnam, 10 May 1963).

24. Lynn D. Smith, "Facts, Not Opinions," pp. 24-26 & 31.

25. Harry W.O. Kinnard, "Vietnam Has Lessons," pp. 77-78 & 80. General Kinnard, who commanded the 1st Cavalry Division (Airmobile) in Vietnam, wrote this article afterwards while Commanding General of CDC.

26. MACV *Directive 70-1* (17 Dec 1969); MACV, "Minimizing Aircraft Damage and Loses from Enemy Ground Fire," report Saigon, 30 Jul 1964, (MHI Doc# MACV-MAD-EGF); and MACV *Directive 10-17* (21 Nov 1967).

27. See, for example, the following articles in *Military Review:* "Scientific Approach to Military Problems," XLV (Jul 1965), pp. 32-39; "Systems Analysis in the Army," XLVII (Jul 1967), pp. 89-95; "Scientific Military Decision-Making," XLIX (Oct 1969), pp. 60-67.

28. Francis J. Kelly, "Operations Research," *Military Review* XLVIII (May 1968), p. 11-15.

29. Julian J. Ewell and Ira A. Hunt, Jr., *Sharpening the Combat Edge: The Use of Analysis to Reinforce Military Judgment* (Washington, DC: Department of the Army, 1974). See especially, pp. 3-5.

30. An informal early call for the fourth element appeared in an article by Y.Y. Phillips, Jr., "The ROAD Battalion in Vietnam," *Army* (Sep 1966), pp. 53-56.

31. The 9-volume report (short title: *ARCOV*), dated 25 April 1966, was published under the auspices of USARV. See especially, Vol. I, *Basic Report*, MHI document: USARV-ARCOV-CDC & DA.

32. *ARCOV*, Vol. I, p. III-1 & IV-1.

33. USARV, ARCOV study, attached letter of transmittal, USARV to Army Chief of Staff, dated 23 April 1966; DA, Approval of ARCOV, Enclosure 3 (CDC review), Enclosure 1 (DA approval), and attached letter of transmittal, dated 26 October 1966. *Annual Report of the Secretary of the Army* in *Report of the Secretary of Defense, Fiscal Year 1968* (Washington, DC: GPO, 1968), p. 173.

34. Ewell, Senior Officer Debriefing, report (9th Infantry Division, 3 Nov 1969), p. 10. See also transcribed interview of William T. Leggett, 27 May 1983, Senior Officer Oral History Program, Project 83-1: Battalion Command in Vietnam, US Army War College and USAMHI, Carlisle Barracks, PA, pp. 7-8, in which he describes creation of the fourth rifle company from the battalion's reconnaissance element (Company E).

35. Donn A. Starry, *Mounted Combat in Vietnam*, (Washington, DC: DA, 1978), pp. 10 & 84-91; and USARV, *Evaluation of US Army Mechanized and Armor Combat Operations in Vietnam (MACOV)*, Vol. 1, (South Vietnam, 28 Mar 1967) and accompanying letter of transmittal, USARV to Army Chief of Staff, 4 April 1967. Also CDC, *Review and Analysis of MACOV* (Ft. Belvoir, VA, 15 May 1967) and attached letter of concurrence, ACSFOR to CDC, 18 December 1967.

36. David E. Ott, *Field Artillery*, pp. 169-172 & 238-239.

37. French Army, *Lessons of the War in Indochina*, Vol. 2 (1955), translated for the Rand Corporation (RM-5271-PR, May 1967), p. 223.

38. *Ibid.*, pp. 206-207 and 222-228; Vol. III, pp. 54-56; see also BDM Corporation, *A Study of Strategic Lessons Learned in Vietnam*, Vol. VI, Bk. 1 (McLean, VA, May 1980), Chap. 1, especially pp. 2 & 18 and Vol. VII, Chap. 2, pp. 5 & 35.

39. *AR 1-19* (May 1966), Para. 13; *AR 71-1* (May 1966), Para. 9 and (Sep 1968), Para. 3.3.

40. Approximately 50 CDC Trip Reports, most dated 1968-1969, are filed in MHI's document collection (ARMY-CDC-LO-V55) or scattered elsewhere.

41. Booz-Allen Applied Research, Inc., *Scientific and Technical Support to the US Army Concept Team in Vietnam (ACTIV)*, final report (Bethesda, MD, Jun 1972). *AR 10-5*, Change 3 (1967); J. Elmore Swenson, "The Army Concept Team in Vietnam," *US Army Aviation Digest* (Jul 1968), pp. 16-18. MHI has several hundred ACTIV studies on file (ARMY-ACTIV).

42. HUMRRO, "Interviews on Small-Unit Combat Actions in Vietnam" report George Washington University, July 1967, 11 vols.

43. CDC, "Trip Report to Asia," memorandum for record (Ft. Belvoir, VA, 6 May 1966), MHI document; ARMY-CDC-TRA. The political turmoil was the tension and governmental crisis in South Vietnam, March-April 1966, involving the violent Buddhist campaign to topple the Ky regime; it featured bitter anti-Americanism.

44. *Bringing Up the Rear*, Chaps. 24-26; Cole, "Marshall," *Parameters*, pp. 6-7. SLAM collaborated with LTC David C. Hackworth on *Vietnam Primer; DA Pamphlet 525-2* (Apr 1967). His first Vietnam trip was in early summer 1966, the second over the 1966-67 winter, and the third in summer 1968. The second trip provided most of his material for *Battles in the Monsoon* (1967), *West to Cambodia* (1968), *Ambush* (1969) & *Fields of Bamboo* (1971).

45. *Bringing Up the Rear*, pp. 272 & 278.

103

CHAPTER 6

LESSONS-MANIA: REPORTING AND PROCESSING VIETNAM'S EXPERIENCES

mania: excessive or unreasonable enthusiasm; craze; infatuation.
— *Webster's Third New International Dictionary*

There are three kinds of lies — lies, damned lies and statistics.
— Mark Twain, *Autobiography*

Experience does not err; only your judgments err by expecting from her what is not in her power.
— Leonardo Da Vince, *Notebooks*

US Army self-examination in the Vietnam conflict surpassed all previous efforts to collect, evaluate, and apply operational experiences. Many of the resulting lessons were analytically derived, but even more resulted from the traditional approach of battle reporting. The unprecedented flood of usable experiences stemmed partly from the duration of the Vietnam conflict — it was America's longest war — but chiefly from the comprehensive reporting-processing system that created and managed the outpouring of experience. Lessons pervaded unit operational reporting and continually produced experience for processing. Moreover, the system fed upon itself, often multiplying the same lesson several times over. A particular lesson first reported by a field unit underwent a chain reaction of reproduction and dissemination at each of several higher headquarters and concerned agencies along the processing circuits, compounding the number of originally derived lessons repetitiously.

The service media contributed to the output by widely broadcasting lessons. *Army Digest* (today's *Soldiers*), an authorized information periodical, for example, carried routine articles on Vietnam experiences and ran a regular feature, "Battle Lore," which presented directly quoted advice from the war's combat veterans. The unofficial but influential magazine *Army* carried similar articles and, moreover, solicited paid contributions for its

regular feature, "Vietnam Reports From The Battlefields." School journals also offered such fare, and Army films presented lessons in the 16mm color series "Vietnam Training Report," which depicted actual combat episodes.[1] One could hardly wade into official or semi-official media without stepping on a lesson.

The Prescribed System

In 1966 a new term entered the indexes of US Army authority publications and "lessons learned" made a formal printed debut. Although still not officially defined, the term at least achieved recognition and legitimacy by becoming an official subject.[2] This new status reflected the reporting and processing system instituted that same year to manage the usable experiences coming out of Vietnam. For the new war, the Army initially drew upon the battle-reporting and experience-processing procedures developed during the Korean War. Embodied in two separate but complementary regulations still current in 1965, the procedures had undergone only the slightest modification since last used in combat over a decade earlier. (See Appendix A-1). The Command Report remained the basis of the lesson-learning system; through it, commanders periodically transmitted "information, evaluation, and recommendations on combat operations" to

104

higher headquarters and directly to the central processing agency, which initially remained CONARC. Changes since Korea had lengthened the reporting period from a monthly to a quarterly basis and designated the Deputy Chief of Staff for Military Operations (DCSOPS) as the ultimate destination of the reports instead of the Adjutant General. In effect, the lessons learned about lesson learning in Korea were taken into Vietnam.[3]

In the new Vietnam war, the system underwent further development. Nearly one year after the arrival of the first ground combat units, the procedures for battle reporting and experience processing underwent significant modification. In May 1966 an entirely new regulation superseded the two previous directives, integrating both the reporting and processing procedures into a single system.[4] The objective remained the rapid and effective response to information derived from current combat experience, but the reporting medium was recast in new form and new processing agencies were incorporated into the system.

No longer called Command Report, the medium for transmitting combat experiences and lessons became the hyphenated Operational Report-Lessons Learned (ORLL in official jargon). Although its features and format generally resembled those of its predecessor, the ORLL required more specificity in reporting lessons and, as indicated by its title, lesson reporting clearly became a primary purpose of the new report. One section was reserved for the itemized recording of lessons learned. Initially, the ORLLs were not *required* below division level, although commanders could require lower level units to submit the quarterly report or a special one after an operation. Once prepared the new reports went forward through channels to eventually reach a recently created HQDA staff element, the Assistant Chief of Staff for Force Development (ACSFOR), who also received an expedited copy after its endorsement by the first higher headquarters of the reporting unit. ACSFOR, it will be recalled, emerged from the 1962 Army reorganization that included the restructuring of all combat developments under the Combat Developments Command, which itself fell under ACSFOR's control. In 1966 ACSFOR replaced DCSOPS and CONARC at the top of the processing system and became chiefly responsible for supervising and coordinating the information transmitted in the new battle reports. (See Appendix A-2.) The central responsibility for processing Vietnam combat experiences and lessons had shifted from an operational command to a general staff element. ACSFOR supervised the experience-processing operations of CONARC in training matters and CDC in matters of doctrine and organization.[5] (See Appendix B-6).

By mid-1966, after almost a year of US combat operations in Vietnam, the lesson-learning procedures of the Korean War were finally adjusted to accommodate the changed Army structure and the new war. The adjusted system functioned during the 1966-1968 period of intensive US operations, requiring only fine tuning. Spread over the entire length of the eight-year war, a total of four adjustments to the system appeared in Army Regulations. (See Appendix A-1). The first and most significant change, already described, came in 1966 with the introduction of the ORLLs. In 1968, a second change re-numbered the prime regulation in a minor piece of publications housekeeping and, more significantly, extended the ORLL requirement down to the battalion level. Additionally, it designated the special nonrecurring operational reports — not the recurring ORLL — as Combat After Action Reports.[6] The third wartime revision, in September 1969, changed nothing of significance; it simply emphasized format and admonished commanders against reporting extraneous matters, especially routine administrative or logistical problems belonging to separate command or staff actions.[7] The last wartime revision went into effect in January 1971, when US ground combat activity had dwindled to a minor level. It mirrored the situation by extending the reporting period to six-month intervals and redesignating priorities: the ORLL became the medium "through which organizations report unit historical information and lessons learned during combat operations."[8] In the terminal stage of the US war effort, putting historical needs first and keeping the historical record accurate became more important than learning combat lessons.

Reporting Lessons: A Case Study

As the first US Army ground combat unit committed to Vietnam and among the last to

leave, the 173d Airborne Brigade (Separate) nicely illustrates the actual practice of lesson reporting during the war. Arriving May 1965 and departing August 1971, the 173d served in-country for over six years, during which time it regularly prepared and submitted the required battle reports. In the same span of time, enough officers and men passed through the brigade — many as casualties but most through rotation — to replenish its authorized strength at least three, perhaps four, times over; yet, its organization remained intact, and its operations continued despite the incessant personnel turnover. The 173d's battle record in Vietnam attests to that, as do its extant battle reports.[9] Examination of those reports reveals the operation of the lessons-learned reporting system and a disturbing transformation of the reports.

Shortly after arrival, the 173d began conducting combat operations and evaluating the experiences. The commander, Brigadier General Ellis W. Williamson, showed keen interest in studying and disseminating those experiences. Every few days he issued Commander's Combat Note, a recurring internal bulletin that kept officers and men generally informed, encouraging them "to continue those things that were proven to be good and to avoid repeating our mistakes." The bulletin included comments and lessons on recent operations, containing a mix of discoveries ("leather boots are not satisfactory in the wet jungle area"), cliches ("Dependable communications with the next higher echelon . . . is an absolute necessity"), and banalites ("the American fighting man will rise to the task . . . when he has good leadership").[10] These "lessons" came directly from experience and were shared. Additionally, Gen. Williamson conducted formal oral critiques of recent operations with his staff and unit commanders, the notes of which were reproduced and distributed in the manner of the bulletin. By this procedure, he hoped to extend the study of recent combat experiences beyond the oral sessions and identify "those techniques and procedures which require modifications in order to improve the system and increase combat effectiveness for future operations.[11]

It seems clear that the 173d's commander arrived in Vietnam primed for learning lessons and quickly established appropriate internal procedures. The 173d's lesson-learning system was not supposed to be a closed circuit, feeding only itself with its evaluated combat experience. In 1965, then-current Army Regulations required units to submit Command Reports after at least three months of combat operations. The reports were designed to transmit information and lessons from a field unit to Headquarters, Department of the Army (HQDA), for central processing and pertinent application throughout the Army.[12] In compliance with the regulations in force, the earliest battle report of the 173d Airborne Brigade was a Command Report, dated 1 March 1966 — nearly a year after its arrival in Vietnam — which covered the brigade's operations during November-December 1965, when US combat intensified. In further compliance with a Headquarters, US Army, Vietnam, directive, a second brigade report followed two weeks later covering the same period but with a new title, "Lessons Learned Report." A few months after that, the new Army-wide reporting system based on the ORLLs went into effect, and for the remaining five years of its Vietnam service, the 173d's battle reports followed the ORLL format and procedures.

Whatever the title or format of the 173d's earliest battle reports, they clearly fulfilled the intended purpose of transmitting evaluated combat experiences. The brigade's first report contained conclusions and lessons derived from nine combat operations. Deeming successful its defensive techniques, aggressive patrolling, daily aerial reconnaissance, and artillery fires, as well as its use of chemical agents against enemy bunkers and tunnels, the first report also related optimistically: "A series of highly successful night attacks were conducted which proved beyond a shadow of a doubt that the night does not belong to the Viet Cong."[13]

Under the ORLL system, after May 1966, the 173d's battle reports continued for a while to provide the content and spirit displayed in the pre-ORLL reports. However, discernible from 1967 through 1969 is a pattern of pronounced growth in volume and a shift from evaluating experience to merely recording data. The early reports averaged 20-30 pages and centered around lessons. Soon, the page count doubled, then tripled, and by 1969 culminated in tomes of more than 150 pages

without counting the numerous attachments. Meanwhile, Section II of the report, specifically earmarked for listing lessons, remained nearly constant at about ten pages of some 20-25 items. The expansion in content came chiefly from the addition of detailed data on the brigade's activities. Anything quantifiable, it seems, became incorporated into the reports, much of it appearing as statistics in lengthy lists. Some of the data was obviously useful, but much was superfluous and, in some cases, ludicrous.

Take, for example, the 173d's report on its operational activities for May-July 1967. After headlining a confirmed body count of 206 enemy killed and another 469 possibilities, the report listed 150 categories of captured enemy materiel that filled six full pages. It itemized, understandably, each weapon model and round of ammunition captured, but it also tallied bunkers, tunnels, foxholes, lean-to's, classrooms, and 1,395 meters of trench. Did someone really weigh the reported 15,595 pounds of captured rice? Could it have been the same person who counted the 7 cans of Pet Milk and 10 chickens? A miscellaneous section in the list — the largest section — boasted 3 cigarette lighters, 1 bar of soap, 2 wallets, 40 bottles, 1 suspender, and 11 "French Tooth Paste." In regard to the last-listed item, for whatever it is worth, the 173d failed to record additional captures of French toothpaste in succeeding reports, but it did list the seizure of three more tubes of the ingredient (country of origin not specified) and four toothbrushes during August-October 1967. Nor was American toothpaste slighted; its statistics appeared in the civic action section of the ORLLs, where precise count was kept of toothpaste and soap distributed to Vietnamese civilians.

Such lists and details pervaded the 173d's ORLLs. Much of the data, to be sure, had obvious significance, such as the 7,000 pungi stakes found during February-April 1967. The same report also included the interesting capture of one bushel of marijuana. Some of the data, like the single canteen cup listed as captured during May-July 1968, simply invoke wonder. If such trivia served any higher purpose than page filler, than the war, indeed, was fought and measured "by the numbers."

One of the main purposes of the ORLLs, in fact, was to provide information on current combat operations.[14] Nevertheless, the other primary purpose — to evaluate and transmit lessons — became overshadowed by the volume of operational and activities data. In the 173d's report covering May-July 1969, 75 pages of so-called "significant" enemy contacts were listed, each contact described in a paragraph along with map coordinates. One must appreciate that this prodigious listing of detailed enemy locations appeared in an Operational Report-Lessons Learned prepared five months after the first enemy contact reported therein. The ORLL was not intended as an intelligence report or a daily log; it was supposed to transmit evaluated experience, not routine data. The enclosures of the 173d's ORLLs reveal the same pattern of abundant but routine information. Lengthy Combat After Action Reports prepared following specific operations were usually attached, as were samples of captured documents, psychological operations leaflets, and many other supporting and illustrative materials. They added detailed bulk to the already swollen body of the report.

By mid-1969, the volume and detail of the 173d's reports had peaked, followed by dramatic decreases. The report for August-October 1969 consisted of only ten pages that simply summarized the quarter's operations and then itemized the lessons. The similarly lean reports during the brigade's last two years in Vietnam reflected the overall winding down of US participation and the new pacification mission assigned to the brigade. Its effect returned the 173d's ORLLs to their initial purpose of transmitting lessons, not compiling operational data. Ironically, a revision of the ORLL reporting system near the end of the war made the recording of detailed and accurate information a major purpose, but by then the 173d no longer recorded massive amounts of data in its ORLLs.[15]

The 1966-1969 growth pattern evident in the 173d Airborne Brigade's ORLLs can be seen repeated generally in the ORLLs of the other combat brigades and divisions in Vietnam.[16] During the long war, as the recurring preparation of the ORLLs became routinized, the inclusion of more and more detailed activities data became standard until the lessons-learned reports became, in effect, trivialized activities reports. To fully account for the transformation, it is necessary to bring into consideration the consequences of certain top-level management aspects of the war.

Given the quantitative problem-solving approach emphasized by the Office of the Secretary of Defense, and in view of the unique nature of a war not measurable by the usual standards, the statistical measurement of indicators naturally followed. With military operations conducted under a strategy of attrition, success had to be measured by the numbers of enemy killed, weapons captured, and so forth, not excluding any useful indicator of progress — even toothpaste. The reporting systems developed in the Pentagon and elaborated upon by the field commands reflected the need for measurable data. The ORLLs did not escape that statistical need.[17]

Role of Historical Activities

An additional factor accounting for the transformation of the Vietnam ORLLs can be discerned in the needs and efforts of Army field historians. Beset by problems of command and control, field historical activities in Vietnam were channeled by design and default into the battle reports. Receiving this new attention, the ORLLs evolved into major historical documents, and their preparation and support became a chief function of the Army's military history activities in Vietnam.

Like lesson learning, the conduct of field historical activities in Vietnam became a command responsibility. Similarity ended there. The governing historical regulation made commanders responsible for "the collection, maintenance, and retirement of historical records and source

processing historical products, whatever those products might be. Although Army field historical activities intended initially to include the preparation of monographs and studies in Vietnam, such products rarely materialized and even the intent was eventually dropped.[18]

In contrast, the US Air Force's historical activities in Vietnam included not only the preparation of contemporaneous monographs but also the institutionalized analysis of combat air operations. Two major historical programs went beyond traditional history and specialized in evaluating specific topics requested by the Air Staff and, in general, the validity of concepts and doctrine. The initial program evolved during the prewar assistance effort and was known as Project CHECO, the acronym standing for the Contemporary Historical Evaluation of Counterinsurgency Operations. ("Counterinsurgency" became "combat" in 1965, then "current" in 1970.) Its purpose was to collect, disseminate, and analyze operational data and experiences for current and future impact on Air Force policies and doctrine. Guided by the Air Force Historical Division and under the operational management of Headquarters, Pacific Air Force, CHECO's teams prepared hundreds of monographs for reproduction and distribution during the war.[19]

The other Air Force historical program, known as Project Corona Harvest, had wider scope. It evaluated the Southeast Asia experience for its application to the total Air Force. Initiated in 1966, the program was centered at the Air University's Aerospace Studies Institute in Alabama and

effort was required of commanders beyond their vigilance against the trashing of anything with historical value; otherwise, they passively awaited the advice of the field historians. Commanders prepared no specific historical reports and units submitting ORLLs were excused from preparing an annual historical supplement or other organizational history. Field commanders and historians had no identifiable historical product to prepare and no medium through which to transmit historical information, nor was there any established system or specified procedure for

report system. The collected information become a major source for studies that impacted on Air Force concepts and doctrine.[23] In Corona Harvest, as well as the mutually supportive CHECO, the Air Force made extensive, utilitarian, and contemporaneous use of its historical activities in the Vietnam war.

