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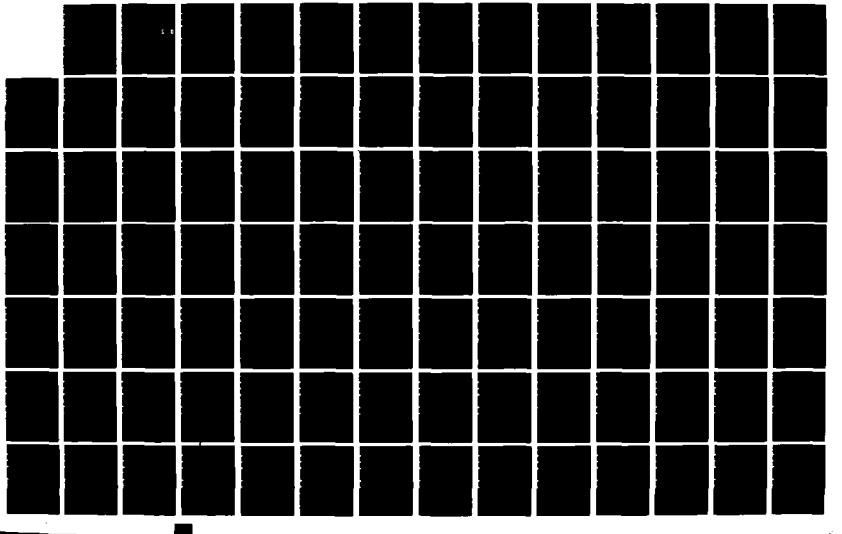

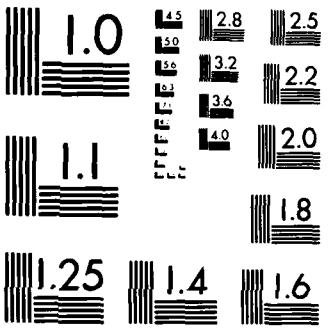

MICROCOPY RESOLUTION TEST CHART

REORGANIZATION DURING COMBAT -- CONSIDERATIONS FOR A MECHANIZED INFANTRY COMPANY

A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree

MASTER OF MILITARY ART AND SCIENCE

by

RAYMOND L. LIVINGSTON, JR., MAJ, USA
B.S., University of Georgia, 1971
M.S., U.S. Naval Postgraduate School, 1980

Fort Leavenworth, Kansas
1985

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THESIS APPROVAL PAGE

Name of candidate Raymond L. Livingston, Jr., MAJ, USA

Title of thesis Reorganization During Combat -- Considerations for a Mechanized Infantry Company

Approved by:

Robert L. Keller, Thesis Committee Chairman
Mr. Robert L. Keller, BS

Douglas R. Jorrey, Member, Graduate Faculty
MAJ Douglas R. Jorrey, BS

, Member, Consulting Faculty
LTC Jay C. Kline, Ph.D.

Accepted this 7th day of June 1985 by Philip J. Brookes,
Director, Graduate Degree Programs

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (Reference to this study should include the foregoing statement.)

ABSTRACT

REORGANIZATION DURING COMBAT -- CONSIDERATIONS FOR A MECHANIZED INFANTRY COMPANY, by Major Raymond L. Livingston, Jr., USA, 144 pages.

This study examines the reorganization process as it applies to a mechanized infantry company. The investigation focuses on the reconstitution process in general, and on the reorganization process in particular. Existing doctrinal publications and research reports on reorganization are reviewed for information appropriate to an understanding of the process of reorganization. The principal referenced document is a draft operational concept for reconstitution currently being developed by the US Army Training and Doctrine Command. The thesis consists of the following major topics: a discussion of reconstitution, combat effectiveness indicators, historical examples of reorganization, existing US Army reorganization doctrine, the reorganization process, and an analysis of the mechanized infantry company organization.

Research indicated that the process of reorganization has not received much emphasis within the US Army in the past. In recognition of the need for such actions on the full spectrum of the modern battlefield, the US Army Training and Doctrine Command is currently developing operational concepts for reorganization. Research identified several factors that impact on a mechanized infantry company's ability to reorganize during combat. The reorganization process, however, is not well understood, and additional efforts are required to insure that unit commanders can use the process to maximum advantage.

ACKNOWLEDGMENTS

The author wishes to acknowledge the assistance and encouragement of the members of the thesis committee throughout this effort. Mr. Robert L. Keller, LTC Jay C. Kline, and MAJ Douglas R. Jorrey provided the necessary guidance during the conduct and development of this thesis. Their constructive advice and flexibility were invaluable. Their contributions and support in this endeavor are acknowledged and greatly appreciated.

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CHAPTER I

INTRODUCTION

> "...an army which has effectively developed -- and can effectively implement -- measures designed to rapidly put attrited formations back into combat may enjoy a capability to wage war far greater than that indicated by the size of its personnel and materiel resources."[1]

A. BACKGROUND

1. Reconstitution

During each of the major conflicts involving the US Army this century, some aspect of reconstitution has been practiced. Personnel and equipment replacements were sent to attrited units; decimated units were inactivated with the personnel and equipment sent to other units; and attrited units with no immediately available personnel and equipment replacements reorganized internally in order to restore the unit to an increased level of combat effectiveness. Some form of reconstitution is necessary in combat in order to counter the effects of combat and non-combat attrition.

Research and study into the reconstitution process have markedly increased over the past few years. Recent developments in the study of reconstitution and new emphasis in the development of doctrine pertaining to this process have generated various definitions of reconstitution and its subcomponents. In order to establish a base for this thesis, the following definitions as found in the US Army Training and Doctrine Command (USATRADOC) Interim Operational

Concept for Reconstitution of Combat Ineffective Units were adopted:

Reconstitution: Actions taken to restore attrited units to a specified level of combat effectiveness by the replacement of personnel and equipment. As defined in the USATRADOC interim operational concept for reconstitution, this process can be divided into these subcomponents: regeneration, reorganization, and redistribution. Figure I-1 portrays the author's concepts of these terms.

Regeneration: The restoration of combat effectiveness that is accomplished through the replacement of personnel, equipment, and supplies, the reestablishment of effective command and control, and the conduct of essential training. This action places effective systems; i.e., fully trained individuals and crews matched to equipment, into attrited units. Regeneration should restore a unit to that level of combat effectiveness attained prior to attrition.

Reorganization: The restoration of combat effectiveness by the cross-leveling of personnel and equipment resources within a unit or by the formation of a smaller, composite unit at a full or overstrength level. This option is the one most easily executed by the commander, and represents the action he can take in restoring combat power during combat prior to regeneration actions. Reorganization will result in a unit with less combat power and effectiveness than that of the original unit prior to attrition.

Redistribution: The reallocation of unit personnel, equipment, and supplies due to overwhelming combat losses rendering the unit incapable of continuing the mission. Personnel and equipment from the unit are then sent to another unit or returned to the personnel replacement or supply systems. The unit is then permanently or temporarily inactivated, depending upon projected reconstitution actions. This is the least preferred reconstitution option.[2]

These three subcomponents of reconstitution describe options available to commanders in order to restore combat effectiveness to an attrited unit, or make maximum use of any remaining resources from a unit which has suffered extreme attrition. The process of reorganization is the principal focus of this thesis; however, this subject will be explored in greater detail in Chapter IV.

The term combat effectiveness appears throughout the thesis, and an understanding of its meaning is important. It is the degradation of combat effectiveness that triggers some reconstitution action that then partially or totally restores a unit's combat effectiveness. Two definitions of combat effectiveness follow:

> "potential to perform assigned missions."[3]
>
> "the capability of troops to conduct decisive combat operations and fully accomplish the combat mission to destroy the enemy under any conditions."[4]

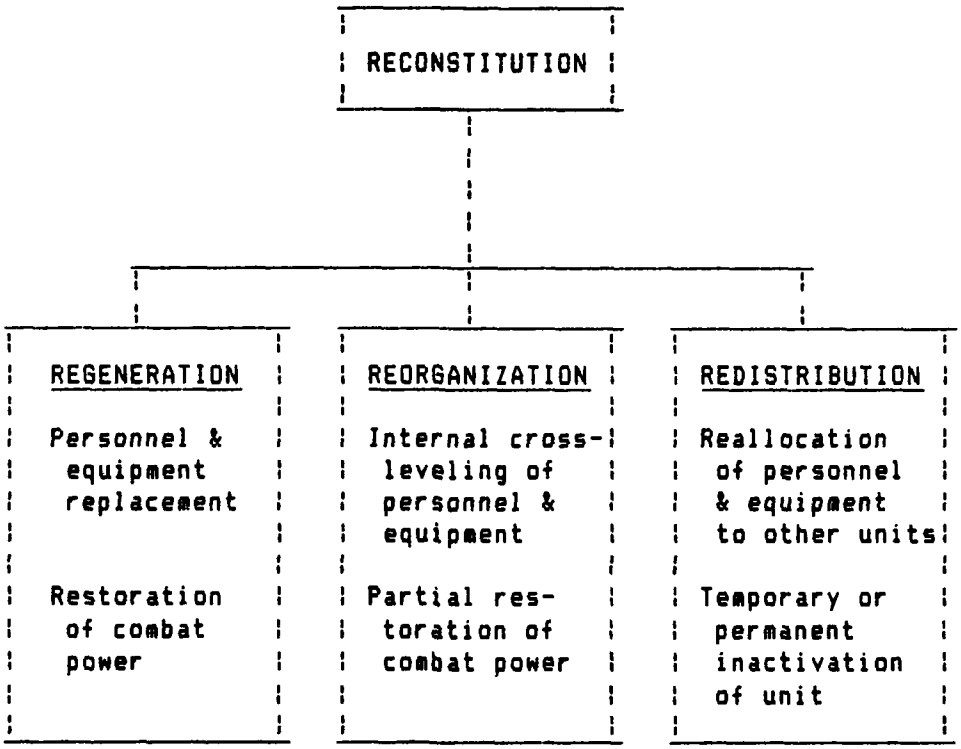

FIGURE I-1. RECONSTITUTION.

2. Reorganization

The process of reorganization has probably been practiced since the first days of combat between man. Through the centuries, historians have written about this process without identifying it as a form of reorganization. The better weapon of a fallen comrade was picked up and used by another combatant with a less capable weapon; crew-served weapons systems usually had sufficient knowledgeable personnel to operate the systems even after suffering original crew losses; and fallen leaders were usually replaced by subordinate leaders or other soldiers within the organization in order to carry on with the mission. In some cases these reorganization events were implemented as a part of a pre-conceived plan and in other cases, they were merely spontaneous actions by soldiers. In any event, reorganization has been an integral element in the restoration and maintenance of combat power in the past and will certainly continue to be in the future. As the lead-in paragraph to this chapter and the definition of reorganization indicate, the ability to reorganize may be a major factor in determining success or failure of any combat mission.

B. STATEMENT OF THE PROBLEM

1. Problem statement: To define the reorganization process and identify factors impacting on reorganization at the mechanized infantry company level.

2. Purpose.

Since the end of the Vietnam War, the direction of the US Army has taken on two distinct dimensions. The first is the rapid development of, and changes in, doctrine. No sooner had FM 100-5, Operations, been published in 1976 than doctrinal thoughts began to shift again resulting in the current FM 100-5, published in 1982. And as the field is rapidly assimilating and implementing the current AirLand Battle doctrine, the doctrine developers are busy with what may be the next doctrine for the Army 21 battlefield. The second dimension is that of broad modernization affecting virtually every branch and functional area in the US Army. This modernization effort is aimed at giving the Army the capability to fully implement the doctrine of FM 100-5, and will firmly establish the direction of the US Army for years to come.

The efforts described above are similar in direction, if not scope, to efforts of other major world powers and Third World countries. It is not enough just to modernize; however, the maintenance of combat effectiveness on the modern battlefield has to be an integral element in capitalizing on the modernization effort. The future battlefield, whether low, medium, or high intensity may be more lethal than those of the past. Combat engagements themselves will likely be characterized by rapid maneuver, high lethality, a trend toward continuous operations, and periodic, isolated fighting by combat units. These characteristics emphasize the need for a reconstitution capability, especially that of reorganization in order to restore and maintain a level of combat effective-

ness which will assist or insure combat success. Reorganization actions are the responsibility of the commander of the concerned unit. The efficiency with which an attrited unit is reorganized, during or immediately following a combat engagement, may well be the difference between success and failure of any following combat actions.

The principal purpose of this research was to put that reorganization process into its proper perspective; to describe reorganization doctrine where it existed; and to identify and define those aspects of reorganization doctrine that do not exist.

C. OBJECTIVES

1. To provide historical examples of combat unit reorganization.

2. To identify existing doctrine on the reorganization process at the infantry company level.

3. To define the reorganization process at the mechanized infantry company level.

4. To identify factors having positive and negative impacts on the combat unit reorganization process.

5. To provide reorganization insights to assist force structure analysts and combat unit trainers in their respective tasks.

D. ASSUMPTIONS

1. The general reorganization process for each type infantry

rifle company is essentially the same.

2. The general reorganization process and factors defined by this research can be applied to other US Army organizations.

E. LIMITATIONS.

1. Research was limited to the mechanized infantry rifle company.

2. Only current Army of Excellence force structures were analyzed in depth.

3. Research was limited to the company level.

4. Reorganization under conditions where weapons of mass destruction; e.g., nuclear, biological, and chemical weapons are employed was not specifically considered.

NOTE: Although the focus of this thesis is at the mechanized infantry company level, sources pertaining to other branches such as armor and to other levels of organization are used to gain insights into particular reconstitution concepts or processes. Additionally, some discussion of combat service support functions as they pertain to reconstitution are discussed. In each case the concepts discussed can be applied to the mechanized infantry company, or they can be used to provide insights into the reconstitution process at the company level.

F. METHODOLOGY

1. General. Although reorganization in some form or other has been practiced throughout the ages, relatively little research and analysis has been done on this particular subject. Regeneration operations; i.e., replacement operations, one form of the process of reconstitution separate and distinct from reorganization, has received considerable attention in the past, especially during and immediately following World War I, World War II, the Korean War, and the Vietnam War. On the other hand, reorganization, as a separate process in its own right, has received increasing attention only since the late 1970's. This information situation then set the stage for the study approach.

2. Study approach. The research followed the principal paths of literature survey, analysis of existing organizations, and personal experience. The following points serve to structure the research methodology:

a. Literature survey.

(1) Historical references. Historical references on unit reorganization are highlighted and discussed.

(2) Current literature. Several contemporary published reports discuss the process of reorganization. In some cases, these include analysis of the reorganization process as it applies to certain small combat units. These were reviewed for their application

to this research effort.

(3) Doctrine. Current US Army publications were surveyed to determine reorganization doctrine as it applies to combat organizations.

b. Analysis of existing organizations.

(1) Analysis of current infantry company organizations. Some recent analytical research has been conducted to assess the extent to which an attrited combat unit can reorganize over time. These analyses were reviewed and included in this effort.

(2) Tables of organization and equipment (TOE). A mechanized infantry company TOE was analyzed to determine to what extent the basic organization itself might facilitate or hinder the reorganization process assuming a mechanized infantry company was attrited.

c. Personal experience. Included throughout this research are thoughts of the author with respect to reconstitution and reorganization. These are based on the author's experiences and discussions with other Army officers and personnel familiar with the reconstitution and reorganization processes.

CHAPTER I

END NOTES

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1. *New Approaches to Reconstitution in High Intensity Conflict on the Modern Battlefield*, BDM/W-79-800-TR (McLean, VA: BDM Corporation, 14 March 1980), p. I-1.

2. US Army Training and Doctrine Command, Interim Operational Concept for Reconstitution of Combat Ineffective Units (Fort Leavenworth, KS: US Army Combined Arms Combat Development Activity, 28 February 1985), pp. 1-4.

3. US Army Training and Doctrine Command, Interim Operational Concept for Reconstitution of Combat Ineffective Units Fort Leavenworth, KS: US Army Combined Arms Combat Development Activity, 28 February 1985), p. A-1.

4. Vasiliy Ye. Savkin, COL, The Basic Principles of Operational Art and Tactics (A Soviet View) (Moscow, 1972), p. 258. (Translated under the auspices of the United States Air Force.)

CHAPTER II

REVIEW OF LITERATURE

A. General.

An extensive literature search was conducted in order to compile all information impacting on the reorganization process. This search included a variety of topics in addition to the terms reorganization and reconstitution. Additional areas searched included unit training, cross-training, unit cohesion, replacement operations, regeneration, redistribution, unit teams, crew training, and combat losses.

In general, most of the information pertaining directly to combat unit reorganization was found in references published since 1979. Many works on reconstitution operations have been published since World War II; however, for the most part, these deal with replacement operations during World War II, the Korean War, and the Vietnam War. These references contain little information pertaining directly to the reorganization of small units.

The additional areas of unit training, cross-training, unit cohesion, replacement operations, combat losses, etc., were researched because of their direct or indirect impact on the reorganization process. For example, unit training and cross-training status, unit cohesion, and the type and extent of combat losses all impact to varying degrees on the ability of a unit to reorganize after being attrited. An understanding of these factors

is fundamental to understanding the reorganization process itself.

B. Literature Summary.

1. General. This section contains brief reviews of some of the more important references used in this thesis. In some cases these references dealt with historical accounts of reconstitution problems. In other sources, especially the more current references, reorganization itself is a topic of discussion.

2. Literature Reviews.

The most recent doctrinal publication pertaining to reconstitution in the US Army is the Interim Operational Concept for Reconstitution of Combat Ineffective Units.[1] As of this writing, this document is being staffed at the various TRADOC schools and integrating centers for comment. Although relatively brief, this document contains some important concepts for future development of the reconstitution process in the US Army. The document establishes definitions for reconstitution and its three subcomponents; discusses reconstitution elements and steps in the process; outlines the resource requirements for reconstitution; and provides a discussion of some indicators of combat effectiveness potential. When approved, this document will become the capstone reconstitution doctrine for the US Army. Within the USATRADOC doctrinal community, this operational concept should provide the impetus for further doctrinal refinements by TRADOC schools and integrating centers.

The US Army, Europe already has an approved document detailing reconstitution actions for ineffective units. The USAREUR Operational Concept -- Reconstitution of Ineffective Units[2] was published on 21 July 1983 and appears to have heavily influenced TRADOC's interim operational concept discussed above. The definitions of the subcomponents of reconstitution, the discussion of the reconstitution process and steps, and the indicators of combat effectiveness potential all appear in the TRADOC document. Additionally, damage assessment worksheets and personnel and equipment profile worksheets were drawn from a BDM report on reconstitution which was conducted in 1979. (This report will be discussed below.) This USAREUR operational concept represents a significant effort by a major field command in describing the reconstitution process. There is no effort to describe the subcomponent processes; however, other than to provide their definitions.

A report prepared by the Combat Studies Institute of the US Army Command and General Staff College in 1983 titled Unit Reconstitution -- A Historical Perspective[3] provided detailed historical examples of unit reconstitution. These examples come from the activities of some of the principal participants of World War I, World War II, the Vietnam War, and the 1973 Mideast War. US Army combat reconstitution examples are provided for the first three conflicts with particular, detailed emphasis on the 28th Infantry Division in

November 1944 during actions in the Huertgen Forest (European Theater of Operations).

The report focused on several ideas. These were criteria for withdrawing a unit from combat due to losses of personnel and equipment; the distribution of casualties within a unit and its effect on reconstitution; and the logistical system's response to high personnel and equipment losses during surge operations. Of these, the discussion of the withdrawal criteria for reconstitution purposes is the most illuminating.

The principal topic of this report is replacement operations, but reorganization is discussed at several points throughout. There is limited discussion at the company level, with the majority at the brigade and division level. This report serves as a useful reference of historical examples of reconstitution.

A study in 1977 by SRI International, Continuous Land Combat,[4] provided some insights into how future conflicts might be conducted. Emphasis is on the capability of the US Army to conduct continuous combat operations for a period of time under conditions of poor weather and low visibility as well as under normal daytime conditions. This report does not consider reorganization or reconstitution; however, the discussion does provide a basis to support the need for rapid and effective reorganization during periods of continuous operations in order to restore and maintain combat effectiveness.

A 1979 report by A. H. Cordesman and R. Franklin, High Technology Experimental Forces,[5] provided a general discussion of experimental and innovative approaches to using low cost and high technology systems in the restructure of US Army tactical units. The report stressed the need to conduct research in this area in order to react to growing pressures on the United States. These pressures were grouped into the following categories: general growth of materiel and weapon technological sophistication; changing roles and missions for US armed forces; NATO capabilities vis á vis the Warsaw Pact; military armament and technological improvements in the Third World; and increasing demands on scarce resources.

The focus of the report was that continuing research and analysis must be conducted in order to put US armed forces in a favorable position with respect to the pressures listed above. Emphasis was placed on materiel and weapons systems. Capitalization of technological innovations and practical applications for the armed forces were stressed.

This report does not discuss reconstitution or reorganization. Its focus was materiel related as discussed above. The need to survey and analyze force concepts is briefly mentioned, but there is no discussion of requirements for the soldier, force structure developments, or training. In that regard, this report fails to discuss some of the critical links in force modernization and application of technological advances and innovations. Human factors

and other soldier-oriented aspects of combat organizations are essential aspects of effective unit designs. High technology materiel systems still require the human element at some point in the organization.

The 1979 version of the US Army Infantry School (USAIS) Mechanized SOP (tactical)[6] was reviewed as an example of how mechanized units (M113 equipped) might consider reconstitution issues as a part of unit standing operating procedures (SOP). Most units develop their own SOP's which reflect relatively standard and established methods for performing certain functions during combat. These SOP's are known to selected, and in some cases all, unit members and are used to preclude the continuous issue of orders and instructions pertaining to these functions while engaged in combat.

This SOP was published by the USAIS as an aid to students at various courses at USAIS and to units in the field. This particular SOP is directed at the company level and includes a discussion of such topics as combat orders, communications, NBC operations, doctrinal information, and tactical information relating to various operations conducted by mechanized infantry units.

The SOP contains a few sections which impact on unit reorganization even though there is not a general discussion of reorganization per se. Revelant areas discussed are succession of command, rules for organizing an understrength squad, and reorganization procedures for offensive and defensive operations.

These areas are presented in cryptic, phrase format with no explanatory comments or in-depth discussion of the reorganization process.

The most extensive, single publication on contemporary reconstitution issues reviewed was the 1980 BDM Corporation technical report New Approaches to Reconstitution in a High Intensity Conflict on the Modern Battlefield.[7] This report was the product of a US Army contract to BDM Corporation for the purpose of analyzing reconstitution requirements, examining current methods of reconstitution, and proposing reconstitution alternatives to meet US Army needs in a high intensity conflict.

This report focuses on reconstitution in general as well as its subcomponents of regeneration, reorganization, and redistribution. In the discussions, emphasis is placed on the importance of the soldier and the impact of human factors in any reconstitution operation. Additional research is done in defining some tangible and intangible indicators of combat effectiveness. Tangible indicators include command and control, accentuated personnel attrition, accentuated equipment attrition, cumulative attrition over time, and logistics resources. Intangible indicators include leadership, morale, esprit de corps, motivation, and training. Throughout the discussions, examples of certain ideas and processes are provided using a tank battalion as the combat unit.