Lacking similar programs for its historical effort and products, the Army's historical activities in Vietnam were generally limited to providing advice and other forms of assistance to field commanders. The historians at the major commands

served as court archivists, preserving records and compiling the history of the command's annual activities. MACV's Military History Branch, organizationally located within the Secretary of the Joint Staff, prepared the required annual command histories from the summaries and documents provided by the various staff elements.[21] Military history detachments augmented the staff historians as needed and performed certain other operational functions.

The first history field detachment had arrived in South Vietnam in September 1965, followed eventually by 26 additional detachments, more than triple the number that covered the Korean War. Assigned by the USARV command historian to various headquarters for limited periods, the detachments generally advised and assisted commanders on historical matters, preserved records, and conducted interviews. They did not research and write monographs. While under the control of their host commanders, the detachment historians often found themselves diverted to various routine headquarters tasks, notably the preparation of after-action reports and ORLLs.[22] In lieu of any other comparable outlet for historical information, the ORLLs served the purpose. With the task of preparing the reports thrust upon the field historians, necessity was turned into virtue by the subsequent historical upgrading of the lessons learned reports.

In assuming the task of preparing ORLLs, the historians went beyond their chartered responsibility that specified only advice and support. At the war's beginning, the military history regulation recognized the Command Report as the basic historical summary of combat operations, supplemented by special studies, interviews, official records, and the like, all of which would constitute source material for future researchers. One of the major functions of field historical activities was to advise commanders on the report's historical adequacy. This function was transferred to the Command Report's successor, the ORLL. The Office of the Chief of Military History, which coordinated Army historical activities but did not control its field operations, left no doubt in published technical guidance that the ORLLs were of prime importance in the Army historical program. The inclusion of detailed information was encouraged in order to make the reports adequate for later historical research.[23]

In addition to the assumed task of preparing ORLLs, field historical activities also included conducting combat interviews and preparing occasional small-unit battle studies. For combat action interviews, the history detachments visited units and interviewed selected participants. Some of their products consisted merely of transcriptions, such as the 33 interviews conducted by the 21st Military History Detachment with Special Forces personnel who had participated in the 1969 Battle of Nui Coto. Other interview products were narrative accounts of actions, some of which occasionally entered the lessons-learned processing system, where they were reproduced and distributed at HQDA level if they included a lessons-learned section.[24] The interviews conducted by the field historians were not used extensively for experience evaluation and lesson derivation; the historians were too few and the interview program too limited. The major historical contribution to the contemporaneous evaluation of combat operations was not oral history but ORLL history.

Processing Lessons: The Outer Circuit

Preparing ORLLs was only the first or collection stage of the overall lesson-learning system. Once prepared and forwarded, the battle reports followed prescribed routes along which higher headquarters and designated agencies processed and applied the lessons. It may be helpful to visualize two processing routes traveled by the ORLLs: an outer one, which carried the reported lessons from Vietnam to HQDA for top-level consideration and potential Army-wide application, and an inner route, which allowed in-country or local application. (See Appendix B-9). More than routes, they functioned as circuits when the reported lessons evoked responses that returned, directly or indirectly, to Vietnam's battlefields. Direct responses took such form as authorized modifications of organization or doctrine, improved equipment, or simply the dissemination of awareness information. Indirect responses reached Vietnam with the arriving replacements who had received stateside combat training that incorporated the lessons. In whatever form, the combat lessons began with the lowest reporting units on the Vietnam battlefield.

The ORLL-reported lessons travelling the outer circuit received, once the system became fully operative, the coordinated and concentrated attention of the Army's concerned command structure. However, the full operation of the outer circuit was not achieved until the ORLL-based system had been implemented, the quarterly reports flowed regularly, and various management techniques worked out. Only by early 1967 can the outer circuit be considered as completely operational, which was well over a year and a half after the initial commitment of ground combat units. Until then, there had been sporadic and limited processing of experience.

Shortly after Vietnam became a major American war, HQDA began to reproduce and distribute — without evaluation — various experience material gathered from the new battlefields. Aware that many usable experiences were contained in Vietnam's combat operations, as well as other ongoing stability operations taking place in the Dominican Republic and from major field exercises, HQDA considered it important to put such information in the hands of the trainers: "These lessons learned can result in higher enemy kills, better chances of survival for our individual soldiers, and an increased combat effectiveness of our units."[25] Soon a rudimentary processing circuit took form for the distribution of the experience-based materials being sent unsystematically from various observers and commanders in Vietnam. At first this circuit attempted to operate, more or less, under the experience-processing system inherited from the Korean War, which designated DCSOPS as the ultimate destination of the Command Reports and Headquarters, CONARC, as the major processing and application center. However, the new ORLL-based reporting and processing system, instituted the next year, in May 1966, recognized the recent structural changes and designated the Assistant Chief of Staff for Force Development (ACSFOR) as the system's pivotal point. ACSFOR, already generally responsible for supervising training, doctrine, and combat developments, became additionally responsible for the "coordination, supervision, and establishment of the overall system for the collection, recording, and dissemination of lessons learned."[26]

ACSFOR ultimately received all of the ORLLs after they passed successively through the various headquarters located in Vietnam and then the Hawaii-based US Pacific Command, the controlling overseas headquarters. Meanwhile, one copy of each unit's report went more expeditiously from the first endorsing headquarters directly to ACSFOR; this served as a "hot line." (See Appendix B-9). Within ACSFOR a special Operational Reports Branch was established to manage the lesson processing, which chiefly involved distributing the lessons to the appropriate commands and then tracking the results. As a General Staff agency without operational ability, ACSFOR only coordinated and supervised this processing and application. ORLLs received and administered by its Operational Reports Branch were reproduced by the Adjutant General's Office and distributed to commands having the appropriate operating functions or to service schools and other activities as information. ACSFOR expected return notification within 90 days of the actions taken by the proponent commands on the reported lessons.[27] The two most important commands receiving ACSFOR's lessons distribution were CONARC and CDC.

CONARC, having lost its doctrinal and combat developments roles in the 1962 Army reorganization, concentrated on evaluating and applying the training matters inherent in the ACSFOR-distributed lessons. As the major training command, CONARC operated the training centers through which passed the constant stream of replacements continually needed to replenish the units in Vietnam, where individuals served a fixed tour of 12 months. Unlike the lesson-learning systems of the Korean War and World War II, the training command's role was strictly limited to training matters; doctrinal and materiel matter belonged to other specialized commands. CONARC only converted Vietnam-based experiences and lessons into suitable training schedules.[28]

Indicative of CONARC's circumscribed role in the lesson-learning system was its training periodical's status. Beginning October 1965, *Operations, Lessons Learned* appeared quarterly through 1969 and was similar to the lessons literature produced during the Korean War by the Office of the Chief of the Army Field Forces (OCAFF), CONARC's predecessor. The pamphlet contained digests of comments made by observers and commanders on various subjects, immediately

followed by pertinent references to current training literature. Readers were invited to submit comments and suggestions to CONARC's Fort Monroe headquarters. Wide distribution of the early issues, published as CONARC pamphlets, reflected the former primacy of CONARC and its predecessor OCAFF in lesson-learning matters, as well as the incomplete development of the new ORLL system. By 1967, however, distribution of the pamphlet became limited to primarily a training clientele and it became a HQDA publication, although CONARC remained its proponent.[29]

CDC as Workhorse

While CONARC specialized in applying Vietnam's combat lessons to training matters, the Combat Developments Command (CDC) at Fort Belvoir, Virginia, devoted much attention to applying Vietnam's ongoing lessons to doctrine and organization. CDC's responsibilities and operational functions made it the most significant processing agency of the outer circuit. It evaluated the ACSFOR-distributed lessons and the experience materials provided by its own components to uncover any immediate requirements for new or improved concepts. At the same time, it searched for trends that indicated a need for future-oriented combat development actions. The Vietnam experience materials provided CDC with a means of uncovering both current and future doctrinal requirements. Its structure and resources enabled the command to process and apply lessons concurrently to both time frames.[30]

CDC's management techniques for Vietnam experiences included data storage, validation, and direct application. A special directorate within the command's headquarters received the incoming materials, stored and cross-referenced their data, then distributed the documents within the command and, finally, coordinated the resulting actions. Other headquarters directorates specialized in doctrine, organization, and materiel, each determining the validity of reported lessons within their specialty. If determinated to be valid, the lessons were integrated into current studies or war gaming and then incorporated as a finished product into authority publications. Having proponency for many of the Army's field manuals, CDC could directly incorporate most operational

adjustments or new tactical features into the appropriate manuals. Often CDC evaluators discovered that lessons and recommendations reported from the field had been previously recognized and already appeared in standard literature, requiring merely an appropriate reference.[31]

CDC informed ACSFOR by quarterly reports on the progress of its lessons evaluations and actions. Lessons materials received from ACSFOR and elsewhere were accounted for in the reports, which collectively reveal the levels and pattern of CDC activity. According to its first report, covering March-May 1967, CDC reviewed 218 ORLLs and separate Combat After Action Reports, of which 93 individual lessons required direct action or warranted further study. The same approximate level of activity continued for almost the next two years, averaging each month a review of nearly 70 reports that uncovered over 40 lessons for CDC action. Then the pace of evaluation slowed dramatically in 1969, becoming a crawl in 1970-1971 with only an average of five or so actions per month. CDC lesson evaluation activity obviously paralleled the dwindling degree of US ground combat in Vietnam.[32]

While the ACSFOR-distributed ORLLs supplied the bulk of the experience material, CDC dealt with additional mediums transmitting combat experience and lessons from Vietnam, such as observer or trip reports and debriefings. Regarding the debriefings, two separate programs were involved, one in support of ACSFOR and the other entirely a CDC operation.

ACSFOR had general responsibility for the Senior Officer Debriefing Program, begun in 1963, in which high-level commanders and other key officers prepared written reports after completing their field assignments. The program was not limited to Vietnam assignments, but the reports produced during the extensive and lengthy US involvement in Southeast Asia obviously predominated. Forwarded by the departing officers to ACSFOR, the reports were reviewed and then distributed for action or information. CDC and other commands on the distribution list processed the debriefing reports as applicable.[33]

The other debriefing program was an internal affair initiated and conducted solely within the command. Vietnam veterans assigned to CDC,

identified by means of questionnaires, selectively prepared brief but guided written reports on aspects of their Vietnam experiences. In some cases, individuals were interviewed in depth at one of the CDC's specialized directorates. Summaries of the compiled debriefing reports and transcribed interviews became a data bank of retrievable information, from which periodic syntheses and analyses of the collected data were prepared and distributed within the command. Although drawn from a narrow base — CDC's peak strength never exceeded 7,000 personnel, including a thousand civilians — and confined to the command, the Debriefing of Returnees from Vietnam program could well serve as a model for the computer-assisted processing of oral interviews. Although the CDC interviewing did not take place in the field fresh after the battle, it systematically generalized and categorized the mass of details from oral testimony.[34]

Computer technology enabled the Combat Developments Command to create a storehouse of retrievable experience data. CDC's data banks were replete with lessons-related information from the Vietnam ORLLs, debriefings, after-action reports, and other media. Drawing upon this repository, the command prepared, under ACSFOR's auspices, a lessons-learned index in 1969-1970. Three thick printed volumes resulted, which listed approximately 3,000 subjects covering the 1965-1969 period. The distributed index enabled researchers to locate pertinent lessons in the mass of Vietnam experience materials. Copies of the indexed documents became available through the Defense Documentation Center, a central bank of research materials for the armed forces.[35]

The Inner Circuits

Vietnam's experiences and lessons contained in the ORLLs not only traveled an outer circuit but often concurrently completed a shorter in-country circuit. This inner circuit — actually a series of circuits — constituted the field processing of Vietnam's lessons, accomplished without transmission to CONUS agencies and back again in some applied form. These inner circuits operated within units and commands and also from the lowest field units to the highest headquarters in Vietnam. (See Appendix B-9.)

Tactical units from battalion to division level evaluated their operational experiences in Vietnam and derived lessons from them. They were required to do so after the mid-1966 implementation of the ORLL system, but even before then, as illustrated by the 173d Airborne Brigade, operational procedures were evaluated against actual experience. Because lesson reporting became a reportable requirement did not make it any less imperative or useful to learn from experience, as suggested by the initiatives of commanders to disseminate lessons material within their units via internal media. *Combat Notes* publications, used early by the 173d Airborne Brigade, appeared in other units. The 9th Infantry Division even published a highly specialized *Monthly Mine and Booby Trap Report*, widely distributed, which included personal experiences and derived lessons.[36]

Disseminating experience information by no means guaranteed that applicable lessons would be learned, i.e., practiced, but making of the information available was a prerequisite. Larger units and commands relied upon publications and formal programs to circulate the information and share useful experiences within their organizations. Each one, in this regard, functioned as an inner circuit for gathering, processing, disseminating, and otherwise applying lessons. One important intra-unit application was the combat orientation of replacement personnel. Although recruits received basic combat training in stateside centers operated by CONARC, with doses of the war's lessons incorporated into the training programs, additional combat training and orientation awaited them in Vietnam. The extent and necessity of this additional instruction should not be underestimated. The policy of fixed 12-month tours of duty for individuals in Vietnam, operative since 1965 and reaffirmed several times thereafter, resulted in the continual turnover of unit personnel strengths. Although the Army's peak strength in Vietnam never exceeded 363,000, more than 2,600,000 US military personnel of all the services served within South Vietnam's borders during the lengthy war, with the large majority serving in the Army and arriving as an individual replacement. During the peak period, 30,000 soldiers per month arrived in Vietnam.[37]

To effectively manage the never-ending stream of incoming Army replacements required elaborate

reception procedures and the services of two full replacement-processing battalions in Vietnam. While undergoing in- processing, which required several days, the new arrivals attended an orientation program consisting of 56 hours of instruction on military courtesy, dress and appearance, personal hygiene, tropical diseases, and the Army Savings Program. A viewing of the film "Unique War" was included.[38] Practical combat orientation took place after this initial processing, when the new arrivals joined their assigned units. Tactical units conducted formal and intensive combat orientation and training for their replacements. The 173d Airborne Brigade ran a 5-day course in jungle operations with classes conducted by veterans of Vietnam combat, and the 25th Infantry Division, like several other units, established an "Ambush Academy."[39]

When formal orientation and training ended, the informal practices of the smallest circuit of all took over. The day-to-day supervision and guidance of new arrivals by combat-experienced small-unit leaders, along with the advice and example of battle-wise peers, constituted the last and least documented stage of the replacement's preparation for combat.

Field Lessons Literature

Experience sharing at the higher levels of the inner circuits left a much more traceable record of lessons literature. The US Military Assistance Command, Vietnam (MACV), controlling headquarters of all US military forces located in-country, served in one of its several capacities as the field operational headquarters of US Army forces in Vietnam. The US Army, Vietnam (USARV), a subordinate headquarters of MACV, controlled administrative and logistical matters, but not operations. Conveniently, the commanding general of MACV wore a second hat and also commanded USARV.[40] Under the ORLL system, lessons passed through both of these headquarters for review on their way through channels via the outer circuit to agencies located in the United States. Both headquarters utilized the inner circuits when they applied command action to the lessons and recommendations in those ORLLs. Their most common form of action was to disseminate selected experience within the

commands as awareness information or lessons literature.

Before the implementation of the ORLL-based system in mid-1966, usable experience had been processed by the controlling US headquarters in Vietnam. As early as 1962, the Military Assistance Advisory Group, Vietnam (MAAGV, predecessor of MACV) collected, processed, and disseminated combat lessons in an impressive number of published reports entitled, naturally, Lessons Learned. Based on the battle reports of the South Vietnamese Army and on reported observations by US advisors, MAAGV's literature summarized counterinsurgency experience and presented lessons. Although intended primarily for US advisors in Vietnam, the lessons, MAAGV believed, impacted on US Army tactical doctrine. Consequently, the distribution of its Lessons Learned reports included direct dispatch to other military advisory groups in Asia and schools in the US. Between 1962 and 1964, MAAGV published and distributed a total of forty of the reports.[41]

After MAAGV became MACV in July 1964, the Lessons Learned reports continued to be published and even more widely distributed, but the pace of production slowed. Under MACV the reports appeared sometimes monthly and sometimes more sporadically, and never matched MAAGV's two-year output until 1970, six years later.[42] The lessened production reflected implementation of the 1966 ORLL-based lesson-learning system and the outer processing circuit, which reduced the Vietnam command's major role. MAAGV had been the only processor of Vietnam experience before 1964, but after 1966 MACV functioned as a relatively minor part of the new Army-wide system's outer circuitry. When launched into the outer orbit, ORLLs prepared by tactical units only stopped briefly at MACV headquarters in Saigon for review before continuing their long journey to HQDA. MACV's review enabled lessons to be selected for inclusion in its Lessons Learned publication, which was itself then launched along both the outer and inner circuits. The distribution list of the MACV publication became prodigious, requiring six pages to identify the more than 250 recipients of some 1,500 copies.[43] Distributing the reports along the outer circuit added to the mass and duplication of experience information processed by the HQDA

agencies. Distributed along the inner circuits, however, the reports more usefully shared experiences among the field forces in Vietnam, which received nothing similar from the outer circuit.

Few of the Vietnam lessons processed by CONUS-based agencies and commands reached the troops and units in Vietnam in the direct form of awareness information. Many lessons, to be sure, became incorporated into stateside training programs or orientation films; others appeared in two limited series of Department of Army lessons publications.The CONARC-prepared *Lessons Learned* served only a training clientele, while the ACSFOR-prepared *Lessons Learned* series consisted of only five issues, four of which specialized in engineering subject matter.[44] The fifth one, however, entitled *Vietnam Primer*, contained a wide-ranging variety of combat tips and was reminiscent of the World War II and Korean War lessons pamphlets, perhaps because it was co-authored by S.L.A. Marshall. But, one pamphlet made little difference. During the required year of duty in South Vietnam, soldiers received their lessons information from within Vietnam, usually in the form of published combat tips disseminated by MACV and USARV.

In addition to its *Lessons Learned* reports, MACV disseminated other forms of experience material. *Hole Huntin*, for example, a 17-page one-time brochure of slick magazine quality contained glossy photographs and a narrative on successful techniques for detecting and destroying enemy tunnels. Based on the July 1967 experiences of 2d Battalion, 35th Infantry, the brochure was published by MACV and widely distributed within the command. MACV also published at least eight issues of *Combat Experiences*, a series specifically designed for sharing information with the other allied forces in Vietnam.

USARV likewise published experience literature for distribution along the inner circuits. One of its occasional publications was *Operations Report Lessons Learned*, which, despite a *nearly* exact title, was not the same as the quarterly ORLL (Operation*al* Report-Lessons Learned). This USARV publication presented summaries extracted from unit ORLLs, while its *Battlefield Reports: A Summary of Lessons Learned* appeared occasionally or quarterly between September 1965 and February 1971. A compilation of

various routine experiences and lessons on combat, service, and support operations, its subtitle soon changed appropriately to *Tips for Commanders*. One other USARV lessons publication, *Combat Lessons Bulletin*, appeared monthly or more frequently between 1969-1971, with each issue of about 45 pages specializing on a single subject, such as Kit Carson Scouts.[45]

Thus, the two top Army headquarters in Vietnam disseminated reported lessons and shared usable experiences among the field units. Commanders and staffs in Vietnam received a continual source of current ideas and examples that, if they chose, could be implemented or ignored, because the literature was informative, not directive. As such it became a significant activity within the inner circuits and was not required in the formal ORLL system. A command prerogative, it apparently grew in response to theater needs. As these needs lessened after 1968 with the growing Vietnamization of the war and corresponding US troop reductions, so did the production of the theater literature. By 1970, both MACV and USARV had relegated the selection and distribution of lessons to minor status. Once a major function of both headquarters' operations staffs, experience processing in MACV's J-3 became a function of the section that handled ceremonies, while USARV's G-3 turned the function over to ACTIV and other contract researchers.[46] The end of the war and its lessons was near.