In addressing the process of reconstitution, the report

evaluated combat service support and operational considerations in restoring a unit's combat effectiveness. A discussion of some indicators of combat effectiveness is conducted with the point that the determination of combat effectiveness may be a difficult process. Attrition of personnel and equipment, status of command and control, impact of intangibles, and status of key personnel all combine to make this determination difficult.

The section of the report on reorganization suggests that reorganization can be more effectively and efficiently conducted in battalion and brigade size units due to the inherent impact of intangibles at those levels. It is at these levels that the materiel related functions can best be integrated with the intangible factors in restoring combat effectiveness. In order to assist in the return of a unit to a higher level of combat effectiveness, the basic structure of a unit undergoing reorganization needs to be maintained to preclude a breakdown of unit cohesion and disruption of the unit's normal routines.

This report, New Approaches to Reconstitution in a High Intensity Conflict on the Modern Battlefield, is the most referenced recent research effort on reconstitution in the US Army. The discussions of reconstitution concepts such as responsibility for reconstitution, corps regeneration units, assessment and recovery teams, and reporting procedures for combat losses have formed the basis for current reconstitution doctrine in the US Army. These concepts are outlined in several US Army Logistics Center

combat service support field manuals; e.g., FM's 63-1, Combat Service Support Operations - Separate Brigade; 63-2, Combat Service Support Operations - Division; 63-3, Combat Service Support Operations - Corps; and 100-10, Combat Service Support, and they formed the basis of combat service support instruction on reconstitution at the US Army Command and General Staff College during Academic Year 1984-1985. This is currently the principal reference on reconstitution and reorganization used in the US Army.

In 1981, JAYCOR published a report titled Reconstitution on the AirLand Integrated Battlefield[8] which dealt with considerations and possible actions to assure effective operations by brigades and divisions when attacked by weapons of mass destruction. The discussions oriented on the AirLand Battlefield and focused on the impact of significant losses of personnel and equipment to combat, combat support, combat service support, and command and control elements of organizations in combat.

The report provided some options available to brigade and division commanders when their units had been rendered combat ineffective. It stressed some ways to quickly compensate for the loss of maneuver unit capabilities through the use of several options. These included a concentration of firepower; e.g., field artillery, close air support, and attack helicopter units; the use of rapidly delivered mines; and the use of various elements of electronic warfare. These are deemed interim measures, however, until force

reconstitution, a more permanent fix, can be effected.

This report does not discuss the process of reorganization. It does, however, provide a good discussion of possible immediate and temporary reconstitution alternatives for maneuver units when subjected to nuclear attacks.

In 1981, an attempt was made by the US Army Combined Arms Combat Development Activity to relate combat effectiveness to the requirement for unit reconstitution. The report, Criteria for Reconstitution of Forces,[9] defined a set of combat effectiveness indicators which were then modified to represent varying values corresponding to different levels of attrition. The combat effectiveness indicators used were personnel status, equipment and weapon status, status of combat support, commander's perception of the enemy, and the status of intangible factors such as leadership, unit cohesion, training, and morale. These profiles were then evaluated through the use of questionnaires by armor and infantry officers at various US Army TRADOC schools, ranging from the Armor and Infantry Advanced Courses to the War College, to determine when a unit might reconstitute as a result of attrition.

This study defined reconstitution as those non-routine actions implemented to restore units to a desired level of combat effectiveness. It included unit replacement, reorganization, and redistribution. The focus of the study, however, was on the need for initiation of reconstitution actions, not how or when various

reconstitution alternatives would be accomplished.

The results of the study indicated that of the combat effectiveness indicators listed above, personnel and equipment status were generally the determining factors in triggering a decision to reconstitute. Of these, personnel status was the overriding consideration. While respondent written comments indicated that they placed a high degree of importance on leadership, unit cohesion, training, and other intangible factors, these had little impact on their reconstitution decisions. Additionally, the status of combat support assets also had little imapct in the reconstitution decisionmaking process.

As a side issue to the study, but of particular note to this thesis, is that a number of respondents indicated an unfamiliarity with reconstitution operations and the attendant decision processes. This was a common written comment from several Advanced Course respondents at the Armor and Infantry Schools. This result can probably be attributed to two factors. First, only four percent of the Advanced Course respondents had combat experience. This compares to combat experience for 95 percent of the Army War College respondents and 85 percent for the US Army Command and General Staff College respondents. Second, the term reconstitution, as used in this study, would be expected to be more familiar to the higher ranking officers who had more service time and more exposure to the reconstitution process. It also bears repeating that the study focused on an attrited unit's need for reconstitution, and not on how or when various reconstitution alternatives would be implemented.

A recent research effort on replacement operations was conducted by MAJ Joe B. Rusin in his 1982 US Army Command and General Staff College Master of Military Art and Science (USACGSC MMAS) thesis, Command and Control of Replacement Personnel.[10] In his thesis, MAJ Rusin looked at who should be the command and control element for replacement personnel operations during wartime. During his research, the author considered this primary issue along with these others: establishment of replacement pools, replacement training requirements prior to joining combat units, and the mode of shipment by which replacements join combat units.

This report focused on problems and lessons learned with respect to replacement operations during World War II, the Korean War, and the Vietnam War. Although replacement oriented, and not focused on reorganization, the thesis provides implied support for reorganization in combat because of identified deficiences in replacement operations in a wartime environment. One-for-one replacements for personnel losses are not always immediately available; therefore, there exists the need for reorganization alternatives to restore a degree of combat effectiveness until fully trained replacements are made available.

Another recent USACGSC MMAS thesis involving personnel replacement operations was The United States Army's Regimental

System -- A Framework for Wartime Personnel Replacement[11] by MAJ Thomas J. Strauss in 1984. This research effort focused on some of the shortcomings of the personnel replacement system and discussed some of the differences between individual and unit replacements. Throughout the thesis, the author stresses the need for cohesive, team-trained units on the modern battlefield. He ties these thoughts to the idea of using the US Army's Regimental System as the principal organization upon which to build cohesive, combat effective units within the wartime personnel replacement system.

The thesis contains a brief discussion of current thoughts on the other aspects of reconstitution; i.e., reorganization and redistribution. In discussing reorganization the author continues to stress the importance of cohesion and leadership.

Some of the human dimension aspects of combat power are discussed in a 1983 US Army War College student essay titled Fighting Power and the Maintenance of Combat Strength: The Imperative Allies of Technology.[12] In his essay, COL J. H. Denton pointed out the fact that the 1976 and 1982 versions of FM 100-5, Operations, both neglected a direct discussion of the importance of the human dimension in combat. The author stressed that the individual soldier, and the fighting power he represents, is a necessary ingredient for success in combat. He also stressed that fighting power, maintenance of combat strength, and technology are all necessary for success on the battlefield.

The author provided support for his thesis by describing the fighting power qualities of the German Army during World War II. He cited certain examples of German emphasis on unit integrity, cohesion, unit training, and especially unit, not individual, replacements as keys to superior fighting power.

Although not a reconstitution discussion, the essay does describe some human dimension characteristics which may impact on unit reconstitution in general and unit reorganization in particular. The author's point about considering the human dimension in combat is particularly noteworthy during this period of transition for the US Army.

Elements of the US Army have been transitioning into new organizations over the past few years in order to fully support the doctrine of AirLand Battle. A significant milestone in that regard was the development of the force structures for armor and mechanized divisions. These new structures are grouped under a category termed Division 86. A report by the US Army Combined Arms Combat Development Activity, Division 86 - Final Report Oct 81 with June 83 Addendum,[13] covers the development of these organizations since 1978 and highlights the new force structures comprising the subordinate units in the armor and mechanized divisions. Force design considerations included some general and specific principles and highlighted an increased awareness of the importance of rapid reconstitution of attrited teams, crews and units.

Resident combat service support instruction at the US Army Command and General Staff College during Academic Year 1984-1985 included a discussion of reconstitution. The reference for this instruction was the Student Handbook - Combat Service Support, Volume I,[14] undated but published in 1984. This handbook is primarily based on the BDM Corporation report, New Approaches to Reconstitution in a High Intensity Conflict on the Modern Battlefield, previously discussed in this section. Instruction itself was oriented on regeneration with limited discussion of reorganization.

A brief review was made of the most recent US Army doctrinal field manuals to determine to what extent unit reorganization was discussed. The following combat oriented field manuals were reviewed:

FM 100-5, Operations, 20 Aug 82[15]

* FM 71-1, The Tank and Mechanized Infantry Company Team, 30 Jun 77[16]

FM 71-2, The Tank and Mechanized Infantry Battalion Task Force, 30 Jun 77[17]

FM 71-3, Armored and Mechanized Brigade Operations, 25 Jul 80[18]

FM 71-100, Armored and Mechanized Division Operations, 29 Sep 78[19]

FM 71-101, Infantry, Airborne, and Air Assault Division Operations, 26 Mar 80[20]

* FM 7-7, The Mechanized Infantry Platoon and Squad, 30 Sep 77[21]

FM 7-8, The Infantry Platoon and Squad (Infantry, Airborne, Air Assault, Ranger), 31 Dec 80[22]

FM 7-10, The Rifle Company, Platoons, and Squads, 17 Apr 70 with Change 1.[23]

FM 7-20, The Infantry Battalion (Infantry, Airborne, Air Assault, Ranger), 3 Apr 78 with Change 1, 28 Oct 80[24]

The above references of course cover a wide range of operations by different types of units at varying levels of organization. Of these references, however, only those asterisked discuss the concept of reorganization, and that discussion is very shallow, consisting of just a few lines of text. In none of these doctrinal references is there a detailed discussion of the reorganization concept and its importance during combat.

In addition to the above listed field manuals, the following

manuals detailing combat service support operations were reviewed:

FM 63-1, Combat Service Support Operations - Separate Brigade, 30 Sep 83[25]

FM 63-2, Combat Service Support Operations - Division, 21 Nov 83[26]

FM 63-3, Combat Service Support Operations - Corps, 24 Aug 83[27]

FM 100-10, Combat Service Support, 1 Mar 83[28]

These manuals all discuss reconstitution, but not reorganization. The reconstitution discussions are centered on personnel and equipment replacement operations. The manuals provide a brief look at some of the tasks required for reconstitution operations. Even though these manuals are oriented on combat service support (CSS), the the concepts discussed are broader than that. They are also applicable to infantry divisions and affect the reconstitution actions of subordinate units within these divisions. The discussions focus on reconstitution actions in the covering force, main battle and rear areas. Collectively, these references provide the bulk of doctrinal material on reconstitution that is found in US Army field manuals. Reorganization, however, is not discussed.

In order to determine what guidance was provided to force structure developers, pertinent regulations regarding tables of

organization and equipment (TOE) and supplemental issues were reviewed. These included the following regulations:

AR 310-31, Management System for Tables of Organization and Equipment (The TOE System), 2 Sep 74[29]

AR 310-34, Equipment Authorization and Utilization Policies and Criteria, and Common Tables of Allowances, 24 Feb 75[30]

AR 310-49, The Army Authorization Document System (TAADS), 15 Dec 80[31]

AR 570-2, Organization and Equipment Authorization Tables - Personnel, 22 Jul 69 with Change 10, 15 Sep 78[32]

These regulations were reviewed to determine to what extent they contained requirements that might impact on the reorganization capability of an attrited infantry company. Examples of such requirements might deal with cross-training of personnel, redundant equipment and capabilities, and personnel primary and additional skill capabilities. There is no mention of any requirement to build into TOE's a capability to facilitate the reorganization of an attrited unit. Collectively, these regulations provide for the following:

- Standardization in developing like TOE units.

- Allowance for additional duties for personnel as long as they do not interfere with primary duties.

- Authorization for only minimum essential personnel and equipment (types and quantities) necessary for mission accomplishment.

These regulations concentrate on the mechanics of force organizational design across the entire US Army. They do not specifically recognize unit reconstitution and reorganization design requirements. Any specific guidance provided at the time of concept design would supplement these regulations and might affect the reconstitution and reorganization capability of the organization.

A number of Soviet articles pertaining to the reorganization process were reviewed. The article in the Military Herald, April 1975, titled "Keeping Up Our Combat Readiness,"[33] is a good example. In this article, the author discussed measures to be taken to restore combat capacity of companies and platoons when subjected to nuclear and chemical attacks. Emphasis was placed on planning for this event and in executing the process in training exercises. Although not referred to as reorganization, the process described included the determination of personnel and equipment losses, replacement of incapacitated leaders, and internal redistribution of resources to restore maximum combat capacity. Other reviewed Soviet references included these subject areas: the restoration of the combat capacity of a tank battalion during a nuclear or chemical attack;[34] the planning, preparation, and training

requirements of artillery units in order to reorganize after a nuclear attack;[35] the requirements for restoration and maintenance of control in attrited combat units;[36] and measures to be taken by attrited units in the restoration of combat effectiveness.[37] These articles highlighted the importance of reorganization after attrition in order to continue the mission. They also are indicative of the importance the Soviet Army places on the reconstitution and reorganization processes.

c. Literature assessment. The reviewed literature contained a great deal of information on the regeneration aspect of reconstitution. Reorganization of units during combat, however, has not received much attention until recently. This recent information does place increasing importance on the reorganization process. Doctrine in this area is not completely finalized, but efforts are underway to correct this deficiency as evidenced by the anticipated publication of the TRADOC Interim Operational Concept for Reconstitution of Combat Ineffective Units.

CHAPTER II

END NOTES

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18. US Army, FM 71-3, Armored and Mechanized Brigade Operations (Washington, DC, 25 Jul 80).

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20. US Army, FM 7-8, The Infantry Platoon and Squad (Infantry, Airborne, Air Assault, Ranger) (Washington, DC, 31 Dec 80).

22. US Army, FM 7-10, The Rifle Company, Platoons, and Squads (Washington, DC, 17 Apr 70).

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CHAPTER III

THE RECONSTITUTION PROCESS

> "Despite precautionary measures to avoid becoming a target and to minimize the effects of a nuclear or chemical attack, commanders must be prepared to continue the mission after such an attack. The commander who reconstitutes first has the advantage."[1]

A. GENERAL.

The US Army Training and Doctrine Command (TRADOC) is currently developing the operational concept for reconstitution. When this operational concept is finalized, it will be published as a TRADOC pamphlet in the 525 series. When published, this reconstitution operational concept will join a growing list of other 525 series pamphlets published by TRADOC to describe the conduct of various aspects of combat, combat support, and combat service support operations. These pamphlets are used by the various TRADOC schools, centers, and agencies and by field forces to support doctrinal training.

As indicated in Chapter II, Review of Literature, the majority of reconstitution information currently found in doctrinal field manuals and taught in TRADOC schools has a common origin in the 1980 BDM Corporation report titled New Approaches to Reconstitution in High Intensity Conflict on the Modern Battlefield. As a result of the ongoing TRADOC development of an operational concept for reconstitution, a closer look is being taken at this battlefield process.

Reconstitution is the umbrella term encompassing the processes of regeneration, reorganization, and redistribution. Because TRADOC is continuing to staff and refine these concepts, some of the most recent reconstitution research efforts will be highlighted in order to describe the reconstitution process. The effort here will not be to describe a concensus process for reconstitution, but merely to relate the separate descriptions as defined in several reports and to make general comments where the process might affect reorganization. This chapter then will define the reconstitution process in a general sense and will provide the structure for a detailed discussion of reorganization in Chapter IV. In order to provide a reference for this discussion, the definition of reconstitution, as found in the TRADOC Interim Operational Concept for Reconstitution of Combat Ineffective Units, is quoted below:

> "... extraordinary actions implemented by commanders to restore combat ineffective units to a specified level of combat effectiveness. These actions may include replacement of personnel, supplies, and equipment, using command priorities to allocate resources; reestablishment or reinforcement of command and control; and conduct of essential training."[2]

B. THE NEED FOR RECONSTITUTION.

By its very nature, combat results in attrition of personnel, equipment, or both. Continued combat results in increased attrition to the participants to the point that one or both sides is no longer capable of engaging in effective combat. At this point the participants are combat ineffective. The process of restoring a

unit to a specified level of combat effectiveness is called reconstitution. Reconstitution then is necessary in order to return an attrited unit to combat effectiveness. Reconstitution entails actions separate and distinct from the normal, routine flow of replacement personnel, weapons, and other equipment. It involves a concerted effort by one or more levels of organization following a conscious decision that a unit should undergo some form of reconstitution. As defined in Chapter I, this process consists of three options: regeneration, reorganization, and redistribution.

The remainder of this chapter will focus on the elements of reconstitution as indicated by several different studies and documents. These elements will then be refined to focus only on the reorganization option in Chapter IV.

C. THE RECONSTITUTION PROCESS.

1. General. The following paragraphs in this section contain ideas concerning the decision to reconstitute an attrited unit. The following separate sources use the term reconstitution in the discussions, but the focus is oriented more on the regeneration process than the others. The reorganization process itself will be discussed in Chapter IV.

2. Current US Army Command and General Staff College instructional materials[3] discuss decisionmaking and various other command and staff responsibilities with respect to reconstitution. Central to any decision pertaining to reconstitution options is the determination of combat effectiveness of a particular unit.

A determination of a unit's combat effectiveness is based in part on information concerning unit status and requirements transmitted to command and staff personnel. These personnel then analyze the unit's requirements, available assets, time constraints, and operational situation. Once this type of information is provided to the commander, a decision can be reached on the relative combat effectiveness of the unit, and what reconstitution measures, if any, could and should be undertaken.

The determination of combat effectiveness is a complex procedure based upon a variety of factors. No single combat report provides sufficient information for such a determination. Commanders must make that decision based upon available information. The USACGSC instructional material provides two principal reasons the determination of unit combat effectiveness is a complex process. First, combat effectiveness can be divided into tangible and intangible factors. Tangible factors include personnel, weapons, and other equipment status; while intangible factors include leadership, morale, training, etc. The determination of the status of these factors may be difficult due to degraded communications links, temporary isolation of units, and difficulty in accurately assessing the intangible factors. The second reason is that combat effectiveness indicators are interactive. For instance, complete fill of authorized personnel means little if critical equipment is short. Likewise, a unit with all authorized equipment, but shortages of personnel will have some combat effectiveness degradation.

Significant to the discussion of reconstitution decisionmaking is to identify the most appropriate commander qualified to make those decisions. The CGSC material proposes that the next higher commander is in the best position to determine the combat effectiveness of his subordinate units.

The CGSC instructional materials propose the use of "casualty and damage assessment elements" formed by attrited units or higher echelon units in order to determine the extent of attrition and also to form the nucleus of "assessment and recovery teams" who will carry out initial restoration operations. The mission of these casualty and damage assessment elements at battalion level includes the following:[4]

- Reestablishment of command and control channels between the attrited battalion's headquarters and the battalion's immediate subordinate elements.

- Determination of personnel losses, with initial emphasis on losses of key leaders and other essential personnel.

- Determination of the status of major weapon systems including the following:
  - -- Number of systems unserviceable or nonreparable.
  - -- Number of systems exceeding damage repair capability in the forward area.
  - -- Number of systems reparable in the forward area.
  - -- Location of desired collection points.

-- Requisition of resources to support evacuation requirements.

- Determination of overall casualty situation including the following:
  - -- Number of casualties requiring immediate treatment.
  - -- Number of casualties requiring evacuation.
  - -- Location of desired casualty sorting/medical evacuation points.

- Overall assessment of unit situation and requirements, to include evaluation of the unit's residual combat effectiveness.

- Organization of internal unit resources to begin initial recovery operations.

- Determination of, and request for, additional required external resources.

In order for these elements and teams to effectively conduct their operations they must possess the following: ability to reestablish internal and external communications links; mobility; strong reconnaissance capability; adequate training; and good standing operating procedures (SOPs). These SOPs are essential since these elements are ad hoc organizations formed for a particular function for a limited period of time.

3. The US Army Combined Arms Combat Developments Activity conducted a study in 1981 titled Criteria for Reconstitution of Forces which related the combat effectiveness of a unit to the requirement for reconstitution actions.[5] In order to conduct the study a set of combat effectiveness indicators were developed which could be used by a commander in evaluating the potential of his unit to continue effective combat operations. These indicators of combat effectiveness potential were agreed upon by a consensus of a group of officers from the US Army Combined Arms Combat Development Activity and the US Army Command and General Staff College staff and faculty. The indication of combat effectiveness is, of course, determined by many varying factors, but this group of officers reached consensus on five indicators to describe the major considerations used by a commander in such an assessment. This set of indicators follows:[6]

- Personnel status, primarily foxhole strength and the status of the unit's command structure.

- Status of the unit's major weapons and equipment and the ability of the combat service support system to perform routine resupply and repair.

- Status of combat support, primarily field artillery and close air support.

- The commander's perception of his enemy's strength, condition, and intentions.

- Status of intangible factors such as strength and experience of leadership, unit cohesion, troop training levels, and morale.

The study was conducted by developing questionnaires and submitting them to infantry and armor officers at the US Army War College, the US Army Command and General Staff College, and the US Army Armor and Infantry Schools. The questionnaires consisted of a scenario (mechanized infantry battalion task force on a defense mission in Europe) subdivided into profiles describing all possible combinations of the five combat effectiveness indicators listed above at each of three different levels of values (high, medium, or low). These three levels corresponded to a status of high, medium, or low for each of the five indicators. For each profile the respondent was asked to evaluate the battalion's chance of success in continuing its assigned mission and to decide whether the unit should be reconstituted. The background and qualifications of the respondents were extremely varied. The senior respondents reflected a group with extensive combat experience and extensive time in the Army, while the junior respondents reflected a group with virtually no combat experience and limited time in the service.

The findings of the study are reproduced below:

"- When personnel strength is reduced to 40 or 50 percent, decisions are needed on reconstitution actions to allow the unit to perform its mission effectively.

- When availability of major equipment is reduced to 30 or

40 percent decisions are needed on reconstitution actions to allow the unit to perform its mission effectively.

- When the commander perceives that his unit's potential for effective combat is less than 40 percent, based on his consideration of all important indicators, decisions are needed on reconstitution actions to allow the unit to perform its mission effectively."[7]

Perhaps more illuminating, given the generally subjective nature of the study, are these analysis insights:[8]

- Respondents tended to focus almost exclusively on the status of personnel and equipment in reaching a decision. Of these two factors personnel status was the overriding consideration in the determination of reconstitution needs.

- Respondents tended to ignore combat support status in their decisionmaking process.

- Knowledge of threat capabilities had little impact on the respondents.

- Intangible indicators had little influence on the respondents.

Written comments by the respondents acknowledged the importance of various intangible factors and the status of combat support assets, but these factors had little impact in their determination of the need for reconstitution actions.

4. The current doctrinal US Army field manual with the most extensive discussion of reconstitution is FM 100-10, Combat Service Support.[9] As noted in Chapter II, the reconstitution discussion in this field manual was heavily influenced by the previously referenced BDM report. This manual is oriented on combat service support (CSS) operations within the theater and dwells on the regeneration aspect of reconstitution. Throughout the field manual, close coordination between tactical commanders and CSS operators is stressed. The principal CSS operators are supply, maintenance, transportation, personnel, and medical elements. Emphasis is placed on the use of regenerating units to implement reconstitution functions.