Sound Doctrine, Adjusted Techniques

Early in the war, when American hopes and troop levels were both high, MACV processed pre-ORLL experiences and incorporated them into its *Handbook for US Forces in Vietnam*. First published in 1965, the lengthy manual was reprinted under Department of Defense auspices and distributed to Vietnam-bound personnel of all the armed services. A second updated edition published by MACV in 1968 incorporated ORLL-reported lessons.[47] This handbook represented more than the usual dissemination of lessons and experiences. Intended as operational orientation for Army ground combat forces, it had nothing in common with the slim pocket-sized orientation booklets issued as general information on host countries.[48] The MACV handbook, a detailed

reference manual incorporating proven operational experiences in Vietnam, sought to "preclude repetition of past mistakes." Follow the handbook's guidance, suggested General Westmoreland's foreword, because it supplemented previous training with "certain basic techniques and procedures which have evolved out of several years of combat operations against the enemy." A lengthy chapter on tactics and techniques contained "lessons learned from actual combat operations."[49]

In disseminating such lessons and experience literature, MACV, as well as USARV, did not directly confront established Army doctrine. Recurring assurances appeared throughout their lessons literature that the fundamentals of current combat doctrine remained sound. Its application in Vietnam, however, entailed taking into account the unique conflict and its diverse physical and cultural environments, necessitating imaginative use of tactics and techniques by commanders. To assist imaginations, MACV provided experience-derived guidance in its handbook, as well as in other media, and considered the guidance supplementary to established doctrine.

Doctrinal adjustment in Vietnam was a widespread phenomenon. The ARCOV and MACOV study groups had recognized during their analytical evaluation of Vietnam experience that operational and organizational procedures were done differently in-country, which led to certain authorized adjustments of doctrine for use in Vietnam. Commanders continually adjusted doctrine and not necessarily by authority. The quintessential uniformed analyst in Vietnam, General Julian Ewell, concluded that "general doctrine keeps one in a sound ball park area and the 'little difference' gives an extra zip to the operation." Specifically, he had "learned by doing," noting, for example, that it was impossible to plan and execute attacks; rather, one conducted reconnaissances and then exploited whatever opportunities arose. To impress such flexibility upon his officers who were, in his words, "mech/armured types with European background" (steeped in standard doctrine, one may suppose), he advised them "to act as though they were conducting armored cav reconnaissance operations."[50] This was not doctrinal heresy but adjustment to situational imperatives that only experience could initially determine.

In disseminating locally adapted doctrine or technique through its lessons literature, MACV recognized that the lessons did not apply to every situation and did not consider them directive in nature. Their value varied. Some lessons might have direct application in combat operations, others indirectly in training, or some may be used "in reinforcing or revising existing doctrine."[51] USARV's lessons literature echoed MACV's on the variability of the lessons, as in this self-description of its *Battlefield Reports* booklet:

> The unique aspect of this publication is that all of the lessons, whether related to combat or support operations, are eyewitness, unedited accounts and, as such, reveal the incidents as the commanders actually experienced and described them. Thus, each reader can draw his own conclusions and determine the extent of applicability to his particular organization and its operations.[52]

USARV's lessons literature also echoed MACV's on the soundness of official tactics and doctrine as set forth in the field manuals and taught at the service schools, but added significantly:

> The soldier in the field doing the job is in the best position to tell us where improvement and changes in techniques can be made. We are remiss if we fail to take advantage of his knowledge and combat experience.[53]

The USARV literature cautioned against construing the improvements and changed techniques as doctrine, and described these disseminated lessons as "a sampling of ideas generated by the combat commanders in their search for new methods of defeating the enemy in the unique environment of Vietnam.[54] By avoiding the label of doctrine and describing Vietnam lessons as ideas, methods, and techniques, the field lessons literature disseminated experience-proven ways of applying or adjusting doctrine to meet unique and constantly changing field situations. After all the enemy learned lessons, too, quickly adapting to each new US effort. "Many of the lessons rapidly lose their pertinency," observed the departing US II Field Force commander, Julian Ewell, whose analytically derived innovations once confounded the enemy. According to Major General Ellis W. Williamson, 25th Infantry Division commander in 1969, who in 1965 in command of the 173d Airborne Brigade

publication assured readers throughout the course of the war: "The majority of the lessons are clearly stated in current doctrine and techniques . . . This suggests that most of our doctrine is sound and is being correctly applied." Although admitting that refinements of established doctrine sometimes occurred, CONARC considered that the fault lay with inadequate emphasis or presentation of the correct principles.[56] On the other hand, the two major field headquarters in Vietnam sanctioned and, indeed, encouraged improvisation by their nondirective lessons literature. In offering its first volume of *Battlefield Reports*, USARV prefaced the collection of lessons and experiences by quoting directly from the official Army field manual on counter-insurgency operations in order to underscore the need for flexibility:

> Counterguerrilla warfare is a contest of imagination, ingenuity, and improvisation by the opposing commanders. Commanders must be ever alert to change or adapt their tactics, techniques, and procedures to meet the specific situation at hand. Once the routine operations of a counterguerrilla force become stereotyped, surprise (a major ingredient of success) has been lost.[57]

Later issues became more explicit on the need for improvisation to counter and overcome the adaptive "chameleon characteristics" of the enemy:

> This booklet is a collection of concepts and techniques which, although not entirely new, are excellent examples of improvisation which have been used by different combat commanders. These techniques, which proved successful in a specific area, may not provide the same results in all sections of the country. The natural ingenuity of the US soldier will quickly modify these techniques to fit his own situation and area of operations.[58]

In sum, the inner circuit processing of ex-

disseminated Vietnam's operational experiences and combat lessons, usually monthly. Conceivably, in a given month, six freshly published digests or monographs of operational experience passed through a field commander's hands. This was in addition to the required ORLL reports, designed specifically to transmit lessons at least every three months, which every tactical battalion in Vietnam submitted. While the ORLLs moved up the inner circuits and along the outer one, the lessons literature moved down the circuits. Furthermore, the various internal media of the field units also shared experiences. Somewhere in the middle of all this information movement and activity were the commanders, who received and transmitted the potentially usable experiences called lessons. How well did they learn lessons in Vietnam?

Many of the disseminated lessons found application in training and operations. How long those lessons remained valid under the changing local situations is another matter, although continual reporting and dissemination practices seemed capable of coping with that problem. Were the lessons really learned, however? Were they institutionally incorporated within combat units undergoing incessant changeovers of personnel and the frequent rotation of commanders? Or did each soldier and each commander have to learn from personal experience despite the profusion of lessons? One departing division commander late in the war summed up his command experience and reported "...there are no profound lessons to be learned, although a number to be 'relearned'."[59] Although lessons were plentiful, they were not necessarily learned. Perhaps the unknown cynic was correct as well as clever when he noted that the Army did not acquire eight years of combat experience in the Vietnam War. It only acquired one year of experience repeated eight times. If so, we must do better next time.

NOTES

1. The *Army Digest* feature began in the July 1967 issue and ran for one year. See also *Army* (Jun 1966), pp. 26-33 and Carlisle R. Petty, "Don't Forget Nothing . . . Lessons Learned — Vietnam," *Army Information Digest* (Aug 1966), p. 36.

2. *DA Pamphlets 310-1, Indexes of Administration Publications* (1966-1977) included the term when citing individual issues of two pamphlet series (350-15 and 525), both entitled "Lessons Learned" and the Operational Reports-Lessons Learned regulation. It should be noted that the subject listing was not generic or conceptual; it reflected only the fact that these publications contained the term "lessons learned" in their titles.

3. *Command Report: AR 525-24* (29 Oct 1959) superseded its 1953 edition and *Processing of Combat Information: AR 525-60* (17 Feb 1960) superseded the 1951 *SR 525-85-5*.

4. *Operational Reports-Lessons Learned: AR 1-19* (26 May 1966).

5. *Ibid.*

6. *Operational Reports-Lessons Learned: AR 525-15* (26 Jan 1968). This regulation superseded *AR 1-19*, which was classified by its "1" prime number as a regulation in the "Administrative" series of regulations. The "525" prime number of the new regulation placed it in the "Military Operations" series.

Incidentally, in the introductory paragraph of the new *AR 525-15*, it was announced clearly that Headquarters, DA, had established "the Lessons Learned Program" based on the ORLLs. Since no other reference to that program or indication of its existence was uncovered, it is presumed that the writers of the regulation wished to stress the already existing procedures by their use of the phrase.

7. *AR 525-15* (25 Sep 1969) superseded the January 1968 edition.

8. *AR 525-15* (Nov 1970) superseded the September 1969 edition.

9. MHI's collection of Vietnam War ORLLs includes a nearly complete run of the 173d's reports, cited hereafter only by the period covered, e.g., February-April 1967. The personnel turnover information was derived from the monthly gains data appearing in the 173d ORLLs.

10. 173d Airborne Brigade, *Commander's Combat Note No. 63* (5 Jun 1965) one of several dozen issues on file in MHI's ORLL collection. A few of the issues were forwarded by the CDC Liaison Detachment in Vietnam to CDC Headquarters, Ft. Belvoir, VA, and were reproduced by HQDA for distribution to CONUS addressees.

11. 173d Abn Bde, "Critique of OPORD 17-65," dated 27 July 1965, and "Critique of Operation Hump," dated 19 November 1965, are two examples.

12. *AR 525-24* (Oct 1959) and *AR 525-60* (Feb 1960).

13. 173d Abn Bde, Command Report for November-December 1965, dated 1 March 1966.

14. See the opening paragraphs of all ORLL regulations, 1966-1970.

15. *AR 525-15* (Nov 1970).

16. Based on sampling of ORLLs prepared by the 1st Cavalry, 1st Infantry and 4th Infantry Divisions, the 5th Special Forces Group, 9th and 25th Infantry Divisions and all divisional brigades.

17. See Douglas Kinnard, *War Managers*, pp. 68-75, and Chap. 5, this study.

18. *Military History — Responsibilities, Policies, and Procedures: AR 870-5* (1965), Secs. VII & XII and (1968), Chaps. 9 & 14, and (1971), Chaps. 9 & 14. Also, Richard A. Hunt, "The Military History Detachment in the Field,"in *Guide to the Study and Use of Military History* (Washington, DC: US Army Center of Military History, 1979), pp. 315-317.

19. Details of the programs' organization and evolution are provided by Warren A. Trest, "Projects CHECO and Corona Harvest: Keys to the Air Force's Southeast Asia Memory Bank," *Aerospace Historian* 33 (Summer 1986), pp. 114-120. A number of the CHECO monographs with their transmittal correspondence are in MHI's documents collection, AF-PACAF-CHECO.

20. *Ibid.*

21. *MACV Directives 870-1* (Jun 1967) and *872-2* (Aug 1968 & Jan 1970).

22. Hunt, pp. 315-317 and *AR 870-5* (1965-1971).

23. *Ibid.,* and *The Military Historian in the Field: DA Pamphlet 870-2* (Apr 1969), pp. 21-23.

24. Combat Action Interviews of 14th, 19th & 21st Military Detachments, 1968-1970, in MHI's collection of ORLLs and the 18th MHD interviews in its Base Hall Vietnam collection filed under detachment number. Also *AR 870-5* (1968-1971) and *Vietnam Primer: DA Pamphlets 525-2* (Apr 1967), Foreword and pp. 1-2.

25. DA cover letter, dated 2 November 1965, transmitting USARV *Battlefield Report No. 1* (30 Aug 1965) and DA cover letter, dated 22 March 1966, transmitting USARV *Operations Report, Lessons Learned, Report 1-66: Operation Crimp* (Mar 1966). The latter document is not an ORLL but a similarly titled publication and is covered later in discussion of the inner circuit. Incidentally, that particular USARV report consisted chiefly of a reproduction of the 173d Abn Bde's *Commander's Combat Note No. 91*.

26. *AR 1-19* (May 1966); *AR 10-5* (Jul 1968); and Petty, "Don't Forget Nothing!," pp. 32-36.

27. *Ibid.,* and DA cover letters on ORLLs.

28. BDM Corp., *Strategic Lessons*, Vol. VII, Chap. 2.

29. The first four issues of *Operations-Lessons Learned* appeared as *CONARC Pamphlet 350-15-1 thru 4*, then as *DA Pamphlet 350-15-5 thru 15*.

30. *AR 10-12* (Jan 1968); *AR 1-19* (May 1966); *AR 525-15* (Jan 1968), Para. 5b; and USACDC, *Lessons Learned: CDC Regulation 71-13* (9 Jan 1967).

31. *CDC Regulation 71-13* and CDC, "Operations Reports-Lessons Learned" (Ft. Belvoir, VA, Jan 1967-May 1971) submitted quarterly to ACSFOR.

32. CDC's "Operations Reports-Lessons Learned" to ACSFOR, 1967-1971.

33. *AR 10-5* (1968), Para. 2-31a (19) and MHI's collection of nearly 200 Senior Officer Debriefings, Vietnam (DA-ACSFOR-DBSO-V55). See also *AR 26-1* (Nov 1966) and *AR 525-14* (Jul 1971) and the following analysis of the contents of the MHI-held debriefings: Leo R. Kennedy, "An Examination of Vietnam War Senior Officer Debriefing Reports," student essay (US Army War College, May 1986).

34. *CDC Reg 71-12* and scattered Debriefing of Returnees from Vietnam Reports (Ft. Belvoir, VA, CDC, 1967-1970) in MHI (CDC-DRV). CDC personnel data appears in the monthly *Strength of the Army Reports* prepared by the Deputy Chief of Staff for Personnel (DCSPER).

35. *Lessons Learned Index*, 3 vols. (Ft. Belvoir, VA, CDC, 1969-1970) cites the source documents on each subject. The Defense Documentation Center (DDC) began in 1951 as the Armed Forces Technical Information Agency (ASTIA), became DDC in 1963 and, in 1979, the Defense Technical Information Center (DTIC).

36. 18th Military History Detachment, Combat Action Analyses of 25th Division, 1968-1969. The analyses themselves were published in the division's *Combat Commanders' Notes*. See also Ewell, *Combat Edge*, pp. 144-147.

37. Office of the Deputy Chief of Staff for Personnel, "Study of the 12-Month Vietnam Tour," (12 Jun 1970); Harry Summers, Jr., *Vietnam War Almanac* (NY: Facts on File Publication, 1985), p. 351; and *DA Historical Summary FY 1969*.

38. Norman S. Nelms, "Replacement System in Vietnam from Buildup to Mid-1969," student thesis (US Army War College, May 1970) and Earl F. Cole, "Replacement Operations in Vietnam," *Military Review* XLVII (Feb 1968), pp. 3-8.

39. 173d Abn Bde, ORLL, May-July 1966, p. 12 and the Training Section of subsequent reports. See also *Vietnam The Fourth Year* (South Vietnam, 173d Abn Bde 1969), p. 38, and *Vietnam—The Fifth Year* (SVN, 173d, 1970), p. 34; also Harris W. Hollis, Senior Officer Debriefing Report (25th Inf. Div., 1 Apr 1970), p. 57 and Richard B. Cole, transcribed interview, Company Commanders in Vietnam (CCIV 82-12, MHI, 1982), pp. 30-31.

40. Concise descriptions of the two headquarters appear in Shelby Stanton's *Vietnam Order of Battle* (Washington, DC: US News Books, 1981), pp. 59-62 and Summers, pp. 235-237 & 350. For a detailed analysis, see George S. Eckhardt, *Command and Control, 1950-1968* (Washington, DC: Department of the Army, 1974).

41. US MAAGV and MACV, *Lesson Learned Nos. 1-83* (South Vietnam, 1962-1970), with many letters of transmittal attached in MHI's collection (MACV-LL). Nos. 1-40 were MAAGV products, dated between March 1962 and March 1964.

42. The MACV-prepared *Lessons Learned* ran from No. 41 (Jul 1964) through No. 83 (Oct 1970), a total of 43 issues.

43. See, for example, MACV's *Defense Against Mortar/Recoilless Rifle Attacks: Lesson Learned No. 60* (10 Dec 1966) and *Fire Support Coordination in the Republic of Vietnam: Lesson Learned No. 77* (20 May 1977).

44. DA Pamphlet 525-series, Nos. 2-6.

45. Scattered issues of the USARV publications are in MHI's Vietnam documents collection (Base Hall, HQ Cabinet, File 3000). The *Combat Lesson Bulletin No. 12* (Nov 1969) covers the Kit Carson Scouts.

46. BARRING Report, p. 2; MACV J-3 "Briefing Material Regarding the Organization and Functions of the Assistant Chief of Staff, J3, JGS," dated 16 October 1970 (Base Hall VN Doc. 2020 file).

47. The Marine Corps prepared its own version in 1967, *Professional Knowledge Gained from Operational Experience in Vietnam: NAVMC Pub 2614*, which served as their non-doctrinal reference and included some US Army experience and lessons material.

48. DOD-published *Pocket Guides* to the many countries hosting US military personnel. Identified within the Army by DA Pamphlet numbers, the *Vietnam Pocket Guide* appeared in two series and three editions: *DA Pam 20-198* and *DA Pam 360-411* (1966 & 1971).

49. Department of Defense, Armed Forces Information and Education, *Handbook for US Forces in Vietnam* (Washington, DC: GPO, 1966). This is the first (1965) MACV edition as reprinted by DOD.

50. Julian J. Ewell, Senior Officer Debriefing Report (9th Infantry Division, 3 Nov 1969), pp. 1 & 5.

51. Letters of transmittal on MACV *Lesson Learned* booklets, 1965-1971. See the representative *No. 76* (22 Nov 1969) issue.

52. Cover letter on Vol. 2, (30 Jun 1966).

53. Cover letter on USARV *Battlefield Reports*, Vol. 1 (30 Aug 1965) and single issue of March 1970. The wording of the transmittal information remained virtually unchanged throughout the life of the publication.

54. *Ibid.*

55. Ewell, Senior Officer Debriefing Report (II Field Force, 12 May 1970) and Williamson's debriefing report (25th Infantry Division, 10 Sep 1969), p. 3 & 19-20.

56. *CONARC Pamphlet 350-15-1* (18 Oct 1965), Para. 2 and *DA Pam 350-15-15* (1 Nov 1969), Para. 26.

57. As appeared in the preface of USARV *Battle Reports*, Vol. I (30 Jun 1966), taken from *Field Manual 31-16*.

58. Cover letter on USARV *Battle Report*, dated 18 January 1968.

59. MG Harris W. Hollis, Senior Officer Debriefing Report (25th Infantry Division), 1 April 1970, p. 1.

EPILOGUE

Experience teaches.

— Tacitus, *History*, Book V, Chap. 6

We should be careful to get out of an experience only the wisdom that is in it —
  and stop there; lest we be like the cat that sits down on a hot stove lid. She will
  never sit down on a hot stove lid again — and that is well; but also she will
  never sit down on a cold one any more.

— Mark Twain, *Pudd'nhead Wilson's*
New Calendar, Chap. 2

I shall the effect of this good lesson keep,
As watchman to my heart.

— Shakespeare, *Hamlet*, Act 1, Sc. 3.

Well over a decade has now passed since the end of the last war. This has been time enough for lesson learning to have become lost and found again in different places and new forms. If the next war will only oblige and delay its arrival, it is possible that the US Army will be ready for it with pertinent lessons already learned from peacetime experiences and an ongoing system ready to learn effectively and immediately from new wartime experiences.

Lessons Lost

For the US Army, the end of the war in Vietnam meant the end of the wartime system of lesson learning. However, the procedures and system for learning lessons developed during the long conflict were not specifically dismantled or demobilized; they simply faded away in disuse and disappeared in the structural change and doctrinal realignment that followed the war.

Lesson learning's supportive organizational structure did not survive the Army reorganization that took place in 1972-1974. The sweeping restructuring eliminated the key elements of the wartime system. ACSFOR, the system's apex, was completely abolished, while CDC, the operational workhorse, and CONARC, the trainer, were replaced by a realignment of responsibilities and functions. Out of this emerged the new Training and Doctrine Command (TRADOC) with its headquarters at Fort Monroe. TRADOC absorbed most of the missions previously assigned to

the defunct CDC and CONARC, becoming the agency responsible for developing and promulgating doctrine and for the individual training in that doctrine. In addition TRADOC's responsibilities included combat developments, thus giving the new command a powerful concentration of chartered functions ideal for operating a central lesson-learning system. Unfortunately, no specific responsibility or function for learning lessons carried over from the defunct commands. TRADOC, despite having all the essential ingredients for centralized lesson learning concentrated within it, did not inherit any mission for combat experience processing. The Army had lost its wartime system in the organizational shuffle. No authorized lesson-learning system, procedure or agency existed in the Army structure of the mid-70s, nor were there any contingency plans for one in the next war.[1]

In addition, a doctrinal realignment further weakened any possible lingering influence the Vietnam experience-processing system might have exerted. As part of the recovery from the frustrating war, pressures were unleashed to make up for the decade of preoccupation with unconventional warfare and to modernize conventional forces with the latest technological advances. The Army quickly looked away from its experience in Southeast Asia and focused on the possibilities in Western Europe. Doctrine development naturally followed the shifted focus.[2]

A period of intensive doctrinal ferment followed the American end of the Vietnam War. Over the

next decade several major revisions of basic doctrine emerged, all of which concentrated on tactical and operational deployment in Europe. This NATO-focused doctrine concerned armored-mechanized combat and left little room for the small-unit, infantry-intensive warfare experienced in Vietnam. The Army ignored its most recent combat experiences and the way in which those experiences became lessons. The baby was thrown out with the bath, the processing system with the lessons. In its place, the Army relied on research and analysis, field tests and exercises, and the historical experiences of World War II to prepare itself for the next war — a mechanized conflict in Europe against the Warsaw Pact.[3]

That war came earlier than expected — in surrogate form — and significantly influenced the development of post-Vietnam doctrine. The Arab-Israeli conflict of 1973, the October War, served the US Army well and bloodlessly as a laboratory of recent and relevant combat experience. Each side in the conflict had been supplied with sophisticated American and Soviet weapons, with which they engaged in modern technological combat, the kind expected to be fought between NATO and Warsaw Pact forces in Europe.[4] TRADOC, the Army's new and chief doctrinal agency, studied the October War's lessons very closely and drew heavily upon its experiences. The resulting doctrine was expressed in the Army's basic operations manual, *FM 100-5*. The 1976 edition introduced the dominant idea of "active defense," which emphasized the firepower of superior US weaponry. Further doctrinal ferment produced refinements for the manual's revised 1982 edition, which introduced the "AirLand Battle" concept. The focus of Army attention had unmistakenly shifted to Europe's potential for high-tech armored-mechanized warfare.[5] The lessons and lesson learning of Vietnam, like the war itself, were considered best forgotten by many.