Reconstitution actions to restore an ineffective unit to a desired level of combat effectiveness are listed without any elaboration. These actions include the following:[10]

- Identification of the extent and types of personnel and equipment losses.
- Assessment of remaining combat capabilities.
- Alleviation of the most urgent, debilitating effects of attrition.
- Preservation of all possible resources.
- Preparation for subsequent recommitment to combat, or for reorganization or regeneration actions.

Specific measures to assist a unit in restoration of combat

effectiveness include these actions:[11]

- Reestablishment of command and control.
- Damage assessment.
- Security procedures.
- Emergency medical procedures.
- Damage control procedures.
- Battlefield recovery, evacuation and repairs of damaged equipment.

5. The most recent doctrinal developments concerning reconstitution are found in the Interim Operational Concept for Reconstitution of Combat Ineffective Units.[12] This document reflects the most concerted doctrinal effort to date in developing an understanding of the reconstitution process and specific steps to be taken in the recovery of combat ineffective units.

As discussed in the operational concept, the reconstitution process consists of these elements:[13]

- Reestablish command, control, and communication (C^3). Replace key personnel and equipment in order to restore adequate C^3.
- Materiel damage and personnel assessments. Determine losses and remaining capabilities in these five major

areas: command and control, personnel, equipment, supply, and training.

- Location. Reconstitution is best undertaken in a forward, secure location. It should be in the vicinity of a main supply route to facilitate combat service support operations and should be conducted when there is little or no enemy contact.

- Security. External security may be necessary as the unit primary effort will be directed to the reconstitution issues and actions.

- Medical support. Maximum effort here in the prevention and treatment of casualties will enhance the reconstitution process.

- Decontamination. Necessary personnel and equipment decontamination should be accomplished as quickly as possible.

- Resupply and maintenance support. Mission essential resupply (ammunition and fuel) and maintenance operations are conducted.

- Replacements. Individual and crew replacements are integrated into the attrited unit. Additional time for integration may be necessary in order to establish unit

cohesion prior to further commitment to battle.

- Training. Training may be necessary in order to restore the unit to the desired level of combat effectiveness.

There are some specific steps which must be followed in reconstituting units. These steps, as listed in the Interim Operational Concept for Reconstitution of Combat Ineffective Units, are as follows:[14]

- Commander's evaluation of residual unit effectiveness. (Combat effectiveness potential indicators are discussed in Chapter IV.)

- Commander makes materiel damage and personnel assessments.

NOTE: In the case of regeneration or redistribution the commander will probably be one or two organizational levels higher than the attrited units. For a unit which is to be reorganized the attrited unit commander will make the assessments.

- Commander recommends how and where the attrited unit should be reconstituted.

- Commander establishes priority of fill for equipment and personnel, and the level of effectiveness to which the attrited unit is to be restored.

- Commander establishes the time by which reconstitution will be completed.

- Theater army provides replacement equipment and personnel.

- Reconstitution actions conducted:

  -- Battlefield recovery and evacuation.

  -- Decontamination and change of NBC protective clothing as appropriate.

  -- Security of the reconstitution site.

  -- Reestablish command, control, and communications.

  -- Provision for maintenance and medical support.

  -- Resupply (Classes I thru IX as appropriate).

  -- Training as required.

6. The BDM Corporation study of 1980, New Approaches to Reconstitution in High Intensity Conflict on the Modern Battlefield,[15] provides the most detailed discussion to date of the reconstitution process in a broad context and also provides a discussion of reorganization itself. Although the study was directed toward high intensity conflict, the concepts discussed appear just as applicable to low and medium intensity conflicts. Regardless of where, when, and with what means combat is waged, if losses are incurred, then a requirement for some form of reconstitution exists.

This study identified several elements comprising the reconstitution process. These elements are listed below:[16]

- Maintenance support. This support includes the timely

coordination and execution of recovery, evacuation and repair functions for damaged weapons systems and other equipment.

- Medical support. Wounded personnel must be treated and returned to the unit or evacuated for additional treatment and subsequent return to the unit or to the personnel replacement system.

- Resupply. All required classes of supply must be restored with emphasis on unit basic loads of ammunition and in fuel.

- Replacement actions. Identification of replacement equipment and personnel and the means and procedures for their integration into attrited units must be accomplished.

- Damage asssessment. Timely assessments of the magnitude, type, and distribution of personnel and equipment losses must be made. Integral to this assessment is also the determination of overall residual combat caspabilities.

- Decisionmaking, information flows, and command and staff procedures. These activities are responsible for the execution of the previously listed reconstitution elements.

- Other related functions which may have to be accomplished when an attrited unit is to be reconstituted.
  - -- Line of communication repair and construction.
  - -- Security functions to protect an attrited unit undergoing reconstitution.
  - -- Restoring a unit's command and control.
  - -- Alleviation of the impact of combat stress.
  - -- Other peripheral tasks related to those above.

Some of these listed reconstitution functions are performed by the CSS system and some are operational in nature.

In addition to the reconstitution elements previously discussed the BDM study also highlights several initial actions taken by an attrited unit as it seeks to recover from high intensity operations. These might precede any of the reconstitution alternatives, but they are especially germane to reorganization since they are initial actions and are accomplished by the attrited unit. These actions are oriented toward maneuver battalion and task forces. These recovery actions are briefly described below:[17]

- Reestablishment of command and control. This action is necessary internal to the attrited unit in order to accomplish the subsequent activities. It may involve the loss or damage of key communications systems, the death or severe injury of key leaders, or a combination of both.

- Damage assessment. This is an integral evaluation of the loss of personnel and equipment within the unit. Once determined, this assessment provides the basis for future reorganization (or reconstitution) decisions. Important to this assessment is the operational environment in which the attrited unit is located and the commander's determination of the unit's combat capability based upon the tangible losses of personnel and equipment and intangible factors such as morale, training, and the impact of combat stress.

- Security requirements. An important requirement is that of providing security to an attrited unit when it is most vulnerable. The operational environment and unit residual capabilities may render these requirements unnecessary or may make them extremely difficult to execute. Even though this discussion centers on internal recovery actions a degree of long range security may be provided by a higher headquarters through the use of indirect fire or air support.

- Emergency medical procedures. Emergency first aid and casualty sorting and evacuation preparation will be implemented at the onset of casualties and will continue as long as the need exists.

- Damage control procedures. Depending on the type engagement and particular combat environment there may be a requirement for actions to contain damage in attrited units. These actions include removal of obstacles, repair of lines of communication, establishment of traffic control posts, and use of general purpose labor.

- Recovery, repair, and evacuation of damaged equipment. The timely recover, repair and evacuation of damaged weapons systems and equipment may very well have a significant impact on the success of combat operations. Cannibalization of equipment for replacement components and spare sparts and the recovery of unexpended ammunition are key elements in this process.

CHAPTER III

ENDNOTES

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1. US Army, FC 100-34, Operations on the Integrated Battlefield (Fort Leavenworth, KS: US Army Command and General Staff College, July 1984), p. 5-9.

2. US Army Training and Doctrine Command, Interim Operational Concept for Reconstitution of Combat Ineffective Units (Fort Leavenworth, KS: US Army Combined Arms Combat Development Activity, 28 February 1985), p. 1.

3. US Army Command and General Staff College, Student Handbook - Combat Service Support - Volume I (Fort Leavenworth, KS: USACGSC, undated), pp. 7-1 - 7-26.

4. Ibid., pp. 7-4 - 7-5.

5. Elizabeth W. Etheridge and Michael R. Anderson, Criteria for Reconstitution of Forces, Technical Report 7-81 (Fort Leavenworth, KS: US Army Combined Arms Combat Development Activity and Combined Arms Studies and Analysis Activity, September 1981).

6. Ibid., p. 3-1.

7. Ibid., p. 7-3.

8. Ibid., p. 7-3 - 7-4.

9. US Army, FM 100-10, Combat Service Support (Washington, DC, 1 March 1983).

10. Ibid., p. 2-12.

11. Ibid., p. 2-12.

12. US Army Training and Doctrine Command, Interim Operational Concept for Reconstitution of Combat Ineffective Units (Fort Leavenworth, KS: US Army Combined Arms Combat Development Activity, 28 February 1985).

13. Ibid., pp. 12-16.

14. Ibid., pp. 16-18.

15. New Approaches to Reconstitution in High Intensity Conflict on the Modern Battlefield, BDM/W-79-800-TR (McLean, VA: BDM Corporation, 14 March 1980).

16. Ibid., pp. II-7 - II-8.

17. Ibid., pp. VII-7 - VII-11.

CHAPTER IV

THE REORGANIZATION PROCESS

A. GENERAL.

In this chapter the information and concepts discussed in the previous chapters, Chapter III in particular, will be refined in order to take a close look at one subcomponent of reconstitution -- reorganization. This chapter will look closely at the need for reorganization; the positive and negative factors affecting the reorganization process; and the reorganization actions appropriate at the infantry rifle company level. Even though several references will be used in the following discussion, the reference definition of reorganization will be that found in the TRADOC Interim Operational Concept for Reconstitution of Combat Ineffective Units:

> "Reorganization is achieved by cross-leveling assets within a unit or by forming composite (smaller) units at a full or overstrength level. For example, a combat ineffective battalion, by cross-leveling, could reorganize its assets so that all subordinate companies would be at 75 percent capability. Alternatively, a battalion could form composite units and reorganize into two full strength companies. Whenever possible, primary groups (e.g., squads, teams, or crews) should remain together to maintain a base for unit cohesion. Reorganization is the primary means by which combat power can best be maintained during the early stages of war and will probably be the method most often used in later stages. In either case, it can provide an immediate response to reconstitution needs. It is the option most easily executed by commanders, and provides a means to maintain continuous combat capability in forward units."[1]

B. BATTLEFIELD DESCRIPTIONS.

In the previous chapters no attempt was made to define the

location, timeframe, or intensity of conflict in which reconstitution actions applied. It was noted however, that the previously referenced BDM Corporation report was oriented to the high intensity battlefield.[2] TRADOC has recently defined the concepts of low, mid, and high intensity conflict to apply to the modern battlefield. The TRADOC definitions for the three levels of conflict follow:[3]

LOW INTENSITY CONFLICT

The limited use of power by nations or organizations to gain or protect territory and interests; coerce, control, or defend a population; to establish or defend rights; to influence the political and economic systems. It normally includes military operations by or against irregular forces, peacekeeping operations, terrorism, counterterrorism, rescues and military assistance, often under conditions of armed opposition. It may also include the limited use of chemical and biological weapons. The commitment of regular armed forces, other than those indigenous to the conflict, is limited to advisory and supporting roles or to specific short term missions of a decisive nature. Low intensity conflict is characterized by the employment of military capabilities -- rather than military force -- in concert with other aspects of national power to achieve political, economic and social goals.

MID INTENSITY CONFLICT

The use of power by nations or organizations in order to gain or protect territory and interests. This intensity of conflict does not include the use of nuclear weapons. However, it is characterized by the protracted employment of regular armed forces in combat as a major manifestation of power by the threat and responding nations, and the designation of military objectives to achieve political and economic goals. May include some or all of the techniques and characteristics of low intensity conflict.

HIGH INTENSITY CONFLICT

The relatively unconstrained use of power by one or more nations to gain or protect territory and interests

> which directly affect the survival of the nation. This form of conflict is characterized by extreme levels of violence. The employment of the full range of military force, sustained by the preponderance of other national resources, to achieve military and political victory is the primary manifestation of power by the threat and the responding nations. It may include the use of nuclear, biological or chemical weapons and may include some or all of the techniques and characteristics of low and mid intensity conflict.