Actually, the lessons and lesson-learning system of the Vietnam War had not been simply forgotten. The Army cast them aside with the revitalized NATO focus, buried them in the organizational reforms, and considered them unnecessary once the war ended. No lesson-learning system, beginning with American involvement in World War I, had survived beyond

the particular war that gave it life. Peacetime has always been the nemesis of many American military institutions and practices, and lesson learning after the Vietnam War proved no exception. The end of American combat in Vietnam by itself would have probably doomeu the system, but the Army's postwar organizational and doctrinal changes guaranteed its demise.

The end itself came piecemeal and unnoticed. Within a year of the Paris peace accords formally terminating American combat involvement in Vietnam, the keystone directive upon which the lesson-learning edifice rested disappeared from the list of current regulations. Then came the Mideast War in 1973, followed the next year by the completion of the organizational restructuring. New European-oriented doctrine was promulgated in the 1976 edition of *FM 100-5*. By 1977, the term "lessons learned" had even disappeared from the indexes to Army publications,[6] symbolizing the passing of lesson learning from contemporaneous concern and into the realm of history.

History Lessons

Once ended, the Vietnam War became a concluded event and part of the past — history, in a word. Any lesson drawn from its wealth of experiences became a historical, not contemporaneous, lesson. It was a simple matter of timing. Whether or not the war's lesson-learning system continued to function made no difference. After January 1973, the war formally belonged to the ages and to the historical approach and to the historians. Thereafter, whoever sought lessons from America's Vietnam War had to look backwards, historically, with the wisdom and burden of hindsight.

As history, of course, the war still offered tactical lessons, which continued to be drawn occasionally by individual researchers and seminars at the branch schools and service colleges. In 1975, for example, the Command and General Staff College prepared a casebook of historical experiences on combined arms. It was a logical evolution of the pioneering classic, *Infantry in Battle*, prepared four decades earlier at Fort Benning. This "second" volume, done at Fort Leavenworth, presented illustrative combat episodes from the three most recent US wars and,

significantly, the 1973 Mideast War. Following each brief account, analytical commentary drew out the teaching points or lessons. The sixty-two selected experiences in the casebook reflected accurately the post-Vietnam reorientation of basic doctrine toward Europe: well over half of the cases selections came from World War II, almost a quarter from Korea, and less than ten percent from Vietnam. Moreover, the only non-American experience covered, the October War, received equal coverage with the Vietnam War.[7]

As reflected in the casebook, the historical approach can assuredly serve current needs and prevailing interests. The past is large enough to accommodate almost everything, which is one justification for having trained historians on hand, who are familiar with the methodology of working in the vast expanse of past experience. In recognition of the usefulness of past experience and the need to effectively manage its exploitation, the Army since 1945 has expanded its historical activities.

The central historical agency, the Center of Military History (CMH), has put much of the Army's recent history, especially its wartime experiences, into published form. It and a designated Chief of Military History arose out of World War II and the need to prepare and manage that war's vast experience. By 1950 the agency became formally entitled the Office of the Chief of Military History (OCMH) and functioned under that title for the next generation, producing official narrative histories on World War II, then Korea, and now Vietnam. Meanwhile, the historical expertise available within OCMH attracted countless queries and resulted in its staff support activities becoming prominent. By 1963, expanded Army historical activities needed to be consolidated and standardized under the Chief of Military History. A decade later OCMH was renamed the Center of Military History (CMH).[8]

A supplementary historical development has been the Military History Institute (MHI), located at Carlisle Barracks, Pennsylvania, home of the Army War College (AWC). MHI was created for the express purpose of collecting, preserving, and making available the unofficial key source material of the US Army. (The official sources, once retired, eventually and very selectively become incorporated into the vast repository of the US National Archives, which stores all of the nation's

important records.) Established in 1967 as the Military History Research Collection and redesignated a decade later, MHI has grown into a complex of library, archival, and special collections that serve the Army as its chief repository of unofficial records, selected documents, and other significant source material.[9] Additionally, MHI's proximity to and close ties with AWC, have proven mutually supportive, especially in regard to several innovative oral history and educational programs.

Another historical activity has close access to doctrine development — the Combat Studies Institute (CSI) at Fort Leavenworth. Established in 1979, CSI was given the specific mission of providing historical studies and perspective on doctrinal matters. Under TRADOC, not the Chief of Military History, CSI functions as a laboratory for war, drawing heavily upon historical experiences to produce both short- and long-term studies on current doctrinal concerns.[10] Although there are no existing procedures to systematically derive lessons from past experience and then directly evaluate them against current doctrine — an ideal situation from the historians' perspective — the indirect and occasional use of processed historical experience at CSI is a promising use of the vast resource of past experience.

The overall Army historical community, however, has a vested interest in the source material that they use and that their successors will use. Living in the present, historians have sought to build a solid basis for future historical research. They stepped boldly into the lesson-learning void of the post-Vietnam period. In 1977 military history activities assumed the function performed by the then-defunct ORLL battle report of the Vietnam War. Army Regulations were re-written to add a new historical responsibility to those already prescribed for commanders in combat or contingency operations: a special historical report to be prepared and submitted directly to the Center of Military History. Details of the new report, which at first had no designated title, were unspecified; its content, frequency of submission, and levels of preparation would be determined later.[11] For the present, it represented a giant first step by military history activities into the lesson-learning field. In the absence of lesson-learning guidance or any other approximation of a battle report, the new historical requirement filled

part of the void and would serve as the wartime battle report. In 1982, the new historical report officially entered the Army records control system with the title of Command Report (RCS CHIS-11). It served specifically as the authorized medium of a de facto lesson-learning system under the supervision of the Chief of Military History.[12] Combat lessons had become history lessons literally — before the next war could even occur. Timing, of course, had nothing to do with it; military history activities had established and would operate a contingency lesson-learning system, the only one the Army had.

The newest version of the battle report, the Command Report — a throwback in terminology to the Korean War — served as the foundation for historically operated lesson-learning procedures. The report's format included a special section for the commander's comments on operational inadequacies and successes in doctrine, tactics, equipment and special concerns — potential "lessons" or "observations," in other words. Commanders were to prepare the report in at least three copies: one for the unit record, two for CMH, and none for the next higher commander or any place else. It was to be one-on-one, the unit commander and the Chief of Military History. CMH would serve as the Army's repository for the battle reports and also a clearinghouse for distributing the commanders' lesson material to other appropriate agencies.[13] Thus, in the absence of any other prescribed contingency reporting and lesson-learning procedures, CMH became by default the executive agent for the Army's next wartime and contingency lesson learning.

One drawback with these "history lessons" is that they represented primarily historical interests, not those of doctrine development or other total Army concerns. The new Command Report emphasized features of special interest to practicing military historians at the time and in the future. As underwritten by the Army historians, the report's purpose became the gathering of data, usable experiences, and "a prompt, thorough, and exact account" of the combat operation undergone by the commander. Only historians concerned with the future deciphering of battlefield facts would place such primacy on accuracy and expect combat commanders to

prepare their reports "per professional historical standards" assisted by command and field historians.[14]

As it had done several times before in the last half century, historical activities influenced battle-reporting and lesson-learning procedures. The historians, in yet another reprise of their role, were left in charge. They had learned their lessons well from the most recent experience in the Vietnam War, when field historians had assumed by default the preparation of ORLL's for commanders who were otherwise occupied. Historians could also have drawn on earlier experiences in 1949-1950 and the 1920s. Army historians have vested and legitimate interests in source material — its collection, preservation and availability. They naturally wish to influence the creation of that source material.

Grenada as Test

The October 1983 intervention in Grenada can be seen as a test case of the history-influenced battle reports and lesson-collection procedures set up by the historians. Admittedly, it is a poor choice for testing. The rescue and pacification operation, codenamed URGENT FURY, was short-lived, extensively inter-service and, above all, included only a few days of sharp but limited combat. It did not allow formal lesson learning the necessary time to collect, process, and apply lessons to ongoing operations. Any contemporaneous lesson learning in Grenada occurred personally, informally and expediently among the combat participants.

If it did not produce formal lessons for the Army in the strict contemporaneous sense, URGENT FURY did produce contemporaneous controversy and "historical" lessons. The public controversy chiefly associated with the operation involved restrictions on media participation — a weighty matter raising the censorship issue — and a lesser matter of prolific awards. The number of medals awarded for the operation far exceeded the number of troops deployed on the island. More important than the attention given to the awkward but explainable question of who was awarded what and why, however, was the attention afforded to lesson learning. Some thanks are due the medals controversy, as well as other concerns,

for stimulating interest and focusing attention on US military performance in the operation. Congress looked into the matter with hearings conducted by the House Armed Services Committee, whose published report, significantly, was entitled *Lessons Learned as a Result of US Military Operations in Grenada*.[15] In general, the show of US military force in the lower Caribbean attracted intense scrutiny and criticism. Some of it fit the category of lessons. A score of articles appeared in military and civilian journals as the critics, reformers, and students of war sharpened pencils or switched on word processors. Grenada was soon sucked dry of its lessons, judging from the spate of published articles and books.[16] The problem was that the usable experiences had no clear direction to follow nor any established procedures to transform them into lessons and apply them. How does an army learn its lessons once it discovers them?

The crude lesson-learning procedures established and operated by the historians had not fared well in the Grenada operation. It was simply too brief, too small, and had too much high-powered attention and effort poured into it to expect the prescribed contingency plans for battle reporting and lesson learning to be precisely followed. The new Command Reports, apparently, were never prepared under that name nor in that format, and CMH did not gather and distribute any lessons material provided by the participating units. Instead, participating units prepared "after-action" reports and their higher headquarters and other agencies prepared "lessons-learned" reports. Furthermore, two teams of historians sent to the island conducted numerous interviews with participants and gathered much information on the terrain. However, the 44th Military History Detachment (MHD) and a special task force from the Combat Studies Institute did not have the opportunity to assist commanders on the island in the preparation of the unit reports; such matters had low priority and awaited return of the units to their home stations in the United States. The fruits of this on-site historical labor and the unit after-action reports appeared nearly two-and-a-half years after the event, in the form of a classified historical monograph on URGENT FURY. As history, it served its purpose well; as contemporaneous lesson learning, it did not.[17]

History and the historians have much to offer the Army in the exploitation of past experience. They have less to offer in contemporaneous lesson learning. There is a clash of basic interests and a problem of timing. Besides, historical activities normally carry little clout in Army affairs, and in the urgency of combat operations, commanders will pay them even less attention. Most of all, the historians do not possess the capability to process and apply battlefield lessons; at best, they can only collect and distribute them. The chief lesson of Army lesson learning is that experience-processing must be concentrated within a single major command or high-level, broad-based agency.

New Lesson Approaches

During the post-Vietnam decade, while lesson learning faded away and then underwent a partial resurrection by military historians, something else of significance was astir. Several initiatives, innovations, and other stirrings ushered in new approaches to the way the Army made use of its field and combat experiences.

One of those stirrings involved the ancient oral tradition in modern, state-of-the-art form. Electronically recorded and computer processed oral briefings became an innovative medium for transmitting lessons and helping them get learned. Near the end of the Vietnam War, high-level interest developed in an oral debriefing program for selected returnees, one that went beyond the Senior Officer Debriefing Program, which only required a written end-of-tour report done before departing Vietnam. The new program contemplated in-depth oral debriefings conducted in CONUS headquarters and agencies, similar to the internal debriefing program of the Combat Developments Command during the war.[18] This led to a milestone oral debriefing program that combines contemporaneous lesson learning and current history. The Division Command Lessons Learned program resulted directly from a 1984 initiative by Army Chief of Staff John A. Wickham, Jr., who raised the matter of how best to accomplish "a gleaning of lessons learned from commanders as they depart their commands." General Wickham suggested a "comprehensive debrief at Leavenworth or the US Army War College" to "capture lessons learned about

training, doctrine, organization, equipment, leadership and ethics and family action issues."[19] Following up on this initiative, the DCSOPS, Lieutenant General Fred J. Mahaffey, proposed that a division command program be established utilizing the existing oral history program at Carlisle Barracks.[20]

For the past decade, the Military History Institute and the US Army War College have been jointly conducting the Senior Officer Oral History program. AWC students interview retired general officers; MHI administers the program, transcribes the results, and makes the products available to researchers. Certain topical projects have been included in the overall program, such as El Salvador, Grenada, and certain aspects of the Vietnam War, especially the unique project "Company Commanders in Vietnam". This last project drew upon the remembered wartime experiences of each incoming class at the War College between 1981 and 1985. Nearly 300 interviews have been conducted and, when completed, the processed interviews will collectively constitute an accessible body of usable experiences — insights and lessons — on the war from the viewpoint of small unit commanders. This oral history approach served as a model for a similar approach to contemporaneous peacetime lesson learning.[21]

Utilizing procedures developed by MHI, the Division Command Lessons Learned program began in early 1985 as a pilot program. AWC students conduct and record interviews with departing division commanders, probing specified subjects in depth. Transcribed and transformed into a usable product at MHI, the interviews are made available to incoming division commanders, then returned to MHI for storage and study by authorized researchers. Meanwhile, selected material from all such interviews is compiled, purged of personal identification, and distributed as "Experiences of Division Command" to TRADOC for analysis and any further distribution. In May 1986, this debriefing program expanded to include current corps-level commanders.[22]

The new debriefing programs capture both historical and contemporaneous experiences and make them available. The personal insights and professional judgments of the debriefed individuals are a unique supplement to other sources of usable but less subjective experience. For example, a recent computer program created for the US Readiness Command builds and retrieves a historical record of experiences undergone during joint readiness exercises. The Joint Exercise Observation File (JEOF) is a data bank of observations, organized by subject, available via special terminals to commanders, staffs and students.[23] While the data or observations can help the users draw their own lessons, the experiences stored in this system are not official lessons, merely observations.[23]

Going several steps further towards official lessons is another recent innovation in the Army's search for usable experience, the National Training Center (NTC) at Fort Irwin, California. Activated in 1981 and fully operational three years later, NTC operates under Forces Command (FORSCOM) and trains units — not individuals — in an area of the Mojave Desert as large as Rhode Island. NTC is not just another training center. It is uniquely designed to overcome combat inexperience. It considers itself, with justification, "the world's most realistic training environment," and its two-week course is the pinnacle of the Army's training program for armored and mechanized battalions. Unique realism comes from two-sided maneuvers involving an opposition force (OPFOR) modeled specifically on the Soviet army. OPFOR, the spiritual descendant of the generic Aggressor Force of the 1950s and 1960s, fights at NTC by the Soviet manual. Additional realism comes from state-of-the-art training technology that includes laser-based simulation firing.[24]

If the NTC experience can approximate the realism of combat, or at least some of its attributes, then it follows that there are potential lessons in such experience. The lessons learned from the NTC benefit not only the individual soldiers in the units undergoing the realistic training but also impacts on the Army as a whole. Data collected from each two-week training cycle can be used to evaluate unit performance and contribute to broader matters like doctrine, organization and weaponry. While NTC's observer-controllers evaluate the participating units subjectively, a more objective assessment of their performance comes from the elaborate electronic sensing and measuring devices at the center that keep tabs on all unit movements and weapons

firing during the mock combat. The resultant data, properly interpreted, represents potential lessons for wide application.[25]

To insure that NTC experiences benefitted the entire Army and its broad spectrum of concerns, the Center for Army Lessons Learned (CALL) was established in August 1985 at Fort Leavenworth. Operated by TRADOC under the supervision of DCSOPS, CALL's mission is to develop lessons from the NTC experiences, from major exercises, and from actual combat in contemporary foreign battlefields or historical ones. CALL is to collect lessons and disseminate them to the active and reserve components of the Army. At the same time, CALL's stored lessons are available through an automated information system that commanders may tap for assistance in preparing specific operational plans.[26] Although already in operation, CALL is intended to be the focal point of a comprehensive Army-wide lesson-learning system not yet established. Proposals are pending at this writing to make CALL the central agency of a forthcoming system that will collect, evaluate, and apply the usable experiences known as lessons.[27] At first glance, this appears to be culmination of a long evolution towards enabling the US Army to effectively learn from experience. A closer look, unfortunately, suggests otherwise.

As proposed, CALL seems seriously limited in its lesson-learning capabilities, so limited that its name could be considered a misnomer. As operated now and as envisioned later, CALL is actually a center for listing lessons, not for learning lessons. Unlike the Combat Developments Command (CDC) during the Vietnam War, CALL is a mere field office and not a major command. CALL cannot directly adapt or otherwise develop doctrine and modify organization. Instead, it can only disseminate lessons in the form of information that has potential application for commanders, who may or may not choose to apply it. CALL can inform and otherwise spread good ideas — tips — on useful techniques and procedures to the Army at large — and this is good, but limited. TRADOC is the logical executive agent of lesson learning, the major command that can incorporate lessons into the Army's doctrine and training, and pass along weighty suggestions to the weapons developers and other agencies. CALL collects experience and evaluates it, but cannot make the Army learn it. While the lines of authority between CALL and TRADOC are unmistakable, the lines of application for lessons — to make them "learned" — are not yet fully defined.

Nevertheless, CALL and its emerging Army-wide system of permanent lesson learning are long overdue. They represent, at this point, the peak of more than three centuries of American lesson learning. These recent developments cap the organized processing of experience that began with the A.E.F. in France seventy years ago. What is most remarkable of all, however, is that the concern and the procedures are all taking place now, during peacetime, before the first battle of the next war. They give promise of better things about to come.

NOTES

1. *DA Manual FY 1982*, Chap. 5; Weigley, *History*, pp. 576-577; and HQDA, *US Army Training and Doctrine Command: AR 10-41* (27 Jun 73).

2. Doughty, p. 41; Weigley, *History*, pp. 583-584. According to Andrew F. Krepinevich, Jr., *The Army and Vietnam* (Baltimore: Johns Hopkins Press, 1986), pp. 4-7, the Army never meaningfully adjusted its conventional organization and approach to the Vietnam situation.

3. John L. Romjue, *From Active Defense to AirLand Battle: The Development of Army Doctrine, 1973-1982* (Fort Monroe, VA: TRADOC, 1984); Doughty, pp. 40-46; and Weigley, *History*, pp. 583-589.

4. Romjue, pp. 3 & 6-7; Weigley, *History*, pp. 583-584; Doughty, pp. 41-42.

5. *Ibid*; L.D. Holler, "Doctrinal Development, 1975-1985," *Military Review* LXV (May 1985), pp. 50-52; DePuy, *Changing an Army*, pp. 186-191.

6. *DA Pamphlet 310-1*, 1973-1977.

7. US Army Command & General Staff College, *Combined Arms Actions Since 1939* (Fort Leavenworth, KS, 1975).

8. *A Guide to the Study and Use of Military History*, edited by John E. Jessup, Jr. and Robert W. Coakley (Washington, DC: US Army Center of Military History, 1979), Chap. 11.

9. *Ibid.*, Chap. 12.

10. Based on presentation by Colonel Louis D. Frasche, MHI, 11 July 1986.

11. HQDA, *Military History Responsibilities, Policies, and Procedures: AR 870-5* (22 Jan 77), Para. 14-3.

12. *AR 870-5* (1 Oct 82), Chap. 9.

13. *Ibid.*

14. *Ibid.*

15. US Congress, House, Armed Services Committee, Hearings on Grenada, 98th Congress, 2d Session, 24 Jan 84. The controversy over the number of awards is reflected in the *New York Times*, 30 Mar 84, pp. A1 & 10, and Jeffrey Record, "More Medals Than We Had Soldiers," *Washington Post*, 15 Apr 85, p. B5. See also Army Chief of Staff John A. Wickham, Jr., "Grenada: The Medals were Deserved," *Washington Post*, 22 Apr 84, p. D7.

16. See, for example, Daniel P. Bolger, "Operation Urgent Fury and Its Critics," *Military Review* LXVI (Jul 86), pp. 57-67 and Charles Doe, "Will Its Lessons Be Taught," *Army Times* (5 Nov 84), pp. 32, 34 & 50.

17. Telephone interview with MAJ Bruce D. Pirnie, CMH, author of the classified monograph on Grenada, which is in MHI's classified collection, along with a FORSCOM history on the operation completed one year earlier.

18. Message, GEN Bruce Palmer, Army Vice Chief of Staff, to LTG William J. McCaffrey, USARV, "Briefings on Lessons Learned," 26 May 72, Bruce Palmer Papers, MHI.

19. Memo from Chief of Staff of the Army to DCSPER and DCSOPS, subject: PCC, 11 Jun 84, Oral History Branch files, MHI.

20. Memos, DCSOPS to Army Chief of Staff, subjects: PPC and Division Command Lessons Learned, undated (Jun-Aug 84), Oral History Branch files, MHI.

21. MHI, *Senior Officer Oral History Program Project Handlist, 1971-1986* (Carlisle Barracks, PA, 10 Oct 85). Interview with LTC Martin W. Andresen, Oral History Branch, MHI, 30 Jun 86; and Memo, Director MHI to LTG Vuono, DCSOPS, 18 Sep 85, Oral History Branch files, MHI.

22. Command Lessons Learned files, Oral History Branch, MHI, and additional interviews with LTC Andresen.

23. US Army War College, *JEOF*, brochure, n.d.

24. FORSCOM & TRADOC, *National Training Center*, brochure, 1980; US Army National Training Center, *Lessons Learned: Commander's Memorandum* (Ft. Irwin, CA: 20 Nov 85); Daniel P. Bolger, *Dragons at War: 2-34 Infantry in the Mojave* (Novato, CA: Presidio Press, 1986), especially preface.

25. Kenneth W. Simpson, et al, "The National Training Center: A Critique of Data Collection and Dissemination," report (National Defense University, Mar 85), Chaps. I & V; *Army Times*, 24 Mar 86, p. 42.

26. *Center for Army Lessons Learned: CAC — Ft. Leavenworth Pamphlet 525-1* (15 Mar 86); *Army Times* 1 Sep 86, p. 24; and *CALL Bulletin No. 1-86* (Jul 86), p. 1.

27. Letter, Unit Training Director, TRADOC to HQDA (DAMO-FDQ), subject: Draft AR 11-XX, Army Lessons Learned System, 6 Dec 85, with draft regulation enclosed. Also, final draft, "TRADOC Regulation 350-XX, The Center for Lessons Learned," 19 Nov 85.

LESSONS LEARNED ABOUT
LESSON LEARNING

After surveying more than two hundred years of American lesson learning, a number of conclusions emerge about exploiting battle experience. Out of this past comes the fundamental fact that contemporaneous or very recent combat experience often guided the deliberate evolution of tactics and organization, and this guidance became increasingly necessary as wars grew in scale and complexity. Where the efforts of individuals once sufficed, modern warfare demanded organizational efforts to effectively gather, analyze, and apply the lessons of the battlefield. Participation in the First World War produced the Army's first such organizational effort at contemporaneous lesson learning, and each succeeding war steadily improved the machinery and raised the level of general awareness. Operations research techniques also became major tools for analyzing experience. The Vietnam War reflected peak development in centralized, comprehensive, and effective lesson-learning procedures. Despite shortcomings, the basic achievement deserves recognition. The US Army has learned in wartime how to learn lessons.

On the other hand, there is room for improvement. Each war of this century required the Army to establish or re-establish its lesson-learning system in the midst of the conflict. Constructing the operational systems in the four wars consumed an average time of 18 months.* Unfortunately, the first battles of these wars had already been fought, as had the second, third, or more. Why not have the system already developed and operational during peacetime, ready for immediate wartime application? Instead of dismantling or ignoring the system after a war — as has been the case consistently — the lesson-learning structure needs to continue as an integral part of peacetime combat readiness. Its engine ought to be idling before the next war begins.

On the basis of past performance, the most effective procedures for managing the Army's usable combat experience involved the centralization of responsibility, control and operation. General Staff responsibility and prime control emerged as prerequisites for the systematic and total exploitation of usable combat experiences. This entails not only high-level responsibility and authority but also control over the major operating agency that exclusively or predominantly runs the system. The workhorse operator should collect and evaluate the experiences reported to it and also apply the lessons. Application means dissemination of Army-wide lesson-sharing literature and, more importantly, direct incorporation of lessons into doctrine, training, and organization. During the Vietnam War, the Combat Developments Command (CDC) approximated the wished-for concentration of responsibilities and functions.

Past wars also reveal two lesson-learning circuits: one local, the other Army wide. Centralization proved indispensable for Army-wide lesson learning but not for localized lesson-learning activities. As overseas field forces reported their experiences up through the chain of command, the information often received analysis and application along the way and before reaching the central processing agencies. The local processing of usable experience evolved on its own, without benefit of being made a specific command responsibility. It represented immediate responses to local conditions, as exemplified by the tactical and technical innovations developed in Normandy's hedgerows or by the adaptation of armored tactics in Vietnam's jungles. Local lesson-learning circuits need specific encouragement, if not a formal mandate, for these activities both serve and complement the central Army-wide circuit.

---

* Derived from the generally accepted beginning of participation to the evolutionary peak of the lesson-learning system as determined by this study. For WW II, this took from April 1917 until October 1918 (18 months); for WW II, Dec 41-Feb 44 (25 months); Korea, Jul 50-Jun 51 (11 months); and Vietnam, May 65-Oct 66 (18 months).

In order for the processing circuits to analyze and apply lessons, usable combat experience first must be collected. Two different reporting sources have identified and gathered this primary information: designated observers and field commanders. Selective reporting by the observers complements the routine reporting required of the commanders, and the dual approach provides different perspectives on the same experience. In past wars the roving observers functioned best when they possessed a high degree of authority or prestige, such as the near Inspector-General status of the AEF's observers in World War I. Such special status provides full access to events and information, while enabling their observations to stand above the flood of routine reporting. However, even with the assistance of supporting specialists and clerks — like the teams that went to Korea — the few observers cannot effectively report on continuous, large-scale field experience. That scale of reporting came best from field commanders down to at least battalion level, where intimacy with operations and regular reporting captured the details of combat. The regular reporting of lessons — first designated specifically as a command responsibility in Korea — became problematic in Vietnam with the trivialization and repetition of the quarterly Operational Report-Lessons Learned (ORLL). However, it seems preferable to repeat trivia than to dispense with the vitally necessary recurring medium like the ORLL.

Another means of collecting battlefield experience began to emerge in World War II but failed to realize its potential in subsequent wars. The group after-action interview technique — assisted later by audio recording and electronic processing — represented a new and promising approach to oral reporting. Information derived by this means can usefully enter lesson-learning circuits for evaluation and application in the same way as other data. This approach, however, has received only limited wartime use, primarily by field historians who reconstruct combat actions for posterity's sake and not for contemporaneous lessons. Recent innovative programs in oral history have utilized aspects of the approach and these procedures await major wartime application.

Until the tape recorder proves effective for battlefield lesson learning, traditional reporting media will have to continue to serve. Written battle reports remain the primary means of transmitting usable experiences through lesson-learning circuits. Meanwhile, recurring competition over this particular medium has developed out of the understandable desire by Army historians to utilize the battle report as historical source material and to so orient its procedures. The problem is clear: shall battle reports chiefly serve present or future concerns? Both lesson learning and history evolved into wartime command responsibilities, but the two concerns are not equals on the active battlefield. Battle reporting is the lifeblood of lesson learning and should be controlled by those who have the duty and responsibility to effect timely correctives.

Finally, one relatively minor but inescapable conclusion became increasingly apparent during the course of this study. "Lessons learned" is an unsatisfactory term as commonly used. In virtually every substantive and grammatical instance, "lesson" sufficed for the redundant two-word noun. For a commander to report after an action, for example, that he learned three "lessons-learned" grates upon the tutored ear but, more importantly, implies incomplete understanding of the overall process. That commander may have personally learned some lessons but the US Army did not. An army learns lessons *after* it incorporates the conclusions derived from experience into institutional form. Out of the commander's experience may come a lesson, and from that lesson may come new or adapted doctrine or perhaps dissemination of potentially useful information. Only after its institutionalization can the lesson be correctly described in the past tense as a lesson learned. Until then it remains just a lesson or usable experience, a semantic distinction that few fully appreciate.

We need to speak of "usable experiences" or "lessons" and avoid using "lessons learned," for once an army learns a lesson, the lesson disappears into doctrine, organization tables, or training programs. Lesson learning is a process, not a product. "Lesson" alone accurately describes processed experience, but trying to change an everyday speech habit may be presumptuous — and not unlike emptying the sea with a bucket. Still, a new consciousness in terminology represents a step toward fuller appreciation of how an army learns lessons.

APPENDICES

APPENDICES

CHRONOLOGICAL SCHEMATIC
OF THE
EVOLUTION OF RELEVANT
DIRECTIVES
1821 – 1986

```
        BATTLE REPORTS                              LESSON PROCESSING
          (BY TITLE)

       REPORT OF THE DAY
              1821 | GEN. REG


       REPORT OF BATTLE
              1857 | GEN. REG


       ENGAGEMENT REPORT
              1892 | TROOPS IN CAMPAIGN


  ACTION AGAINST ENEMY, REPORTS AFTER
              1924 | AR 345-105


    HISTORICAL REPORTS
         1949 | AR 345-105 | + | SR 345-105
    COMMAND REPORT
         1950 | AR 345-105
                                            1951 | SR 525-85-5
         1959 | AR 525-24
                                            1960 | AR 525-60

OPERATIONAL REPORT – LESSONS LEARNED   1966 | AR 1-19

                              JAN 1968 | AR 525-15
                              JAN 1969 | AR 525-15
                              NOV 1970 | AR 525-15

                              OCT 1973 X (RESCINDED)


       command report
              1977 | AR 870-5

       COMMAND REPORT
              1982 | AR 870-5
                                            1985 | AR 11-XX | DRAFT

                    1986
```

CHRONOLOGICAL SCHEMATIC
OF
RELEVANT ORGANIZATIONS
1940 – 1986

```
1940 ─
1941 ─                          ┌─────┐
1942 ─      WWII                │ GHQ │
                               └──┬──┘
                                  │
                          ┌─────────┐      ┌──────────┐
            ↓             │ WD, G-3 │      │ AGF HQ   │ 1942
                         └────┬────┘┌───┐ └────┬─────┘
                              │     │OPD│       │
            KOREAN            │     └───┘       │
            WAR                                 │
                         ┌─────────┐     ┌──────────┐        ⊙ ORO  1948         ┌──────┐
1950 ─                   │ DA, G-3 │     │ OCAFF    │ 1948                        │ OCMH │ 1948
                         └────┬────┘    └────┬─────┘                             └──┬───┘
                              │               │                  ⊙ HUMMRO  1951      │
                              │               │                                      │
                         ┌────────┐    ┌──────────┐     ⊙ CORG   ┌────────┐          │
                         │ DCS/MO │    │ CONARC HQ│ 1955          │ ACSR&D │          │
                         └────┬───┘    └────┬─────┘               └────────┘          │
                              │              │                    ⊙ SORO              │
                              │              │                      1957             │
                              │              │                                        │
                              │              │              ↓1961                    │
1960 ─                        │              │            ⊙ RAC                       │
                         ┌────────┐          │        ┌─────┐                        │
                         │ ACSFOR │          │        │ CDC │─ ─ ⊙ ─ ⊙ ─ ⊙           │
            VN WAR       │  1963  │          │        └──┬──┘    ↓   ↓   ↓           │
                         └────┬───┘          │           │                           │
                              │              │          ╱ ╲                          │
                              │              │         ╱   ╲                   ┌─────┐│
                              │              │        ╱     ╲                  │ MHI │┤
                              │              │       ╱       ╲                 └─────┘│
1970 ─                   ┌────────┐     ┌───────┐                                      │
                         │ DCSOPS │     │TRADOC │ │FORSCOM│ 1972                       │
                         │  1972  │     └───┬───┘ └───┬───┘                            │
1973 ◁ OCTOBER WAR       └────┬───┘         │         │                          ┌─────┐
                              │              │         │                          │ CMH │ 1973
                              │              │         │                          └──┬──┘
                              │         ┌──────┐      │                              │
                              │         │ CSI  │ 1979 │                              │
                              │         └──┬───┘      │                              │
1980 ─                        │            │      ┌──────┐                          │
                              │            │      │ NTC  │ 1981 ESTAB               │
                              │            │      └──┬───┘                          │
1983 ◁ GRENADA                │            │         │ ─ 1984 FULL OPERATION        │
                         1985 │            │         │                              │
                         ┌──────┐          │         │                              │
                         │ CALL │          │         │                              │
                         └──┬───┘          │         │                              │
```

SEE ACRONYM GLOSSARY, APPENDIX C

US ARMY
BASIC OPERATIONAL DOCTRINE
1821 - 1986

GENERAL REGULATIONS, 1821
                    1825
                    1836   "PROTO-DOCTRINE"
                    1841
                    1847   — brief section on
                    1857   general dispositions
                    1861   for battle
                    1863
                    1881 ART. 69: "TROOPS IN CAMPAIGN"

TROOPS IN CAMPAIGN, 1892

FIELD SERVICE REGULATIONS, 1905
                    FSR, 1908
                    FSR, 1910
                    FSR, 1913
                    FSR, 1914
                    FSR, 1915
                    FSR, 1916
                    FSR, 1917
                    FSR, 1918
                    FSR, 1923

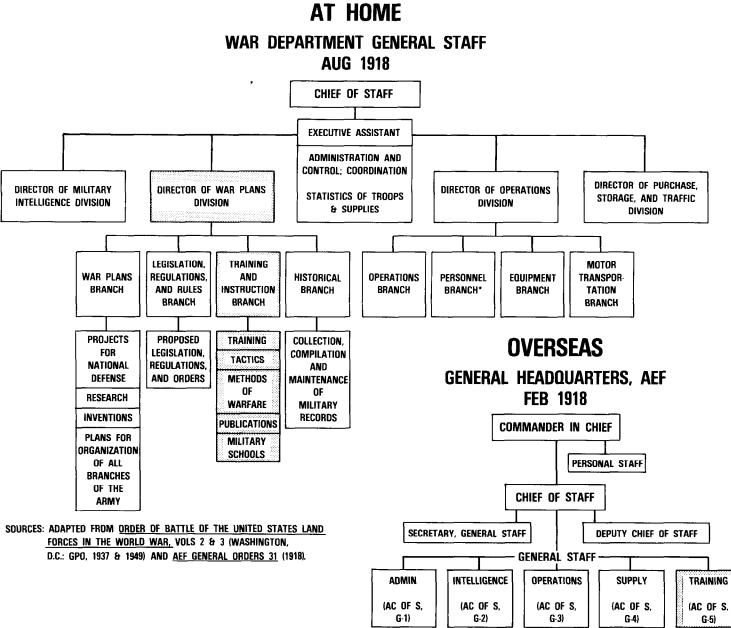[MANUAL FOR COMMANDERS OF LARGE UNITS (PROVISIONAL), VOL I: OPERATIONS, 1930]

TENTATIVE FIELD SERVICE REGULATIONS, OPERATIONS: FIELD MANUAL 100 - 5, 1939
                    FIELD SERVICE REGULATIONS, OPERATIONS: FM 100 - 5, 1941
                    FSR: FM 100 - 5, 1944
                    FSR: FM 100 - 5, 1949
                    FSR: FM 100 - 5, 1954
                    FSR: FM 100 - 5, 1962
          OPERATIONS OF ARMY FORCES IN THE FIELD: FM 100 - 5, 1968
                    :FM 100 - 5, 1976
                OPERATIONS: FM 100 - 5, 1982
                    :FM 100 - 5, 1986

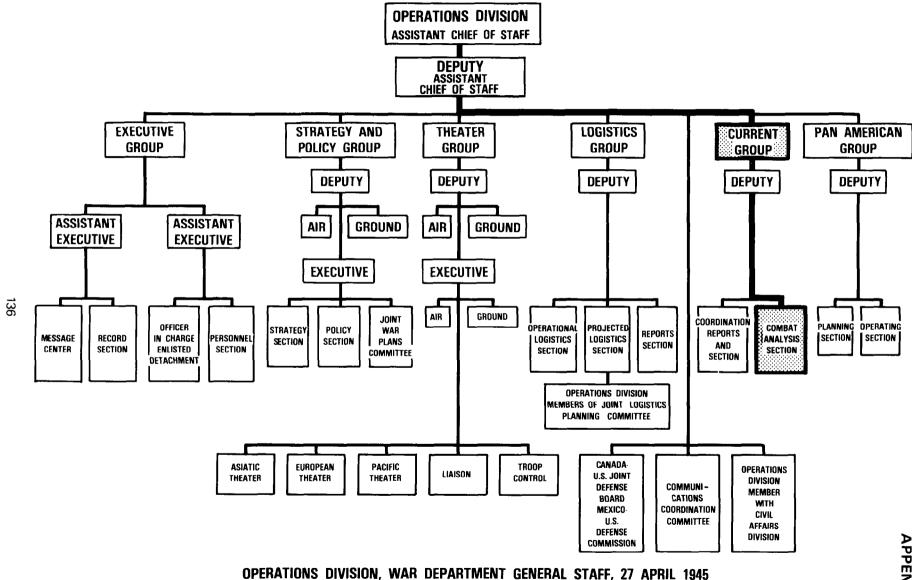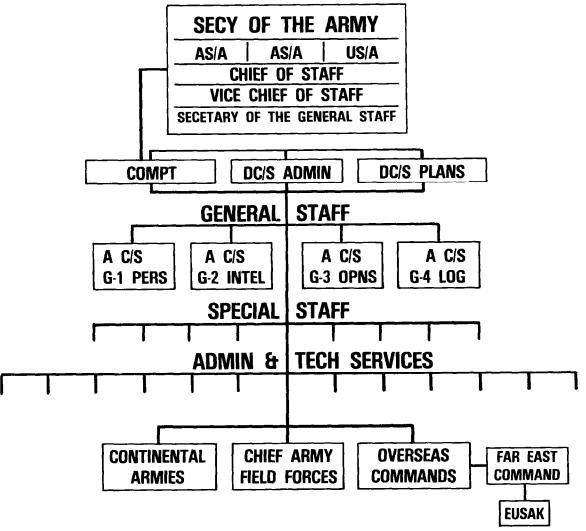# US ARMY OPERATING HEADQUARTERS, WWI

AT HOME

WAR DEPARTMENT GENERAL STAFF
AUG 1918

```
                          CHIEF OF STAFF

                        EXECUTIVE ASSISTANT

                        ADMINISTRATION AND
                        CONTROL; COORDINATION

  DIRECTOR OF MILITARY   DIRECTOR OF WAR PLANS    STATISTICS OF TROOPS    DIRECTOR OF OPERATIONS    DIRECTOR OF PURCHASE,
  INTELLIGENCE DIVISION        DIVISION              & SUPPLIES                  DIVISION           STORAGE, AND TRAFFIC
                                                                                                        DIVISION
```

```
                    LEGISLATION,   TRAINING                                                          MOTOR
      WAR PLANS     REGULATIONS,      AND      HISTORICAL      OPERATIONS   PERSONNEL   EQUIPMENT   TRANSPOR-
       BRANCH       AND RULES     INSTRUCTION    BRANCH          BRANCH     BRANCH*      BRANCH       TATION
                     BRANCH         BRANCH                                                           BRANCH
```

```
      PROJECTS       PROPOSED      TRAINING      COLLECTION,
        FOR         LEGISLATION,                 COMPILATION                OVERSEAS
      NATIONAL      REGULATIONS,    TACTICS         AND
      DEFENSE       AND ORDERS    METHODS       MAINTENANCE       GENERAL HEADQUARTERS, AEF
                                    OF              OF
      RESEARCH                    WARFARE        MILITARY                 FEB 1918
                                                  RECORDS
      INVENTIONS                  PUBLICATIONS
                                                             COMMANDER IN CHIEF
     PLANS FOR                     MILITARY
    ORGANIZATION                   SCHOOLS
      OF ALL                                                           PERSONAL STAFF
     BRANCHES
      OF THE
       ARMY                                                       CHIEF OF STAFF
```

```
          SECRETARY, GENERAL STAFF              DEPUTY CHIEF OF STAFF

                              GENERAL STAFF

      ADMIN      INTELLIGENCE     OPERATIONS      SUPPLY       TRAINING

     (AC OF S,    (AC OF S,       (AC OF S,     (AC OF S,     (AC OF S.
       G-1)         G-2)            G-3)          G-4)          G-5)
```

ORGANIZATION OF US WAR DEPARTMENT, ARMY, AND ARMY GROUND FORCES, 1942 - 1943

SECRETARY of WAR

ADMINISTRATIVE ASSISTANT and CHIEF CLERK

ASSISTANT SECRETARY of WAR

PUBLIC RELATIONS

ASSISTANT SECRETARY of WAR for AIR

UNDER SECRETARY of WAR

CHIEF of STAFF

SECRETARIAT

DEPUTY CHIEF of STAFF

GENERAL STAFF

OPD | G-1 | G-2 | G-3

MILITARY INTELLIGENCE SERVICE

SPECIAL STAFF

G-4

INSPECTOR GENERAL

LEGISLATIVE AND LIAISON DIVISION

TASK FORCES | DEFENSE COMMANDS | THEATERS | | COMMANDING GENERAL ARMY AIR FORCES | COMMANDING GENERAL ARMY SERVICE FORCES

COMMANDING GENERAL OF ARMY GROUND FORCES

GROUND STATISTICS SECTION

GROUND HISTORICAL SECTION

GROUND TECHNICAL SECTION

CHIEF OF STAFF ARMY GROUND FORCES

DEPUTY CHIEF OF STAFF

SECRETARIAT

GROUND STAFF

PLANS SECTION	G-1 SECTION	G-2 SECTION	G-3 SECTION	G-4 SECTION	REQUIREMENTS SECTION
PLANS	PERSONNEL	MILITARY INTELLIGENCE	OPERATIONS AND TRAINING	SUPPLY CONSTRUCTION TRANSPORTATION AND EVACUATION	DEVELOPMENT, PUBLICATIONS ORGANIZATION & EQUIPMENT PERTAINING TO THE ARMS

SPECIAL STAFF

GROUND ADJUTANT GENERAL'S SECTION | GROUND CHEMICAL SECTION | GROUND ENGINEER SECTION | GROUND FISCAL SECTION | GROUND MEDICAL SECTION | GROUND ORDNANCE SECTION | GROUND QUARTERMASTER SECTION | GROUND SIGNAL SECTION | GROUND HEADQUARTERS COMMANDANT

COMMANDS

ARMIES AND OTHER UNITS OR FORCES ASSIGNED | ANTIAIRCRAFT COMMAND | ARMORED COMMAND | TANK DESTROYER CENTER | AIRBORNE COMMAND | DESERT TRAINING CENTER | REPLACEMENT AND SCHOOL COMMAND

SOURCE: JAMES E. HEWES, JR., FROM ROOT TO McNAMARA: ARMY ORGANIZATION AND ADMINISTRATION, 1900 - 1963 (WASHINGTON, D.C.: US ARMY CENTER OF MILITARY HISTORY, 1975), pp. 75 & 81.