The definitions differ dramatically in the level of combat in each of the three types of conflict. The degree of backup combat support and especially combat service support may also differ markedly from one conflict level to another. Nevertheless, where units are engaged in combat of any intensity, losses at any given time may be of such magnitude that some reconstitution actions may be initiated. These actions are not constrained to any one particular level of conflict. They can occur at any level.

Future US Army conflicts are expected to occur in the lower intensity areas. The requirement to reconstitute units, however, can be expected at any of the three levels of conflict. While more lethal weapons systems in larger quantities may be prevalent in high intensity conflict, the need to conduct reconstitution operations exists at any level. In a low intensity conflict, for example, small units such as companies, may be isolated while engaged in combat operations. In this case, reorganization actions will initially be the major reconstitution option available to the unit commander in the effort to restore combat effectiveness. The requirement for reconstitution in low intensity conflict was demonstrated during the Vietnam War and in the Beirut terrorist bombing of the

US Marine Corps compound in 1983. Therefore, an understanding of reconstitution requirements is necessary for leaders at all levels of organization for all three levels of conflict.

In a general sense, the modern battlefield will be different--radically different in some cases--from those the US Army forces have encountered in the past. The modern battlefield will be characterized by rapid, nonlinear maneuver; the use of increasingly sophisticated and lethal weapons systems; and the engagement of opposing forces the full extent of the battlefield from the friendly rear to the enemy's rear areas.[4]

C. THE NEED FOR REORGANIZATION.

For the most part, the US Army's reconstitution emphasis since World War I has been on regeneration, i.e., replacement operations for both personnel and equipment. While regeneration will more fully restore the combat capability to an attrited unit, that option may be less available on future battlefields. Despite the problems the US Army has historically experienced with replacements, especially personnel replacements, that was the system of choice in the past. When replacement operations were implemented, units generally could be withdrawn from battle to be reconstituted in a relatively secure location. Regeneration actions also involve the interaction of personnel, equipment, and supplies from outside the unit being regenerated. These resources may not be available for regeneration at the time they are needed. Additionally, the time required for regeneration may be a constraint. Therefore, regeneration may be

more difficult in future conflicts; thereby placing more emphasis on reorganization.

The increased emphasis being placed on reorganization is evident in TRADOC's doctrinal concept for reconstitution:

> "Reorganization is the primary means by which combat power can best be maintained during the early stages of war and will probably be the method most often used in later stages. In either case, it can provide an immediate response to reconstitution needs."[5]

In order to be combat effective a unit must have a functioning command and control system and must man the most essential weapons systems for the particular mission at hand. These weapons, as well as other essential equipment, must be operational and supported with ammunition and other necessary supplies. Additionally, the unit must be organized into a cohesive organization to fight a coordinated action.

Combat attrition will degrade a unit's effectiveness. In order to restore some of its combat effectiveness only reorganization will work until complete restoration can be effected through regeneration. Reorganization is only one process by which a unit's combat effectiveness can be restored, but it may initially be the only option available to the commander of an attrited unit. For a unit commander to initiate reorganization actions, he must have determined that his unit's combat effectiveness has been degraded in some manner. This combat effectiveness determination is extremely important as it may guide the type and degree of reconstitution corrective actions applied to the unit.

D. DETERMINATION OF COMBAT EFFECTIVENESS.

1. Definition of Combat Effectiveness.

Central to the discussion of reconstitution efforts is the knowledge that something has happened to a particular unit that requires some corrective action. Unit commanders and leaders must be constantly on the alert for signs of some degradation of the unit's ability to conduct effective combat. Knowledge of some adverse impact on the unit's combat effectiveness then triggers a response to correct the situation.

The term combat effectiveness reflects a particular unit's "potential to perform assigned missions."[6] An alternative definition is "the capability of troops to conduct decisive combat operations and fully accomplish the combat mission to destroy the enemy under any conditions."[7]

2. Combat Effectiveness Indicators -- Historical Perspectives.

A US Army Command and General Staff College report in 1983, titled Unit Reconstitution - A Historical Perspective, looked closely at various historical examples of reconstitution. In this report, World War I and World War II historical excerpts are highlighted from conflicts involving British, French, German, and American units.

One of the issues considered in the report was an evaluation of what criteria a commander might use to determine when a unit was no longer combat effective and should be withdrawn from combat.

These criteria are based for the most part on an analysis of the events occurring with the 28th Infantry Division in combat in the Huertgen Forest, European Theater of Operations, in November 1944. The 28th Infantry Division attacked Schmidt, Germany on 2 November and met heavy resistance. By 14 November, the division had lost most of its infantry fighting strength and was incapable of further sustained operations. The division was withdrawn from the fight for major regeneration actions. The evaluated criteria are listed below:

- Condition of soldiers at the onset of the engagement. Included here is the total combat time for the unit; length of rest just prior to the engagement; nature of the most recent experience in combat; unit on-hand strength; and the number of replacements in the organization. This may very well be the variable most apparent to the commander.

- Terrain. The commander considers the physical aspects of the terrain and resulting tactical advantages and disadvantages for his combat, combat support, and combat service support elements. Additionally, the psychological effects of the terrain on the troops must be considered. Varying influences on troops may be exerted by the different types of terrain which can be encountered, e.g., mountains, deserts, arctic regions, jungles, built-up areas, etc.

- Weather. As with terrain, the various extremes of weather can have adverse psychological effects on soldiers. Degradations in effectiveness may be encountered under these conditions: excessive rain, sun, cold, heat, cloudiness, wind, snow, etc.

- Soldier's expectations. Important here are these conditions: understanding of the mission; nature of the threat; prior combat activity in the area; and the extent of combat experience among the soldiers in the unit.

- Intensity of the engagement. The various combinations of variables can produce varied results among the soldiers of the unit and may therefore degrade the effectiveness of the unit. These variables include the expectations of the soldiers, i.e., light or heavy resistance; and the actual resistance, light or heavy.

- Loss of key leaders. A loss may be a physical loss or a psychological loss through combat stress and nervous strain. The term "key leaders" is difficult to define and may vary from unit to unit and from situation to situation.

- Physical condition of soldiers and materiel. Quantity and quality are important to both personnel and equipment status. Equipment quality includes operational readiness of equipment as well as its effectiveness versus the threat.

- Casualties. This should be the major indicator of the need for reconstitution actions, but must be watched closely due to reporting delays and inaccuracies in the report. These inaccuracies may be deliberate or accidental.

- Combat support and combat service support expected. Soldier morale and confidence can be quickly dashed if expected support is not received. Delays or cancellations of support should be promptly communicated to the soldiers.

- Isolation. Adverse effects on soldiers and units can occur through perceived or actual isolation. Important to soldiers and units is the knowledge that they are part of a larger operation, and not an isolated element. Loss of visual and audio contact and communications links can lead to this perception. S. L. A. Marshall provided details of this phenomenon as individual soldiers in units in World War II felt immediate isolation once their unit had been fired upon.[8]

- Intangibles: morale, esprit, unit pride, unit cohesion, etc. The unit commander must know his unit and soldiers. Shifts in indicators of intangibles can result in shifts in morale and corresponding effects on unit combat effectiveness.[9]

As is evident from reviewing this list of conditions and variables, most are interrelated. The unit commander must be able to assess each individually as well as the entire group collectively in order to determine the need for reconstitution actions.

3. Combat Effectiveness Indicators -- US Army Doctrine.

The US Army Training and Doctrine Command has identified four broad areas where indicators can be used to determine unit combat effectiveness. The information is then used in the decision of whether or not to implement reconstitution actions. These broad areas and their sub-elements follow very closely with the criteria for combat effectiveness discussed above in paragraph 2. The indicators of combat effectiveness can be measured quantitatively or determined subjectively.

The four broad areas with combat effectiveness indicators are discussed below:

- Personnel status. This indicator includes a determination of unit strength, number and type of casualties, status of key personnel, weapon system crew status, state of training, status of chain of command, and impact of individual replacements.

- Equipment, supply, and combat service support capability. This is a very broad area covering the following areas: the status of major weapons systems, vehicles, and

communications equipment; the determination of remaining ammunition and petroleum, oil, and lubricants (POL) supplies; and an assessment of the resupply and equipment repair and replacement capability of appropriate combat service support elements.

- Combat support status. Maneuver units depend heavily on various combat support assets in the execution of assigned missions. The availability of these assets should be determined by the unit commander. Combat support assets include field artillery, electronic warfare, signal, intelligence, engineer, air defense artillery, and USAF close air support systems.

- Subjective indicators. Once again, intangible indicators, such as unit leadership, soldier morale, esprit de corps, commitment, and unit cohesion play very important roles in the determination of combat effectiveness. The unit commander must consider these intangible factors in his determination of unit combat effectiveness.[10]

Of particular interest here is that TRADOC has stressed the importance of the subjective indicators as well as those that are more quantifiable.

In addition to the four broad areas of combat effectiveness discussed above, the TRADOC Interim Operational Concept for Reconstitution of Combat Ineffective Units also lists five other

elements that unit commanders may use to weight the above indicators when making reconstitution decisions. These possible modifying elements include the following:

- Soldier condition prior to battle as influenced by unit time in combat, number and location of rest periods, the nature and intensity of the most recent combat engagement, and the status of individual and crew replacements.

- Physical environment of the combat area including weather, terrain, and physical evidence of previous success or defeat.

- Soldier expectations prior to battle as related to soldier's knowledge of their role and commitment to the mission; enemy situation; and CS and CSS support expectations compared to that actually received.

- Soldier perceptions of the nature and intensity of the battle.

- Loss of key formal and informal leaders and unit veterans.[11]

The combat effectiveness elements listed in this section containing US Army doctrinal guidelines closely parallel those previously discussed in the section on historical perspectives (see paragraph D.2.). These are factors which have been identified over time and validated by actions in various conflicts.

They are now being formally placed in TRADOC's emerging reconstitution doctrine.

This concern about combat effectiveness and indicators thereof is receiving renewed emphasis within the US Army. As evidenced in the next section, the Soviet emphasis on combat effectiveness factors supports the US Army historical perspectives and the current doctrinal initiatives in this area.

4. Combat Effectiveness Indicators -- Soviet Perspectives.

The Soviet Union has long been concerned with combat effectiveness of military units. In one reference on the operational aspects of warfare, several factors concerning the combat effectiveness of troops were highlighted.[12] The following were described as the most important factors:

- The full authorization of unit personnel and the soldier's moral and physical state.
- On-hand versus authorized strength of combat equipment.
- Strength and technical condition of weapons.
- State of training, combat experience, and combat coordination of units.
- State of training of commanders and staff.
- The supply support provided to the soldiers.

The Soviets place a great deal of emphasis on the preservation of combat effectiveness for units engaged in combat. This emphasis is illustrated by the following:

> "... the combat effectiveness of troops must be constantly maintained at the level which insures successful accomplishment of assigned combat missions."[13]

This same reference continues with a discussion of various actions to be taken in preserving troop combat effectiveness. These actions are divided into the following four groups:

- Operational methods to counter the effects of enemy nuclear strikes.
- Troop protection measures against weapons of mass destruction.
- Methods to maintain troops in a state of constant combat readiness.
- Measures to restore troop combat effectiveness.[14]

5. Combat Effectiveness Determination -- Company Level.

The indicators of combat effectiveness discussed above can be applied at every level of organization to include the company. A company commander should know the factors that affect unit his combat effectiveness and he should be constantly assessing his unit's capabilities and weaknesses.

The determination of combat effectiveness may be a difficult process due to the attrition of personnel and equipment, the degradation of command and control, the loss of key leaders, and the impact of various intangibles.[15] While true for the higher headquarters and levels of organizations, this determination should be easier for the lower levels. At these lower levels; e.g., infantry platoon and company, the leaders are physically located to better determine the status of their units. Leaders at these levels have frequent contact with their subordinate leaders, and the number of subordinate levels of organization are limited. A company commander will know the environmental conditions, the combat experience of his soldiers, and the losses of key personnel and equipment. Additionally, intangible factors at these levels are easier to physically see and evaluate. The determination of combat effectiveness may not always be easy at the company level, but, relatively speaking, it should be easier than at higher levels of organization.

Where other evaluations can be made, however, the determination of combat effectiveness at the company level should not be based solely on the assessment of the company commander and his subordinate leaders. The company commander may get too involved in his unit and may become overly protective or otherwise biased in his evaluations. Additionally, subordinate leaders may not be sufficiently experienced to make such evaluations.

E. REORGANIZATION -- HISTORICAL EXAMPLES.

1. General. Determinations of combat effectiveness are made so that corrective actions can be taken to restore any unit effectiveness that may have been lost. The results of these determinations then, will cause leaders to initiate some reconstitution alternative in order to counter any degradation in combat effectiveness. Based upon the situation existing at the time these determinations are made, reorganization is usually the first, and sometimes may be the only alternative available.

2. German Army Reorganization -- World War II.

Throughout World War II, the German Army continuously surprised her adversaries who underestimated her ability to form combat effective units and put up stubborn resistance even in the face of an increasingly constricted manpower pool. Despite the tenacious manner in which German units fought, Germany had significant reconstitution problems early in the war.

Germany attacked Russia on 22 June 1941. By November 1941, the Germans were short 340,000 replacements. The Zone of Interior had only 33,000 trained replacements available so field commanders recommended the inactivation of some units in order to provide replacements for others. Hitler, however, refused to entertain any such suggestion. Army Group Headquarters continued to divert replacements to those combat divisions whose regeneration (Germany used the term rehabilitation) would produce the most desired results.

The first few months of 1942 saw some divisions undergoing complete rehabilitation with personnel and equipment replacements.

Other divisions, however, had to reduce the number of tank battalions from three to one. In so doing, the remnants of the three tank battalions of some armored divisions were reorganized into one tank battalion. Additionally, the intensity of combat on this front resulted in enormous losses of infantrymen. As a result, a large number of technical specialists were committed as infantrymen, thus creating additional problems in the technical branches.[16]

By 1 May 1942 the three major German field commands on the Russian front, Army Group South, Army Group Center, and Army Group North, were critically short trained manpower. The infantry divisions of the first army group were at about 50 percent of authorized strength, and the infantry divisions of the other army groups were at about 35 pecent strength. By August 1942, the strength of those infantry divisions in the south was to be 100 percent, while the strength of the others was to be 55 percent.

There were several factors which hindered the German Army's attempts at rehabilitation in general. These factors included the following: experienced commissioned and noncommissioned officer casualties could not be readily replaced; the combat effectiveness of the motorized divisions was adversely affected due to the shortage of trained technicians and specialists; the reduction in combat efficiency due to differences in age, training, and experience of personnel within and among units; and the combat stress generated by the strains of the winter combat operations. Full rehabilitation was not possible as divisions had to make do with the forces and

equipment they had on hand. Reorganization actions were necessary to maintain a degree of combat effectiveness in the attrited units.[17]

There are several lessons that can be gleaned from this example. First, in combat, some form of reorganization will often be required in order to restore degraded combat effectiveness. Second, unit reconstitution planning should take into account those types of soldiers most likely to sustain the greatest number of casualties, e.g., infantrymen. Next, unit training and planning should consider cross-training requirements and leadership development in order to constitute a group which can be used to replace casualties to leaders and personnel with critical skills. Last, unit leaders must be trained to recognize and then counter the affects of combat stress and the resultant adverse impact on a variety of intangible factors.

3. US Army Reorganization -- World War II.

Historical accounts of the 28th Infantry Division's battle at Schmidt, Germany in the European Theater of Operations provide an extreme example of combat reorganization. It was during this campaign in the Huertgen Forest that the 28th Infantry Division was rendered virtually combat ineffective.

Elements of the 112th Infantry Regiment captured Schmidt on 3 November 1944. The next morning the Germans counterattacked and overwhelmed the 3rd Battalion, 112th Infantry Regiment which began to retreat toward Kommerscheidt which was defended by elements of the 1st Battalion, 112th Infantry Regiment. The retreat quickly turned into the rearward movement of small groups of disorganized

men filtering back toward Kommerscheidt. At this point company leadership elements within the 3rd Battalion began to halt retreating elements and to reorganize groups of men to assist 1st Battalion in the defense of Kommerscheidt. These reorganization efforts involved the integration of groups of stragglers into other units and the reorganization of companies into understrength platoons. These units succeeded in defeating the subsequent German attack on Kommerscheidt on 5 November.[18]

The preceding example is admittedly an extreme case of reorganization involving a badly attrited unit. Nonetheless, there are important lessons to be learned. First, the requirement for reorganization on the battlefield is a reality, and one which all unit leaders should be prepared to recognize. Second, reorganization efforts, even those involving understrength composite units, can be used to reform effective units. Another lesson illustrates the importance of having well-trained leaders who can effectively deal with reorganization requirements. Last, soldier knowledge of the mission and individual initiative are all-important assets on the battlefield. While not entirely clear what effect these two factors had in this particular example, it is clear that these factors could help reorganization efforts.

The 112th Infantry Regiment and other 28th Infantry Division units were to mount a last effort to retake Schmidt on 6 and 7 November. It was apparent that the 28th Infantry Division was rapidly becoming combat ineffective. The Division was withdrawn from the front lines on 13 November and sent to a quiet sector in the Ardennes

for regeneration. During this brief period, the Division, including attached units, had 6,184 casualties. The 112th Infantry Regiment itself lost 167 men killed, 719 wounded, 232 captured, 431 missing, and 544 hospitalized for nonbattle reasons such as combat exhaustion and respiratory diseases.[19]

F. REORGANIZATION AT COMPANY LEVEL.

1. General. Using the previous discussions of the need for reorganization, combat effectiveness determinations, and historical examples of reorganization, the impact of this information at the company level will be examined.

2. US Army Doctrine.

a. Existing doctrine.

Reorganization is not described in detail in doctrinal field manuals at the company level. Reorganization is mentioned briefly in several field manuals, but there is no detailed discussion of the process and those factors that hinder or facilitate the execution of that process. Because the reorganization discussion is very limited in these field manuals, several pertinent passages have been extracted in order to show the level of detail and depth of discussion.

FM 7-10, The Rifle Company, Platoons, and Squads

> "Reorganization is the restoration of order in the attacking unit. It is accomplished by restoring the chain of command, evacuating and replacing casualties, replenishing or redistributing ammunition, moving the command post, and other actions necessary to prepare the unit for further operations."[20]

"Reorganization and consolidation commence immediately upon seizure of the objective.... During reorganization after seizure of the objective, the situation, strength, and ammunition status are received and reported to the battalion commander. Ammunition is brought forward and issued and casualties are evacuated. If tanks are attached, they are resupplied with fuel and ammunition as required either on the position or in a covered area immediately to the rear. Prisoners are sent to collecting points, and enemy information and materiel are collected and reported."[21]

The passages quoted above constitute the substance of reorganization discussions in FM 7-10 and refer to units conducting offensive operations. There are a few deficiencies in this discussion of reorganization. First, the term reorganization as used in FM 7-10 does not contain all the facets of the definition of reorganization as used earlier in this chapter. The field manual, for the most part, discusses operations that would more properly be termed normal sustaining operations and regeneration operations. Second, it would appear that part, or most of the potential problem of reorganization has been assumed away. For instance, how does one restore the chain of command, move the command post, and report statuses if the unit has been badly attrited?

FM 71-1, The Tank and Mechanized Infantry Company Team

"Reorganization includes all measures taken to maintain the unit's combat effectiveness. Teams continually reorganize throughout the attack, but consolidation offers a chance to perform activities that are hard to accomplish on the move. Reorganization actions include:

- Reporting losses, ammo expenditures, fuel status, and vehicle condition.
- Redistributing supplies and equipment.
- Restoring communications with units out of contact.
- Performing maintenance checks and emergency repairs."[22]

FM 71-2, The Tank and Mechanized Infantry Battalion Task Force.

This field manual does not contain a discussion of reorganization.

In general, these doctrinal references do not contain all the reorganization elements as implied in the definition of reorganization at the beginning of this chapter. These references do not contain the details to impart necessary reorganization knowledge to leaders and soldiers. It is also significant to note that the reorganization references are made to units in the offense, with no discussion of the reorganization requirements for units in the defense.

b. Emerging doctrine.

Future doctrine on reconstitution and reorganization actions is reflected in the USATRADOC publication titled Interim Operational Concept for Reconstitution of Combat Ineffective Units. This document is discussed throughout this thesis so it will not be covered again here. When published, however, this concept will provide guidance to TRADOC schools for use in their refinements of the reconstitution process.

This document will establish a definition for reorganization and will provide some information about how one determines the need for reorganization and the elements involved in the process. It is a significant step toward recognizing the importance of reorganization and other reconstitution actions.

3. COMBAT SIMULATION ANALYSIS.

a. General.

During the past few years, increased efforts have been made in the area of simulating the reconstitution process in combat models. Without the modeling of this process, opposing forces in effect engage in straight attrition warfare with no accounting for the effects of reconstitution in general, and reorganization in particular. These processes could be expected to be implemented in future combat as they have in the past; therefore, their accurate modeling is important. This section will examine the results of one combat model that simulates the reorganization process. The results of the use of the model, Analysis of Military Organizational Effectiveness (AMORE), will be examined from two separate studies.

b. Analysis of Military Organizational Effectiveness (AMORE) Methodology.[23]

The more detailed analysis discussions which follow in subsequent paragraphs were based upon results of using the AMORE methodology. AMORE is a combat simulation developed to measure the effectiveness of a degraded unit as a function of time. The key elements in the model are personnel and materiel transfer matrices and an inputted level of degradation. The personnel and materiel transfer matrices are input data which contain individuals or items that can be substituted for each other and the time required to effect a substitution. Also input is the makeup of mission essential teams (e.g., infantry squads or fire teams) which the model will try to reestablish after a unit has been degraded. The combat capability

if the unit, then, is determined by the number of essential teams formed as a function of time. This process, as inputted into the model, is representative of the process that would occur in an attrited unit. In this case, surviving members of a unit would reorganize to maintain or reestablish mission essential teams such as infantry mortar squads, infantry fire teams, and antiarmor sections.

The process used by AMORE is in effect reorganization as no outside personnel, equipment, or other support is rendered the degraded unit. The number of essential teams formed is determined by the degree of degradation and the degree of substitutability, or robustness, of the personnel and equipment in the unit. Highly resilient units are those which can achieve a high degree of combat capability after degradation. Other units may not be as resilient due to low substitutability of personnel, equipment, or both. The AMORE methodology considers the following factors in determining the degree of resilience of a unit.

- degradation of personnel and materiel and their interaction in the formation of functional teams.

- determination of skill substitutability of personnel which is a reflection of the state of training and cross-training within the unit.

- susbstitutability and reparability of unit materiel items.

- essential functions required to be performed by a unit.

- the unit's reorganization capability as essential functions are restored over time.