OPERATIONS DIVISION
ASSISTANT CHIEF OF STAFF

DEPUTY
ASSISTANT
CHIEF OF STAFF

EXECUTIVE GROUP

STRATEGY AND POLICY GROUP

THEATER GROUP

LOGISTICS GROUP

CURRENT GROUP

PAN AMERICAN GROUP

DEPUTY

DEPUTY

DEPUTY

DEPUTY

DEPUTY

ASSISTANT EXECUTIVE

ASSISTANT EXECUTIVE

AIR | GROUND

AIR | GROUND

EXECUTIVE

EXECUTIVE

MESSAGE CENTER

RECORD SECTION

OFFICER IN CHARGE ENLISTED DETACHMENT

PERSONNEL SECTION

STRATEGY SECTION

POLICY SECTION

JOINT WAR PLANS COMMITTEE

AIR | GROUND

OPERATIONAL LOGISTICS SECTION

PROJECTED LOGISTICS SECTION

REPORTS SECTION

COORDINATION REPORTS AND SECTION

COMBAT ANALYSIS SECTION

PLANNING SECTION

OPERATING SECTION

OPERATIONS DIVISION MEMBERS OF JOINT LOGISTICS PLANNING COMMITTEE

ASIATIC THEATER

EUROPEAN THEATER

PACIFIC THEATER

LIAISON

TROOP CONTROL

CANADA-U.S. JOINT DEFENSE BOARD MEXICO-U.S. DEFENSE COMMISSION

COMMUNI-CATIONS COORDINATION COMMITTEE

OPERATIONS DIVISION MEMBER WITH CIVIL AFFAIRS DIVISION

OPERATIONS DIVISION, WAR DEPARTMENT GENERAL STAFF, 27 APRIL 1945

Source: Ray S. Cline, *Washington Command Post* (Washington, D.C.: Office of the Chief of Military History, Dept. of Army, 1951).

APPENDIX B-3

ORGANIZATION OF THE
DEPARTMENT OF THE ARMY, 1951

SECY OF THE ARMY

AS/A	AS/A	US/A

CHIEF OF STAFF

VICE CHIEF OF STAFF

SECETARY OF THE GENERAL STAFF

COMPT	DC/S ADMIN	DC/S PLANS

GENERAL STAFF

A C/S G-1 PERS	A C/S G-2 INTEL	A C/S G-3 OPNS	A C/S G-4 LOG

SPECIAL STAFF

ADMIN & TECH SERVICES

CONTINENTAL ARMIES	CHIEF ARMY FIELD FORCES	OVERSEAS COMMANDS	FAR EAST COMMAND

EUSAK

ORGANIZATION OF THE ARMY ESTABLISHMENT, 1955

SECRETARY

UNDER SECRETARY

ADM ASST | GEN CNSL | PI | LEG LIAS | SC ADV PNL

ASST SEC (FIN MGMT) | ASST SEC (MP & RES) | CHIEF OF STAFF VICE CHIEF OF STAFF | ASST SEC (CIV & MIL AFF) | DIR OF RD | ASST SEC (LOG, RES & DEV)

THE JAG | INSPECTOR GENERAL | ASST C/S INTELLIGENCE | CHIEF NGB | CHIEF RES & ROTC

DEPUTY CHIEF OF STAFF FOR MIL OPNS | DEPUTY CHIEF OF STAFF FOR PERSONNEL | CHIEF OF RESEARCH AND DEVELOPMENT | DEPUTY CHIEF OF STAFF FOR LOGISTICS | COMPTROLLER OF THE ARMY

CHIEF PSY WAR | THE AG | THE QM GENERAL | THE SURGEON GENERAL | CHIEF OF FINANCE

CHIEF CAMG | CHIEF OF CHAPLAINS | CHIEF OF ENGINEERS | CHIEF SIGNAL OFFICER

CHIEF OF MIL HISTORY | CHIEF OF INFO AND EDUCATION | CHIEF OF ORDNANCE | CHIEF CHEMICAL OFFICER

THE PMG | CHIEF OF TRANSPORTATION

AAA COMD | CONARC | OVERSEAS ARMY COMDS

CONTINENTAL ARMIES | FIRST | SECOND | THIRD | FOURTH | FIFTH | SIXTH | MDW

SELECTED ORGANIZATION OF THE DEPARTMENT OF THE ARMY, 1968

```
                          ┌─────────────────────────────┐
                          │    SECRETARY OF THE ARMY    │
                          ├─────────────────────────────┤
                          │  UNDER SECRETARY OF THE ARMY│
                          └─────────────────────────────┘
                                       │
                          ┌─────────────────────────────┐
                          │       CHIEF OF STAFF        │
                          │     VICE CHIEF OF STAFF     │
                          ├─────────────────────────────┤
                          │ SECETARY OF THE GENERAL STAFF│
                          └─────────────────────────────┘
```

| COMPTROLLER OF THE ARMY | | DEPUTY CHIEF OF STAFF PERSONNEL | ASSISTANT CHIEF OF STAFF INTELLIGENCE | ASSISTANT CHIEF OF STAFF FORCE DEVELOPMENT | DEPUTY CHIEF OF STAFF MILITARY OPERATIONS | DEPUTY CHIEF OF STAFF LOGISTICS | CHIEF OF RESEARCH & DEVELOPMENT | ASSISTANT CHIEF OF STAFF COMMUNICATIONS— ELECTRONICS |

Lower boxes:

- CHIEF U.S. ARMY AUDIT AGENCY
- CHIEF OF ENGINEERS
- THE ADJUTANT GENERAL
- CHIEF OF CHAPLAINS
- CHIEF OF PERSONNEL OPERATIONS
- THE PROVOST MARSHAL GENERAL
- THE SURGEON GENERAL
- CHIEF OF MILITARY HISTORY

Command boxes:

- U.S. ARMY AIR DEFENSE COMMAND
- U.S. ARMY COMBAT DEVELOPMENTS COMMAND
- U.S. CONTINENTAL ARMY COMMAND
- U.S. ARMY MATERIEL COMMAND
- U.S. ARMY SECURITY AGENCY
- U.S. ARMY STRATEGIC COMMUNICATIONS COMMAND

Bottom row:

- U.S. ARMY EUROPE
- U.S. ARMY PACIFIC
- U.S. ARMY FORCES SOUTHERN COMMAND
- U.S. ARMY FORCES, STRIKE COMMAND
- U.S. ARMY INTELLIGENCE COMMAND

SOURCE: ADAPTED FROM DEPT. OF THE ARMY HISTORICAL SUMMARY FY 1969

DEPARTMENT OF DEFENSE AND COMMAND RELATIONSHIPS IN VIETNAM
1968


```
                    ┌──────────────────┐      ┌──────────────────────────┐
                    │  ARMED FORCES    │──────│   SECRETARY OF DEFENSE   │
                    │  POLICY COUNCIL  │      ├──────────────────────────┤
                    └──────────────────┘      │ DEPUTY SECRETARY OF DEFENSE│
                                              └──────────────────────────┘
```

| ASSISTANT SECRETARY OF DEFENSE (ADMINISTRATION) | ASSISTANT SECRETARY OF DEFENSE (COMPTROLLER) | ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS) | ASSISTANT SECRETARY OF DEFENSE (INTERNATIONAL SECURITY AFFAIRS) | ASSISTANT SECRETARY OF DEFENSE (MANPOWER AND RESERVE AFFAIRS) | ASSISTANT SECRETARY OF DEFENSE (PUBLIC AFFAIRS) | ASSISTANT SECRETARY OF DEFENSE (SYSTEMS ANALYSIS) | GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE |

JOINT CHIEFS OF STAFF

DEPARTMENT OF THE ARMY

SECRETARY OF THE ARMY

UNDER SECRETARY AND ASSISTANT SECRETARIES OF THE ARMY

CHIEF OF STAFF, ARMY

DEPARTMENT OF THE NAVY

DEPARTMENT OF THE AIR FORCE

JOINT STAFF

| ALASKAN COMMAND | ATLANTIC COMMAND | CONTINENTAL AIR DEFENSE COMMAND | EUROPEAN COMMAND | PACIFIC COMMAND | SOUTHERN COMMAND | STRATEGIC AIR COMMAND | STRIKE COMMAND |

U.S. ARMY, PACIFIC

MACV

USARV

FIELD FORCES HQ

TACTICAL UNITS

SOURCE: ADAPTED FROM VARIOUS OFFICIAL PUBLICATIONS.

UNITED STATES ARMY COMBAT DEVELOPMENTS COMMAND

COMMANDING GENERAL USACDC

FORT BELVOIR   VIRGINIA

USACDC EXPERI- MENTATION COMMAND	AUTOMATIC DATA FIELD SYSTEMS COMMAND	USACDC COMBAT ARMS GROUP	USACDC INSTITUTE OF ADVANCED STUDIES	USACDC COMBAT SUPPORT GROUP	USACDC INSTITUTE OF COMBINED ARMS AND SUPPORT	USACDC COMBAT SER- VICE SUPPORT GROUP	USACDC INSTITUTE OF SPECIAL STUDIES	USACDC INSTITUTE OF NUCLEAR STUDIES
FT ORD CALIF	FT BELVOIR VA	FT LEAVENWORTH KANS	CARLISLE BKS PA	FT BELVOIR VA	FT LEAVENWORTH KANS	FT LEE VA	FT BELVOIR VA	FT BLISS TEX

USACDC AGENCIES
(FOR EXAMPLE:
USACDC INFANTRY
AGENCY) LOCATED
AT STATION
INDICATED

Combat Arms Group (FT LEAVENWORTH KANS)

INFANTRY — FT BENNING GA	
ARMOR — FT KNOX KY	
ARTILLERY — FT SILL OKLA	
AVIATION — FT RUCKER ALA	
SPECIAL WARFARE — FT BRAGG N.C.	

Combat Support Group (FT BELVOIR VA)

ENGINEER — FT BELVOIR VA	
INTELLI-GENCE — FT HOLABIRD MD	
AIR DEFENSE — FT BLISS TEX	
CHEMICAL BIOLOGICAL RADIOLOGICAL — FT McCLELLAN ALA	
COMMUNICATIONS ELECTRONICS — FT MONMOUTH N.J.	

Combat Service Support Group (FT LEE VA)

MILITARY POLICE — FT GORDON GA	MEDICAL — FT SAM HOUSTON TEX
CIVIL AFFAIRS — FT GORDON GA	MAINTENANCE — ABERDEEN PROV GRD MD
TRANSPOR-TATION — FT EUSTIS VA	SUPPLY — FT LEE VA
PERSONNEL & ADMINISTRA-TIVE SVCS — FT BEN HARRISON IND	JUDGE ADVOCATE — CHARLOTTESVILLE VA
CHAPLAIN — FT LEE VA	

Source: DA Manual 1967, p. 6-37

141

APPENDIX B-8

JCS

PACOM

MACV

HQ, USARV

HQ, FIELD FORCES

HQ, DIVS

HQ, BDES

HQ, BNS

→ ROUTINE ORLL (TRANSMITTING "RAW" INFO & RETURNING APPLIED LESSON)

−−−− EXPEDITED ORLL

−−−−− INNER CIRCUIT (WITHIN THEATER) RETURN OF LESSON

ACSFOR

CDC | CONARC | MATERIEL COMMAND | OTHER DA AGENCIES | SCHOOLS

"HOT LINE"

ADAPTED DOCTRINE, ORG., ETC.

TRAINED REPLACEMENTS

SUITABLE WEAPONS, EQUIPMENT, ETC.

AS APPROPRIATE

KNOWLEDEGEABLE LEADERS AND SPECIALISTS

VIETNAM WAR LESSON-LEARNING CIRCUITRY

APPENDIX C

ACRONYM GLOSSARY

ACS	Assistant Chief of Staff	G-2	General Staff — 2d Section (Intelligence)
ACSFOR	Assistant Chief of Staff for Force Development	G-3	General Staff — 3d Section (Operations and Training)
ACTIV	Army Concept Team in Vietnam	G-5	General Staff, AEF (in WW I — 5th Section (Training)
AEF	American Expeditionary Forces, WW I		
AFF	Army Field Forces	GHQ	General Headquarters
AGF	Army Ground Forces	GO	General Order
AR	Army Regulation(s)	GPO	Government Printing Office
ARCOV	Army Combat Operations in Vietnam (research project and report)	HQ	Headquarters
ASF	Army Service Forces	HUMRRO	Human Resources Research Office
AWC	Army War College		
		I&E	Information and Education
BTT	Battle Training Team (British)	IDR	Infantry Drill Regulations
CALL	Center for Army Lessons Learned	JCS	Joint Chiefs of Staff
CDC	Combat Developments Command		
CDEC	Combat Developments Experimentation Center/Command	MAAGV	Military Assistance Advisory Group, Vietnam
CGSC	Command & General Staff College	MACOV	Mechanized and Armor Combat Operations in Vietnam (research project and report)
CHECO	Contemporary Historical Evaluation of Counterinsurgency/Combat/ Current Operations	MACV	Military Assistance Command, Vietnam
CMH	Center of Military History		
CONARC	Continental Army Command	MHD	Military History Detachments
CONUS	Continental United States	MHI	Military History Institute
CORG	Combat Operations Research Group	MID	Military Intelligence Division
C/S	Chief of Staff	MIS	Military Intelligence Service
CSI	Combat Studies Institute	MTO	Mediterranean Theater of Operations
DA	Department of the Army	NTC	National Training Center
DCS/MO	Deputy Chief of Staff for Military Operations	OCAFF	Office of the Chief of Army Field Forces
DCSOPS	Deputy Chief of Staff for Operations and Plans	OCMH	Office of the Chief of Military History
DOD	Department of Defense	OPD	Operations Division, War Department General Staff
ETO	European Theater of Operations	OPDIB	Operations Division Information Bulletin
EUSAK	Eighth US Army in Korea		
		OPFOR	Opposition Force (at NTC)
FM	Field Manual	ORLL	Operational Report — Lessons Learned
FORSCOM	Forces Command		
FSR	Field Service Regulations	ORO	Operations Research Office

143

PACOM	Pacific Command	TI&E	Training, Information and Education
		TRADOC	Training and Doctrine Command
RAC	Research Analysis Corporation		
R&D	Research and Development	USARV	US Army, Vietnam
ROAD	Reorganization Objective, Army Division	USFET	US Forces in the European Theater
		VN	Vietnam
SOP	Standard Operating Procedures		
SORO	Special Operations Research Office	WD	War Department
SR	Special Regulation(s)	WW	World War
SWPA	Southwest Pacific Area		

APPENDIX D

COMPARATIVE LESSON LEARNING: FOREIGN EXAMPLES

A comparative approach to lesson learning, one that includes the historical and contemporary procedures used by foreign armed forces, as well as those of the US Army's sister services, would surely be worthwhile. It would also require another entire study. No attempt at comparative analysis is attempted here. Instead, three selected foreign experiences in lesson-learning procedures are presented individually to remind readers that there are lessons in the lesson-learning efforts of others. Take, for example, the Soviet system developed during the Second World War (D-1), the French army's format for transmitting combat lessons in the Algerian rebellion (D-2), and the current lesson-learning procedures as observed in the Israeli Defense Force (D-3).

APPENDIX D-1

LESSON LEARNING, SOVIET-STYLE: WORLD WAR II

Despite limited source material, it is possible to reconstruct an insightful account of the Red Army's lesson-learning effort during the Second World War. In order to fully appreciate that effort, one should first understand the importance of Soviet military history, the matrix of their lessons program.

Soviet Military History: A Doctrinal Tool

The Soviets use history — military history, in particular — much more pragmatically than Americans. To them, history officially represents a continuing and predetermined process, making its study decidedly usable. In their military history, all combat operations, long past or recent, are treated as war experiences to be evaluated. It is not unusual to find contemporary Soviet military journals reprinting 40-year old articles without editorial comment, allowing the original accounts to speak for themselves and address current concerns that the readers recognize.[1] History as past combat experience constitutes a hard-working laboratory for current Soviet thought and serves as a functional branch of their military science. Although conforming to Marxist-Leninist methodology and the dialetic-materialism interpretation of history, Soviet historical research still allows room for critical examination of past combat experiences. While recognizing the significance of technological change and the need to predict future trends, the Soviets still rely heavily on past experience.[2]

They continue to exhaustively study the 1941-1945 Russo-German conflict, their Great Patriotic War. Russian publications on it numbered around 5,000 a decade ago and the total has undoubtedly increased since then. A great many of these publications are products of Soviet military research institutions and are classified as official scientific literature, such as the over 450 books

analyzing — not simply narrating — specific campaigns and battles of the Eastern Front. The publication of numerous compilations of documents, the gathering of war records in specialized military archives, and the continuing solicitation of war memoirs and reminiscences clearly suggests that their study of the war will continue.[3]

Such intensive historical study is not for academic exercise but for practical military application. A special section, the Historical Administration, is part of the Soviet Army General Staff and has played an active role in the formulation of major doctrine. The section's reports, various publications, and major periodical, *Military Thought*, as well as its close connections with the Voroshilov and Frunze Academies, have all been influential in developing Soviet operational doctrine in the post-World War II era. This historical influence stemmed largely from the experience-processing program of the Great Patriotic War, a lesson-learning system that operated as a historical activity.[4]

Military History Role in WW II

Official history activities played an important contemporaneous role in Soviet combat performance during the war. They went beyond "history" and into the production and dissemination of lessons for field commanders and combat officers. According to US intelligence information at the end of the war, the Historical Division was one of the most important components of the Red Army General Staff. It maintained field offices at army group and army headquarters. American intelligence concluded:

The Historical Division transcends the function indicated by its title. Its duties include the accumulation and processing of field reports on strategy, tactics, and the employment of arms, weapons, and equipment.

Clearly impressing the American analysts was the speed of the procedure and its results: modifications appeared within a few months of the Historical Division's recommendations. The analysts conceded that "the continuous study and rapid application of combat lessons has been one of the greatest assets of the Red Army."[6]

Although the Soviet Historical Division overall was responsible for this study and application of combat lessons, proper credit belongs to a component of the division uniquely divorced from routine historical activities. Sources reaching the West after the war suggest that the Historical Division contained two sections, one that compiled current history and the other that evaluated and applied contemporaneous battle experience.*

The Military History Section performed routine historical functions and published accounts of selected recent operations. It prepared operational histories *during* the war, a dozen by late 1943 or early 1944. They were classified with distribution limited to senior officers, while an unclassified parallel series of histories had a wider distribution.[7] The more unique, second component of the historical division was entitled the Section for the Application of War Experience, which speaks for itself. In 1942 it was headed by Major General P. Vechnk,[8] who exercised, presumably, the general staff responsibility for the combat lessons program. The program included both centralized processing procedures and a field structure for local processing.

Centralized Processing of Lessons

Centralized processing of Red Army battle experiences was a specific responsibility of the General Staff. The War Experience Section of the Historical Division accomplished it by using the resources and "scientific-research" capability of the Frunze Academy (comparable to the US Armed Forces Staff College or the US Army Command and General Staff College). Battle

reports, documents, and eyewitnesses were evaluated at the academy, making it "an organ for throwing light on combat experience." It disseminated the evaluated experience through an occasional publication issued sometimes down to division level. Known as *Sbornik,* ** it served as an important medium for adjusting combat doctrine, tactics, and techniques.[9]

Other Soviet publications disseminated combat lessons during the war, such as the *Air Battle* series on tactical fighter aviation, but the Frunze Academy's *Sbornik* appears to have been the chief disseminator of tactical and operational lessons. It was not intended as current history but as guidance in the form of battle-derived lessons on planning, strategy, operations, and logistics. An issue typically contained some dozen case studies and object lessons drawn from recent operations. Issued under the authority of the Red Army General Staff, *Sbornik* served expediently as tentative field service regulations pending formal publication of revised manuals. At least seven issues of *Sbornik* had been issued by late 1943 or early 1944, and more appeared during the last year of the war, possibly twenty in all.[10]

Some details of Soviet top-level experience processing are revealed in one particular issue of *Sbornik*. In preparing the issue, the personnel of the Frunze Academy were dispatched to the front for firsthand information. After their return, they conducted a month-long "military-scientific conference," in which representatives from other military academies and institutions participated. The analysis and conclusions that resulted then went to the General Staff, which selected and published the material as *Sbornik No. 7.*[11]

Field Structure and Processing

Along the battlefronts, local processing of experience and application of combat lessons occurred within a special field structure created by the Red Army General Staff. This structure already existed, at least in rudimentary form, when the Russo-German War began, and may have been one of the reforms, or lessons, resulting from the 1939-1940 Russo-Finnish War. Special officers

---

* See organization chart at end of this section.

** Russian short title for *Collection of Materials for the Study of War Experience*.

designated to evaluate battle experience were assigned to the headquarters of army groups and armies by the spring of 1941.[12] Late in 1942, however, the General Staff discovered that insufficient command emphasis weakened the field program:

> The chiefs of staff of army groups and armies and the chiefs of operational (G3) sections as a rule do not attempt to study, and draw general conclusions from the study of war experience. In many cases, they appear to consider that this is a job for future historians, and reckon that by keeping combat journals they have done all that is necessary. This incorrect view on their part as to the value of study of war experience leads to the repetition by commanders and troops of the same mistakes over and over in the organization and conduct of combat, and it slows down the process of communicating to the troops new combat procedures and the use by the troops of these procedures in combat.[13]

To correct the deficiencies, the General Staff directed that the study of combat experience receive priority emphasis and provided detailed instructions for the organization, supervision and methodology of processing lessons in the field. As mandated, each army group and army headquarters included an experience-processing section in its operations division, to which were assigned either two or four officer-specialists. The command chief of staff became directly responsible for the experience processing and, under him, the operations chief personally supervised the daily work of the section. Both staff chiefs were expected to render all possible assistance to the experience specialists and "check and critique their work every day."[14] Within the experience-processing sections, the senior officer was responsible for the actual collection, organization and evaluation of the data received from subordinate staffs and units. He also administered the dissemination and application of the section's studies. His many duties en-

compassed the functions of researcher, adjutant, and troop information chief, not to mention intelligence analyst, since he was expected also to study enemy combat methods in order to forestall surprise by new weapons or tactics.[15]

The field processing of experience required meticulous planning and rigid adherence to approved plans. A quarterly plan was prepared for the army group or army chief of staff's approval, and the precise subjects to be studied were identified, accompanied by timetables for completing the tasks involved. Monthly progress reports on fulfilling the approved plan followed. Specific operations required the same bureaucratic procedures.[16]

In addition to the heavy hand of bureaucracy, ideology complicated the field processing. According to a former Red Army captain who served in the experience section of an army group headquarters, he did not objectively study all aspects of combat operations looking for improvements but, instead, focused only on mistakes. Because Russian military doctrine was assumed correct until proven otherwise, any lack of success axiomatically meant someone made a mistake. Lessons could thus only stem from failures or defeats, which created certain difficulties for the Red Army, for the Communist Party required that lessons be drawn only from successful experiences and victories.[17]

Whether drawn from successes or failures, the Russians derived lessons and disseminated them in various ways: published papers, oral critiques, staff exercises, or brief reports. Additionally, personal liaison by experience-processing officers with the training section of the field headquarters insured that crucial lessons became quickly incorporated into unit training programs. Some headquarters even prepared and issued their own local versions of *Sbornik*.[18]

NOTES

1. Interview with COL David M. Glantz (US Army War College, 15 Apr 1986), a Soviet expert, who has noted such articles in his research.

2. USSR, Ministry for Defense, *The Officer's Handbook* (Moscow, 1971), translated by the Canadian Secretary of State Department and published under the auspices of the US Air Force, pp. 50 & 59-60, and Marshal Andrei A. Grechko, *The Armed Forces of the Soviet State* (Moscow, 1975), translated and published under the auspices of the US Air Force, pp. 270-271 & 285-286.

3. General Pavel A. Zhilin, Director of the Institute of Military History, USSR, contributed a historiographical article to the Conference on Research in the Second World War. See the Conference's *World War II: An Account of Its Documents* (Washington, DC: Howard University Press, 1976), pp. 29-38.

4. Raymond L. Garthoff, *Soviet Military Doctrine: RAND Study R-223* (Santa Monica, Calif.: The RAND Corporation, 1953), pp. 60-61.

5. US War Department, *Handbook on U.S.S.R. Military Forces: Technical Manual 30-430*, dated November 1945, with changes dated March 1946, p. 119.

6. *Ibid* and see also *Official Histories: Essays and Bibliographies from Around the World*, edited by Robin Higham (Manhattan, KS: Kansas State University Press, 1970), p. 397.

7. *Sbornik No. 6*; see Note #9.

8. See Note #12.

9. *Sbornik materialov po izucheniiu opyta voiny* (Moscow, 1942-1945). Two issues of at least four reputedly available in the US are in MHI, namely: *Analysis of World War II Operations on the Eastern Front, Sept-Oct 1942: Sbornik No. 2* (Moscow: Military Publishing House, 1942) and *Sbornik*

No. 6 covering the Battle of Stalingrad (Moscow, 1943), both of which are undated translations done sometime between 1949 and 195? by the US Department of the Army's Military Intelligence Division, G2. The other two issues are in the Combined Arms Library, Fort Leavenworth, Kansas. The quoted material is from *Sbornik No. 6*, pp. 342-343; see also Garthoff, pp. 59-60.

10. *Sbornik No. 6* contains an informative appendix entitled "Bibliographical and Handbook Section," pp. 342-360, which critically describes other issues of *Sbornik* and briefly discusses the methodology used in deriving lessons. See also Higham, ed., *Official Histories*, p. 397.

11. *Ibid.*, pp. 345-346. Apparently *No. 7* was near publication when the bibliographic section of *No. 6* was written. Also, Garthoff, pp. 59-60, quotes an instructor at the Frunze Academy who related how the evaluators had to struggle against the Party line that demanded lessons be derived from victories and not defeats.

12. "Directive of the General Staff Concerning the Study and Application of War Experience: Directive No. 1005216," dated 9 November 1942, reprinted and translated in *Sbornik No. 8*, pp. 272-284. MG Vechnk's signature block is on the last page. (*No. 8* is not in MHI, but COL Glantz generously provided his personal copy of the directive.)

13. *Ibid.*

14. *Ibid.*, and *1942 Red Army Field Service Regulations*, unidentified translation on file MHI, p. 45; also Garthoff, p. 59.

15. War Experience Directive, Inclosure, Sec. 5.

16. War Experience Directive, Inclosure, Sec. 3.

17. Garthoff, p. 59. The former Soviet officer served in the war experience section of Marshal Timoshenko's Northwest Front (Army Group) Headquarters in 1942-1943.

18. *Sbornik No. 6*, pp. 346-347.

149

CENTRAL AGENCIES OF THE SOVIET MILITARY ESTABLISHMENT, 1944-1946.
AND THE CENTRAL AGENCIES OF LESSON LEARNING

150

SUPREME
SOVIET

PRESIDIUM

COUNCIL
OF PEOPLES'
COMMISSARS

STATE DEFENSE
COMMITTEE

SUPREME
COURT

MILITARY
COLLEGIUM

CENTRAL
COMMITTEE
OF THE
COMMUNIST
PARTY

GENERAL
HEADQUARTERS

PEOPLES'
COMMISSARIAT
OF DEFENSE

CHIEF
OF
STAFF

INSPECTOR OF
INFANTRY

GENERAL
STAFF

VOROSHILOV
(GENERAL STAFF)
ACADEMY

FRUNZE
ACADEMY

MAIN
ADMINISTRATION
OF AN ARM OR
SERVICE

MAIN
ADMINISTRATION
OF
PERSONNEL

MAIN
ADMINISTRATION
FOR FORMATION &
EQUIPMENT OF UNITS

MAIN
ADMINISTRATION
OF MILITARY
TRIBUNALS

MAIN
POLITICAL
ADMINISTRATION

MAIN
ADMINISTRATION
OF COUNTER
INTELLIGENCE

OPERATIONS
DIVISION

FORMATIONS
DIVISION

HISTORICAL
DIVISION

STAFF

ACADEMY
OF AN ARM
OR SERVICE

ADMINISTRATION
OF PERSONNEL

ADMINISTRATION
FOR TRAINING

MAIN
ADMINISTRATION
OF MILITARY
EDUCATIONAL
INSTITUTIONS

MILITARY
POLITICAL
ACADEMY

MILITAPY
POLITICAL
SCHOOLS

GENERAL
STAFF
OFFICERS'
POOL

MOBILIZATION
DIVISION

STATISTICAL
CONTROL
BRANCH

HISTORICAL DIV

MILITARY	APPLICATION OF WAR
HISTORY	EXPERIENCE
SECTION	SECTION

ARMY
GROUP
ETC.

MILITARY
DISTRICT
ETC.

WAR COLLEGES ③

ARMY GROUPS
&
FIELD ARMIES

Source: Adapted from US War Dept.,
TM 30-430 (15 May 1946), p. II-6.

① GEN STAFF
② HIST. DIV
③ WAR COLLEGES

———— PERSONNEL POLICY AND ADMINISTRATION
◄--► INFORMATION AND COORDINATION
[ ] AGENCIES EXISTING ONLY IN WAR OR IN PEACE

APPENDIX D-1-A

APPENDIX D-2

LESSON LEARNING, FRENCH-STYLE: ALGERIA

In assessing the bitter experience of Indochina, General Paul Ely, French Commander in Chief, Far East, noted:

> The enemy we fought for the past nine years used, under the name of self-criticism, a time honored practice of our own armed forces which we simply call the critique. This collective self appraisal which routinely followed upon our field exercises has been our best means for studying and improving ourselves.*

To study and improve itself in Algeria, where another counterinsurgency effort followed hard on the heels of the Indochina one, the French army standardized its lesson learning by means of a special report and format. Two examples of the format used for transmitting lessons are reproduced here in their original form. "Enseignements," the title of the last section in both reports, contains the lessons taught by the action.** In the first reported action (a), the French army annihilated a company-sized rebel unit. In the second report (b), a French outpost was penetrated by a small rebel band. These were lessons in both the successful and unsuccessful operations.

---

* Opening statement, 31 May 1955, introducing *Lessons of the War in Indochina*, Vol. II, translated by the Rand Corporation (RM-5271-PR, May 1967).

** The reports are contained in a folder of 14 cases, entitled "Operations en Algerie: Cas concrets de combat en Algerie," in MHI MiscFiles-Algeria.

ZONE	Z. E. C.	CARACTERISTIQUES	R. B.

LIEU	Djebel DOKKANE S X 73 H 6	DATE	13 Août 1957

BUT

- Destruction d'une bande.

ENNEMI

- Bande rebelle estimée à une centaine d'hommes.

TERRAIN

- Djebel boisé par endroit, accessible aux véhicules chenillés.

MOYENS

P.C. 6ème Cuirassiers 8 lème B.I. (3 Cies dont 1 portée) 1/6ème Cuirassiers G.M.P.R. 5 1 Bie du R.A.C.T.	puis : 2°, 3° et 4° EsC. du 6° Cuirassiers Harka 6ème Cuir. 2 Cies du 60ème R.I. 1 Cie Portée du 8° R.P.C. 2/6ème R.S.M. P.C. S.A. TEBESSA.

BILAN

Pertes amies	Pertes rebelles	
- 8 tués (dont 1 Officier et 1 aspirant). - 25 blessés. - 3 jeeps détruites - 2 F.M. perdus (retrouvés par la suite).	- 120 tués - 9 prisonniers	- 1 mortier de 81 - 1 mortier de 50 - 1 mitrailleuse Lewis - 6 F. M. - 23 P.M. - 89 F.G.

OBSERVATIONS

Cette opération est caractéri sée par une prise de contact brutale qui nous occasionne des pertes, suivie d'un engagement progressif et rapide de moyens permettant de fixer puis de détruire la bande rebelle.

RÉSUMÉ DE L'ACTION

Un renseignement non recoupé indiquait, le 12 Août, la présence d'une bande d'une centaine de rebelles dans le Djebel ANOUAL.

Un énorme incendie de forêt ne permet pas d'effectuer, le 13, l'opération prévue, seule une opération dans le Djebel DOUKKANE limitrophe de l'ANOUAL est déclenchée.

- A 7 h. 30 : Le 81ème B.I., moins sa compagnie motorisée, renforcé du G.M.P.R. 5, met pied à terre à la côte 1712, s'aligne sur la piste de la Mechta OULED BOULASBAH et progresse vers le S.O., flanc gardé au N. par le 1/6ème CUIR et au Sud par la Compagnie portée du 81ème B.I.

  Le P.C. est en 1648.

- A 8 h. 15 : Une Section portée du 81ème B.I., qui assurait le bouclage Sud, s'aventure dans un terrain couvert d'arbustes. Elle est brusquement assaillie à courte distance : 4 gradés et hommes sont tués ou blessés, 3 jeeps incendiées, 1 F.M. perdu. Les rebelles déclenchent alors un feu violent sur le bouclage Sud avec mortier de 81, mitrailleuse, F.M.

  Le 81ème B.I. est alors rameuté sur l'accrochage, le 1/6ème CUIR resserre le bouclage jusqu'au contact dans la région de GARET EL MEDELIA.

  Les 2ème, 3ème, 4ème Escadrons et harka du 6ème CUIR sont appelés en renfort d'EL MA EL ABIOD. Le Secteur Autonome de TEBESSA est informé de la situation.

  Deux T.6 attaquer.' les éléments rebelles en mouvement vers le Sud. Un tir d'Artillerie est effectué sur les mêmes éléments.

- A 9 h.00   La 1ère Compagnie du 81ème B.I. et le G.M.P.R. atteignent le GARET EL M'RA cependant que la 2ème Cie était durement accrochée à 1 Km. N. du GARET EL M'RA. Elle perd son Cdt de Cie et plusieurs hommes, les autres sont dispersés.

  L'Artillerie intervient, et un Peloton du 1/6ème Cuir, après avoir récupéré quelques isolés de cette Cie, nettoie cette zone, tuant 10 rebelles et récupérant 1 P.M. et 9 F.G. et retrouve le corps du Commandant de Compagnie du 81ème B.I.

- A 10 h.00 : Les Escadrons d'EL MA EL ABIOD arrivent sur les lieux, prennent à leur compte les faces N.E. E. et S.E., prennent le contact des rebelles et commencent la progression lentement.

- A 11 h. 30 : Le P.C. du S.A. de TEBESSA arrive ainsi que la Compagnie Portée de Reconnaissance du 8ème R.P.C., qui prend à son compte la face Sud - S.O. et progresse vers le N. sans difficultés.

  Les combats font rage de toutes parts. L'encerclement est total.

- A 15 h. 30 : Les 2 Cies du 60ème R.I. arrivent ainsi que l'Escadron de Chars du 6° R.S.M. - Ils sont placés au N.E. de l'accrochage et reçoivent mission de procéder au nettoyage de la zone en progressant vers le S.O. - Ce mouvement s'effectue normalement, chaque buisson est mitraillé par les chars, fouillé par l'Infanterie.

- A 17 h. 30 : L'opération est terminée. La bande est totalement anéantie. - Quelques éléments restent la nuit sur le terrain pour compléter la fouille le 14 matin. Ils n'obtiendront aucun résultat nouveau.

C R O Q U I S

ENSEIGNEMENTS

- La possibilité de renforcer très rapidement une opération par des éléments importants permet d'emporter la décision dans la journée.

- Une reconnaissance de quelques jeeps, non appuyée par un élément blindé solide, en terrain couvert et accidenté, court le plus grand risque d'être détruite.

- Une Unité d'Infanterie mal encadrée est vite désorientée et désorganisée lorsque son Commandant d'Unité est tué.

- Nécessité absolue d'être toujours et partout "en garde".

- Efficacité réduite de l'aviation sur un terrain couvert permettant le camouflage des rebelles.

- Efficacité certaine, au contraire, de l'Artillerie, dans ces terrains, dirigée par les D.L.O. de Bataillons.

ZONE		CARACTERISTIQUES	
	Z. O. C.		E. B.

LIEU		DATE	
	Maison Forestière d'EL HOURANE N X 59 D 5		4 Février 1958

BUT

- Enlèvement d'un poste par les H. L. L.

ENNEMI

- Un commando rebelle de faible importance.

TERRAIN

- Petite vallée enserrée d'Oueds profonds et dominée de collines escarpées et boisées au Nord et à l'Ouest.

MOYENS

- 1 Peloton blindé soit :

(- 3 A.M. M. 8 - 1 Officier   - 2 gardes forestiers.
(- 2 Half-Tracks - 3 S/Officiers (1 FMA)
(
(- 1 Jeep   - 23 Hommes (4 FMA)
(- 1 Obusier + - 1 S/Officier et 3 dépanneurs

BILAN

Pertes amies		Pertes rebelles
- 2 tués - 7 blessés - 15 disparus - 2 gardes fores- tiers disparus. ------- - 1 Jeep brûlée. - Véhicules blindés partiellement incendiés.	- 5 mitrailleuses de 50 - 6 '' de 30 - 3 F. M. - 1 mortier 81 - 1 mortier 60 - armes individuelles.	

OBSERVATIONS

  L'enlèvement du poste a été effectué par une petite bande rebelle qui a profité du moment où la garnison prenait son repas et où la soudure entre le service de jour et le service de nuit était mal assurée.

RÉSUMÉ DE L'ACTION

I.) - AMBIANCE :

Le poste militaire est établi dans la maison forestière d'EL HOURANE. Celle-ci est située à l'extrémité d'une piste qui conduit vers le Sud à M'SILA (1 h.50 en véhicule) où se trouve le P.C. du Quartier et vers l'E. - N.E. à LECOURBE et Bordj BOU ARRERIDJ, P.C. de Secteur (2 heures de véhicule auto).

Le poste sis dans une petite vallée assez habitée est enserré au Nord de Djebels escarpés et boisés. Un oued encaissé borde le poste au N. et à l'E. juste à l'extérieur des barbelés. Un autre oued fait de même au S.O. et au Sud. De l'autre côté, deux petits djebels dominent le poste respectivement à 400 et 200 mètres constituant des bases de feu idéales pour appuyer une attaque éventuelle.

Ce poste a une mission quadruple : - renseignement,
- interception,
- relais,
- pacification,

la garnison sort souvent et exerce outre la surveillance des itinéraires, le contrôle des villages voisins habités par 3.500 habitants environ. Elle est accompagnée dans ces missions par le G.M.P.R. de M'SILA. Le Poste constitue, par ailleurs, une excellente base de départ pour les opérations à effectuer dans les djebels environnants dont la population longtemps considérée comme hostile avait récemment fait quelques pas vers nous. Le Douar OULED AMAR (6 Km Nord) entre autre avait fait sa soumission.

Le 2 Février, un informateur indique au Secteur que la maison forestière d'EL HOU - RANE sera probablement attaquée.

Le Colonel Commandant le Secteur en informe aussitôt le Commandant de Quartier qui avertit à son tour le poste. Le Lieutenant, à l'appel de 18 h.00, le 3 Février, met tout son personnel en garde lui recommandant une vigilance particulière. La même nuit, à 23 h.00, il fait un exercice d'alerte qui se déroule dans de bonnes conditions. D'ailleurs, les harcèlements assez fréquents entretiennent la vigilance

II.) - LE POSTE :

Il est constitué par trois solides bâtiments en pierre munis de portes métalliques et de nombreuses fenêtres pouvant être obstruées par des plaques de blindage à meurtrières.

Il est ceinturé d'un panneau droit de barbelés et 25 m. plus loin d'un réseau complet parfaitement réalisé. L'accés de l'intérieur est facilité par une entrée Nord et une entrée Sud. Chaque entrée comporte deux portes (une par réseau) en chicane qui sont battues de nuit par des armes automatiques.

III.) - LA GARNISON :

Elle comporte un peloton blindé du 8ème Régiment de Spahis. Deux gardes forestiers musulmans habitent l'un des bâtiments.

Le peloton se compose d'1 Officier, de 3 S/Officiers et de 23 hommes. Le 4 Février, 1 S/Officier et 3 dépanneurs sont également au poste où ils effectuent des réparations sur les véhicules de cette Unité qui sont au total d'une jeep, 3 A.M.M.8, un obusier et deux half-tracks dont 1 doté d'un poste S.C.R. 506 qui assure les liaisons radio par vacation toutes les 2 heures (paires) avec le P.C. de Quartier à M'SILA

... / ...

RÉSUMÉ DE L'ACTION

IV.) - LA SECURITE :

En dehors des sorties presque quotidiennes pendant lesquelles un effectif réduit assure la défense du poste, la garde est assurée de jour par une sentinelle placée dans le mirador du bâtiment central d'où elle peut assurer une bonne surveillance. De nuit, trois sentinelles veillent simultanément, une dans chaque mirador. Elles prennent des factions de 2 h. 45 : de 19 h.00 à 6 h.00 le lendemain. Quatre hommes montent donc la garde par mirador, douze pour l'ensemble du poste par nuit, ce qui correspond à 50 °/° de l'effectif.

L'obusier a un obus engagé dans la chambre et est prêt à faire feu ainsi que les 2 mortiers sur des tirs repérés et effectivement jalonnés.

Les emplacements de combats sont prévus et aménagés.

V.) - DEROULEMENT DE L'ACTION :

18 h.- Le travail est terminé. L'appel est fait au milieu de la cour. Il ne manque personne. Gradés et hommes se détendent.

18 h. 30-La nuit tombe, la soupe est prête. Les gradés et spahis quittent leurs occupations et se dirigent, sans armes, vers le bâtiment central où se trouve, à gauche en entrant, la popote des cadres et, à droite, le réfectoire des hommes accolé à une petite chambre de troupe.

18 h.45-La sentinelle européenne du mirador central terminant le service de jour descend dans la cour et se dirige vers la porte de la cuisine, tout en surveillant l'entrée N. à 20 mètres de lui.

Les hommes achèvent leur repas - les gradés vont commencer le leur.

Somme toute à 18 h. 45, la situation est la suivante : le service de nuit n'est pas en place, les deux portes du poste sont largement ouvertes. La sécurité du dispositif repose sur une seule sentinelle. A ce moment deux fellagahs portant tenues françaises entrent par la porte Nord, s'approchent de l'unique sentinelle qui ne les arrête pas, et l'égorgent puis sans que l'éveil n'ait été donné font entrer un deuxième élément à eux composé probablement d'une dizaine d'hommes. Ainsi sans qu'aucun coup de feu n'ait été tiré, les rebelles font irruption à la popote d'une part où tout le monde est capturé sans armes et au réfectoire d'autre part où, sommés de se rendre, les hommes refluent dans la chambre voisine. Trois hommes y prennent leurs armes (2 P.A. - 1 P.M.) et tirent sur les rebelles qui ripostent au P.M., reculent, ferment la porte disant "Si vous ne voulez pas vous rendre, on va vous brûler vifs". 7 spahis blessés, sont étendus sur les lits, cependant que les 3 porteurs d'armes guettent à la porte et aux fenêtres. Ensuite, un groupe d'hommes de mains, envahit la cour, visite les autres bâtiments, enlève les armes, les véhicules et vide les soutes à munitions. Il répand alors quelques nourrices d'essence dans les bâtiments et sur les véhicules et y met le feu.

Le bâtiment où se trouvent encore les spahis brûle entièrement, sauf la pièce où ils étaient barricadés.

A l'aube, les rescapés sortent, vont aux véhicules, trouvent 2 A.M. M.8. intactes y chargent les blessés et font route vers M'SILA. A mi-chemin, ils rencontrent le G.M.P.R. qui avait été envoyé en liaisons vers le poste à la suite des renseignements d'une reconnaissance aérienne.

.../...

RÉSUMÉ DE L'ACTION

Dans l'après-midi, la maison forestière est entièrement réoccupée. Seule une jeep est irrécupérable. Tous les autres véhicules blindés sont remis en état. Des recherches sont effectuées aux environs. Dans un rayon de 2 Km, toute la population a disparu, les mechtas sont vides - A 1 Km au Nord des traces de lutte auprès desquelles on trouve 1 fusil et 1 P.A. ayant appartenu à un spahis. Un peu plus loin, un bivouac révèle qu'une trentaine d'animaux de bât ont été amenés pour charger le matériel saisi.

VI.)- CONCLUSION :

Il faut constater qu'aucun des F.M.A. n'était au réfectoire avec leurs camarades puisqu'ils ont disparu. Les Eaux et Forêts ont signalé, après la chute du poste, que l'un des gardes était des plus suspects.

Il n'est donc nullement exclu que un ou plusieurs des Musulmans aient participé à l'affaire du côté des F.L.N. parfaitement renseignés sur l'heure la plus propice à la prise du poste, ainsi que sur la disposition des pièces à l'intérieur des bâtiments.

Il faut noter également que le démontage rapide, bien que de nuit, des 11 mitrailleuses, toutes sur les véhicules blindés a probablement été effectué par des personnes averties.

1 Réseau Barbelés	8 Cuisine	15 Blockaus
2 Panneau Barbelés	9 Soute à Munitions	16 Mirador
3 Bâtiment Chambre	10 Magasin Armes des ABSENTS	17 Monument aux Morts
4 Bâtiment PC	11 Mirador Central	18 Dépannage Foyer
5 Popote Cadres	12 Sentinelle égorgée	19 Mirador
6 Réfectoire	13 Mortier de 81	20 Piton à 400m
7 Chambre	14 Chambre	21 Piton à 200m

ENSEIGNEMENTS

- Un poste ne doit pas être établi dans un fond où il n'a aucune visibilité et est dominé de toutes parts.

- Si pour des raisons impératives on est amené à s'installer de la sorte, il est absolument nécessaire de se couvrir et s'éclairer par un dispositif de sonnettes extérieures au poste et judicieusement placées.

- Le service de garde doit être assuré sans la moindre défaillance. Il doit être tel que des armes automatiques puissent ouvrir le feu sans délais sur les points sensibles de la périphérie du poste.

- Le dispositif de nuit doit être pris avant la tombée de la nuit.

- Même à l'intérieur du poste chacun doit avoir son arme à proximité immédiate et être en mesure de s'en servir à tout moment.

- Les véhicules blindés munis d'armes automatiques ou de canons doivent entrer dans le dispositif de défense et participer au plan des feux.

- Les portes doivent être fermées, de jour comme de nuit, et ouvertes seulement, après reconnaissance de l'arrivant, sous la protection d'une arme automatique.

- Les heures les plus dangereuses sont celles pendant lesquelles il y a repos ou détente, en particulier la sieste, la soupe, la fin du travail.

- Les liaisons radio par vacation sont impératives aux heures fixées. Toute absence d'un correspondant à l'heure prévue doit entraîner une recherche, aussi rapide que possible, des raisons motivant son silence et, éventuellement, une intervention.

- L'effectif d'un poste doit être proportionné à ses servitudes et à sa mission.

APPENDIX D-3

LESSON LEARNING, ISRAELI-STYLE, 1986

The Israeli Defense Force (IDF) has utilized its historical activities explicitly for lesson learning since shortly after the creation of the independent Israeli state. At first the combat experience analyzed by the IDF's History Section was primarily foreign and historical experience because, obviously, the new nation had not yet accumulated much national combat experience of its own. Since the 1967 Six-Day War, however, contemporaneous lesson learning has been practiced hand-in-glove with the collection of historical materials. The source material collected and processed by the History Section is used not only for historical purposes but also for drawing lessons that get incorporated into the army's combat doctrine. History and lessons are both produced by the historians.*

Recently a serving officer of the US Army visited Israel ex-officio but nonethless in the observer tradition. Extracts from his report follow:

USAMHI   24 June 1986

MEMORANDUM FOR ***

SUBJECT: Visit with the Israeli Defense Forces (IDF), 29 May-15 June 1986

1. **PURPOSE:** The purpose of this memorandum is to provide a personal impression of the IDF — its composition, readiness, practices, techniques, and condition — gained during a 16-day visit by the undersigned during late May and early June 1986.

* * * * *

5. **OVERALL IMPRESSIONS:**

b. Institutionalized Change: The IDF has an admirable ability and systematic approach to learning from its mistakes. The errors of the 1973 war have been carefully analyzed, and major reforms have been implemented. This is the one activity where the US Armed Forces has the most to learn from the IDF. Some IDF techniques, tactics, and materiel innovations are transferable, but most of these have been derived from a novel system that collects information, identifies deficiencies, and institutes change. It is the system and not its products that should draw American interest. A more detailed discussion of this system is discussed below under "Lessons Learned."

* * * * *

---

* *Official Histories: Essays and Bibliographies from Around the World*, edited by Robin Higham (Manhattan, KS: Kansas State University Library, 1970), pp. 246-247.

9. LESSONS LEARNED:

a. General. The IDF has developed and is implementing an extremely effective closed loop system designed to identify experienced-derived deficiencies and implement changes in its training, doctrine, organization, and materiel systems. Unlike the US Army, the Israelis have learned much from their relationship with the late S.L.A. Marshall. The system was partially developed after the 1967 war, improved in the mid-1970s, and fully implemented in 1982. The system is fundamentally based on the use of military historians to gather information and rapidly publish results in a classified form. The publications are used in the IDF school system and various headquarters along with practical soldier experience and the use of other military history practices such as staff rides and the free issue of commercially produced military history books to the officer corps. The end result is a well read leadership that aggressively uses past experience, both its own and foreign, to rapidly gain the consensus and willingness to accept and implement change. Of the many IDF strengths, this lessons learned system is probably the cornerstone.

b. Information Collection. Commanders are required to write after action reports, but prime reliance in recording experience is vested in IDF military historians. Each combat action is initially captured by the tape recording of voice command communications nets at division and above and the collection of message traffic. Reserve historians, trained and mobilized by the small (10 officers) IDF history office, are dispatched to division and above sized units. Three of these officers are allocated per division but report to and are controlled by the history office directly. Historians have access to all meetings. After study of the tapes and messages, the historians question commanders and selected personnel using oral history techniques and write their accounts. Incidentally, the historians are not particularly popular in the IDF. One has the impression of an odor faintly similar to an American officer's sensing of a hostile IG.

c. Publication and Dissemination. The historians' accounts are consolidated, polished, and published by the IDF history office in classified form. Internationally recognized historical techniques are observed, the historian must put his neck on the line — writing critical conclusions. A simple chronology of events is not adequate. By US Army standards, the IDF historical publication process proceeds at the speed of light. The rationale for rapid publication is that the IDF does not want its officers to be at the mercy of journalist written war accounts, quickly done books by non-professionals, or ill founded rumors within the IDF. The small IDF history office has completed the official history of all of Israel's many wars to include the 1973 Yom Kippur War as well as half of the 1982-1984 Lebanon Incursion. By way of comparison, the US Army has yet to finish its official account of the Korean War of 33 years ago and has only one of the 17-volume Vietnam history published. The widely disseminated IDF historical publications provide the backbone of a historical publication program that includes the translation and publication of foreign military history books by COL Uri Dromi's Ma'arachot, an IDF subsidized printing establishment that produces the IDF Magazine. In the recent past, Dromi has been able to send as many as five free military history books per year to each IDF officer. Budget cuts have resulted in a controversial decision to eliminate the procedure this year. During the visit, I heard a number of comments by IDF officers that the free book program was the last item that should have been cut. Restricting professional knowledge is considered to be a false economy in Israel. The large scale provision of historical materials, both domestically produced and of foreign origin, provides a fertile ground for innovation and change.

d. Use of History. The visit did not include any exposure to the IDF research and development organization. Information herein on the use of lessons learned is derived from talks with five IDF general officers, briefings at the Staff College, conversations with IDF HQ general staff officers, and with unit personnel at various locations. At the staff college, about 30% of all instruction is on military history. This compares with about 12% at the US Command and General Staff College, the US Army institution that uses the most history. Historical materials include those classified publications of the IDF history office, supplemented by seminars with former commanders who were key figures in Israel's past wars. For

example, the Commandant of the Staff College remarked that he had the Minister of Industry, former General Airel Sharon, describe his role in the 1956 and 1973 wars to his students. The students had read the official IDF history version of Sharon's controversial actions, and the Commandant described the ensuing question and answer period as "bloody." Students at this college and members of combat units conduct historical battlefield tours as a normal activity. In some instances, units have preserved sites, particularly of the 1967 war, so as to instruct their officers and soldiers of enemy techniques, IDF mistakes and successes, and the use of terrain. Some of those tours deal with ancient Roman and Byzantine battle sites. One staff college tour was observed at Jerusalem. Historical case studies are often used in classes to illustrate tactics and weapons employment. Conversations with a number of IDF officers clearly indicated their knowledge of military history is a cut above American Army officers of the same grades despite the Israeli's comparative youth and shorter service experience.

e. Materiel Lessons Learned. Upon return, the undersigned contacted a US officer who had recently served as an attache in Israel. The following is a brief description of how the IDF applies its experience to the materiel development process. In order to rapidly incorporate battlefield driven materiel changes and avoid the protracted nature of their disciplined research and development process, the IDF uses a "quick-fix skunkworks." This organization, the Yiftach, is under the direction of IDF HQ but is not subordinate to the normal R&D bureaucracy. The Yiftach does not have to comply with R&D regulations and is composed of engineers, mechanics, electronic and electrical workers, metal fabrication personnel, and weapons experts. The charter is to quickly produce a prototype, given a tactical problem that can be solved by materiel innovation. The genius of the system is that there are, in essence, two R&D organizations, and they are inevitably in competition for institutional survival, funds, and personnel, so that each strives to cut development time, satisfy the user, and take advantage of the best available technology. Lessons learned in the Israeli military establishment thus have an excellent chance to come to quick fruition in the form of superior armament and technology.

*   *   *   *   *

16. CONCLUSIONS:

*   *   *   *   *

f. The single most important thing that the US can learn from the IDF is its system to effect change.

ROD PASCHALL
Colonel, Infantry
Director

INDEX

Department of the Army, Headquarters (HQDA),
77, 78, 106, 109, 110, 111, 113, 137, 138, 139 (see also
War Department)
- G3/Operations/DCSOPS, 77, 92, 96, 105, 110, 123, 125
- G4/Logistics, 92
- Asst C/S for Force Development (ACSFOR), 93, 94, 99,
100, 105, 110, 111, 112, 119, 139
Dickman, J.T., 50
Division Command Lessons Learned 123-124
Doctrine 1, 127, 128, 133 (see also Manuals and Indian
fighting)
- pre-20th century, 6, 16, 17, 19, 21, 22, 23-4, 29-30
- WWI, 39-43, 46, 47, 49, 51
- WWII, 57, 58, 59, 61, 68, 70, 76
- KW, 76, 77, 78, 82, 83-4, 85-6
- VN, 91, 92, 97, 98-9, 109, 110, 115, 116
- post-VN, 119-20, 121, 122, 124
Drum, Hugh A., 50
El Salvador, 124
Ely, Paul, quote 89
Enthoven, Alain G., 95, 96, 98
Evaluation of US Combat Operations in Vietnam (ARCOV),
98-99
Ewell, Julian J., 98, 99, 115
Fiske, Harold B., quote 37, 46-47, 48
Forces Command (FORSCOM), 124
General Board, USFET, 70
General staff:
- US, 26, 29-30, 31, 38, 58, 61-64, 69-70, 93, 94, 127
- German, 28, 44
- Soviet, 146-8
George Washington University, 92, 100
Grant, Ulysses S., 26
Guibert, Compte de, 18
Halleck, Henry Wager, 17, 24, 25, 26
Harrell, Ben, 101
Harmon, Ernest, 62
Harrison, William Henry, 13-14, 17, 19
History/historical activities, 3, 120, 128 (see also Wagner,
Arthur)
- by IDF, 164; Prussian General Staff, 28; Soviet Army,
146-7; US Air Force, 108
- by US Army 51, 69-70, 78-9, 81, 105, 108-9, 120-1, 122-
123, 124.
Hodge, John R., 78, 85
House, Edward, 39
Human Resources Research Office (HUMRRO), 92, 100
Indian fighting, 1-18, 24, 31, 39
Infantry in Battle, 51, 57, 120
Information & Education - see Troop information programs
Inspectors General, 48, 128, 164
Intelligence, military, 28 (see also War Dept — G2)
Indian fighting, 1-18, 24, 31, 39
Jackson, Andrew, 15, 19
Jackson, Thomas "Stonewall," 23
Johns Hopkins University, 92
Johnson, Harold K., 98, 101
Johnson, Lyndon B., 94
Johnston, Joseph E., 16

Joint Exercise Observation File (JEOF), 125
Jomini, Henri, 21, 25
Journals, professional & service, 29, 30-1, 41, 64-5, 83-4, 97,
104, 123
- *Army,* 104
- *Army and Navy Journal,* 26
- *Army Digest,* 104
- *Cavalry Journal,* 30
- *Field Artillery Journal,* 41
- *Infantry Journal,* 30, 41, 64
- *Infantry School Quarterly,* 84, 86
- *Journal of the Military Service Institution of the United
States,* 30, 31
- *Journal of the United States Artillery,* f5
- *Military Review,* 97
- *Soldiers* - see *Army Digest*
- *United States Service Magazine,* 25-26, 31
Kennedy, John F., 94
Knox, Henry, 11, 12
Lee, Robert E., 23
Legion of the United States, 12-14, 17
Lessons learned, definition, 2-3, 104, 128
*Lessons Learned as a Result of US Military Operations in
Grenada,* (report), 123
Lessons literature, periodic:
- *Army Talks* (ETO, 1944-45), 65-66
- *Army Troop Information Discussion Topics* (DA, 1951-53),
79-80
- *Battle Experiences* (ETO, 1945), 66
- *Battlefield Reports: A Summary of Lessons Learned/Tips
for Commanders* (USARV, 1965-71), 114-116
- *Combat Experiences* (MACV, 1966-67), 114
- *Combat Lessons* (OPD, 1944-45), 63, 64, 66, 83
- *Combat Instructions* (AEF G-5, 1918), 49
- *Combat Lessons Bulletin* (USARV, 1969-71), 114
- *Commander's Combat Note* (173d Abn Bde, 1965-), 106
- *Dessemination of Combat Information* (OCAFF), 1951-53,
83, 85
- *Handbook for US Forces in Vietnam* (MACV, 1965 & 1968),
114-115
- *Hole Huntin* (MACV, 1968), 114
- *Information Bulletin* (WD G-2, 1940-41), 57-8
- *Lessons Learned* (OCAFF, 1951) - initial title of
Dissemination of Combat Information.
- *Lessons Learned* (MAAGV & MACV, 1962-70), 113-114
- *Lessons Learned* (ACSFOR, 1966-67), 114
- *Military Notes on Training and Instruction* (1918, USWD),
41
- *Monthly Mine and Booby Trap Report* (9th Inf Div, 1967),
112
- *Notes for Infantry Officers on Trench Warfare* (British), 41
- *Notes on Recent Fighting . . . .* (British), 41
- *Notes on Recent Operations* (1917, US War Department),
41
- *Notes on Recent Operations* (1918, US AEF), 41, 48, 49
- *Operations Division Information Bulletin* (OPD, 1944-45),
62-63, 65
- *Operations, Lessons Learned* (CONARC, 1965-9), 110-111,
114

167