The AMORE methodology was institutionalized for use within TRADOC in 1983.[24] Its use by TRADOC branch schools and integrating centers was directed in order to assess the sustainability of new and existing organizations and to identify cross-training requirements. In a broad context, the AMORE methodology was to be used within TRADOC to assist in designing organizations and in identifying training problems and requirements. AMORE is a useful tool, but its limitations must be recognized.

This discussion of AMORE must also include mention of problem areas. Despite its utility and institutionalization within TRADOC, AMORE suffers one major potential shortcoming. Virtually all of the input data are subjective. Substitutability of personnel and equipment, times required for substitutability, equipment repair times, and makeup of mission essential teams are all subjective inputs which determine the resulting combat capability of a unit after degradation. The probability of degradation itself is also input data requiring special note because the selected level of degradation is applied across the entire unit and is not allowed to vary within a unit as would probably be the case in combat.

c. Mechanized Infantry Company Analysis - "C" Series TOE.

In 1979 Science Applications, Inc (SAI) published a report for the US Army Training and Doctrine Command which evaluated the

resilience of various units organized under "C" series TOE's.[25] This evaluation used the AMORE methodology. One of these units was mechanized infantry company organized under TOE 07-047C800. This TOE reflects a transition between the "H" series TOE and the "J" series TOE or Army of Excellence (AOE) force structures under which the Army is currently reorganizing. While not an AOE structure this TOE does incorporate the M2 Infantry Fighting Vehicle (IFV), an increase in secure communications systems, and the addition of the Position Location Reporting Systems (PLRS). The results of this analysis are included here because this SAI report contains one of the few existing analyses of the mechanized infantry companies. Additionally, insights gained from this analysis are considered to have a degree of application to the AOE mechanized infantry company.

The AMORE analysis concluded that the mechanized infantry company was resilient. SAI determined that a resilient unit had to have a "40% or greater balanced substitutability of skills." Personnel substitutability was determined to be high with materiel substitutability somewhat lower. Critical materiel items impacting on the maintenance of a high degree of resilience consisted of these items in order of priority: M2 IFV, mortar carrier, launcher - smoke screen, TOW carrier, and the Dragon.

d. Mechanized Infantry Company Analysis - Division 86 Company.

In 1982 the AMORE methodology was used by the US Army Armor Center in its Close Combat (Heavy) Mission Area Analysis.[26] As a part of that analysis the Armor Center evaluated the mechanized infantry company. The analysis determined that the mechanized

infantry company was robust with 43 percent substitutability (recall that SAI determined that 40 percent substitutability was required for a unit to be robust).

The Armor Center analysis indicated that recoverability of the company was constrained by materiel and not personnel. The SAI analysis indicated the same results. In this case, recoverability was limited by machineguns, squad automatic weapons (SAWs), and IFVs. The fact that the mechanized infantry company has a variety of different types of equipment, contrasted to an armor unit for instance, also limited the unit in its recovery.

Some personnel problems were identified, however. Substitutability was hindered by "too many specialized jobs in the mechanized infantry company." This category included these personnel: IFV gunner, antiarmor specialist, grenadier, squad leader, and assistance squad leader. The analysis noted that cross-training might provide for significant improvements in unit recoverability, and that leadership skills for the infantry squad may be lacking.

As noted above in the discussion on AMORE, the inputs for this simulation are generally subjective. Therefore, the results obtained in these studies may change with a different set of input data. For instance, the Armor Center analysis indicated that SAWs helped limit company recoverability. For a variety of scenarios, SAWs may not even be a consideration in overall unit combat effectiveness, and therefore would not be a significant factor in determining recoverability.

4. The Mechanics of Reorganization

The references discussed in Chapter III listed various elements of the reconstitution process. None, however, discussed how those elements may vary when considered in light of the subcomponents of reconstitution--regeneration, reorganization, and redistribution. A review of Chapter III will show that not all elements equally apply to the three reconstitution subcomponents and some may not apply at all. This section will provide a discussion of those elements that constitute the process of reorganization.

The discussion in this section will orient on the reorganization procedures within an attrited unit. Of course, many of the assessments conducted by such a unit would be forwarded to higher headquarters as soon as possible in order to gain the resources and assistance required to fully restore the combat effectiveness of the attrited unit. The actions of the attrited unit commander prior to receipt of outside assistance is called reorganization. In the reorganization process, efforts are oriented on fixing what is broken with the aid of internal resources rather than focusing on the preparation of reports for higher headquarters, even though these are essential for follow-on reconstitution actions. The focus here will be on unit survival and continuation of the mission if possible. These actions by the unit commander will be directed toward restoring to the attrited unit the maximum possible combat effectiveness.

The most comprehensive discussion of the elements of the reconstitution process are provided in the USATRADOC Interim Operational Concept for Reconstitution of Combat Ineffective Units.

Chapter III focused on general reconstitution elements with no discussion of the differences these elements might have on the three subcomponents of reconstitution. Therefore, these reconstitution elements will be used again, but in this instance the discussion will focus entirely on those actions a unit undergoing reorganization should take.

- Reestablish command, control, and communications (C^3).
  Severe impairment to the C^3 process and system will require immediate attention. In order for the unit to be fully functional an adequate C^3 capability must exist. The C^3 system consists of both personnel and equipment. Key personnel such as leaders will require replacement as required. In some cases, C^3 functions may have to be consolidated in order to reestablish the necessary C^3 capability. Equipment losses may pose a different problem in that austere unit equipping somewhat limits the redundant C^3 capability at the infantry company level. In that regard, any C^3 equipment on the battlefield may be used to supplement this capability.
  As the C^3 functions are being restored the unit leadership must make decisions as to what portions will be fully reestablished, what portions will be partially reestablished, and what portions will be temporarily eliminated. This element is essential to the entire reorganization effort and must be accomplished quickly and effectively.

- Materiel damage and personnel assessments. For this element the unit commander conducts assessments to determine losses and remaining capabilities for both materiel items and personnel. The discussion on reconstitution included five major categories under this element. These include command and control, personnel, equipment, supply, and training. Each of these will be discussed in turn.

  -- command and control (C^2). Assessments of the C^2 system will be accomplished by the first element discussed above.

  -- personnel. Key personnel must be replaced as necessary. Key personnel include leaders, persons in technically oriented positions, and personnel manning essential weapons and equipment.

  -- equipment. This category can be divided into weapons systems and other equipment such as vehicles, radios, generators, etc. Losses of equipment cannot be replaced during reorganization so some functions may have to be eliminated and others may have to be consolidated to fit the capabilities to the remaining equipment. The requirements of the unit at the time must be considered in order to determine which weapons systems and other equipment are to be manned and which

functions can be consolidated. An important element here is the use of cannibalized components and spare parts taken from friendly equipment, and the use of enemy equipment if practical.

-- supply. Unit commander must establish the status of supplies in two areas. The first is the supply status of the company supply section; i.e., those supplies kept at company level awaiting issue. The second is the supply status of the squads, sections, and platoons themselves.

-- training. This category may have little impact on reorganization at the company level insofar as unit level training is concerned. There is little a company can do to improve the training of a unit while it is in combat, except of course to take advantage of that very experience itself. Any training that is conducted will be done wherever the unit happens to be, without the benefit of a training facility or training environment per se. Where training does matter though, is in finding adequately trained, internal replacements for key personnel losses. A replacement does no good if the individual lacks the leadership skills, technical expertise, or general training required to assume the position and duties of a casualty.

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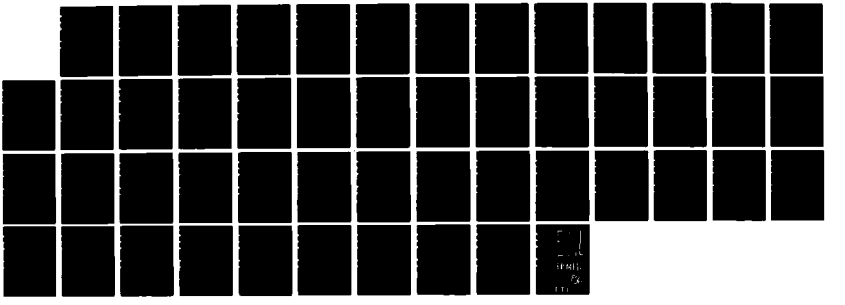
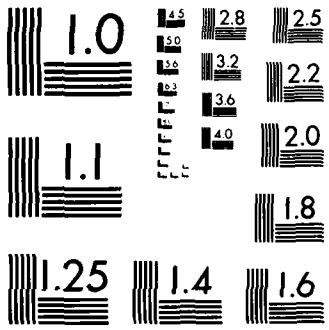




MICROCOPY RESOLUTION TEST CHART

- Location. The TRADOC Interim Operational Concept for Reconstitution of Combat Ineffective Units states that within "the combat zone, reconstitution is best undertaken in a secure location." While the previous statement is certainly the best alternative, the infantry company undergoing reorganization may not have that luxury, and in fact, may have to reorganize while still engaged in combat with an enemy force. The commander of a unit undergoing reorganization cannot always pick the time or place for such actions; therefore, speed in reorganization actions is of the utmost importance. This condition also highlights the importance of security.

- Security. As a follow-on to the above discussion of location any security provided the unit to be reorganized will have to come from internal resources. An infantry company is always responsible for its own security, but in this case it may be difficult to provide.

- Medical support. This element reflects business as usual. Emergency medical treatment will continue for casualties. The objective of this medical treatment remains to return casualties to duty as quickly as possible. This treatment is conducted for the full range of personnel with battle injuries, non-battle injuries, and disease. Medical personnel will have to employ triage techniques in

dealing with the wounded, and some decisions on how to handle the dead will be necessary. This area heavily affects individual morale, so prior unit planning and knowledge by the unit soldiers that such decisions may be necessary are important considerations for the unit commander.

- Decontamination. No special procedures apply here as an attrited infantry company will probably not have an extensive decontamination capability. Personnel will employ what individual personal decontamination resources they have. If an infantry company is the subject of a chemical attack, then it probably will have to "fight dirty" until more complete reconstitution efforts can be conducted. These extensive efforts will include complete personal and equipment decontamination.

- Resupply and maintenance support. By definition, resupply operations do not apply to units undergoing reorganization. It might be possible; however, to receive ground or air resupply of some classes of supply after combat activity, but that occurrence will not be discussed here as such resupply actions are classified as regeneration actions. What an attrited unit can do, however, is to redistribute critical supply items internally in order to provide such items to those elements with the greatest need. This most often would apply to

ammunition, but might also apply to other supply categories depending on the situation.

Organizational maintenance activities in the areas of recovery and repair operations will receive high priority. These operations constitute the only means a unit undergoing reorganization has to return essential equipment to the unit in an operational condition. The commander will have to establish maintenance priorities depending upon the overall friendly and enemy situations and the unit's mission. Again, cannibalization may provide a ready source of spare parts and components.

- Replacements. Personnel replacements in the generally accepted definitional sense do not apply to units undergoing reorganization because they are a part of the regeneration process. There are four options for the unit commander to consider when he has critical personnel losses. These may be executed individually or in any combination. The first of these is the continuing emphasis on emergency medical treatment to return battle and non-battle casualties to their normal duty positions. The second alternative is to cross-level critical personnel across subordinate elements in order to better distribute the experience and expertise. The commander and all leaders must be conscious of the impact of such a move on the overall cohesion of the unit and its subordinate

elements. The third option is that of filling critical personnel vacancies by advancing personnel from positions subordinate to those where casualties have occurred. The fourth option is to have senior personnel assume the duties of subordinate casualties. These last three options must be carefully evaluated as their implementation may result in additional vacancies in critical positions or may result in the overburdening of key personnel with too many duties. Additionally, the importance of primary groups, e.g., squads, teams, and crews, must be recognized, and every effort should be made to retain these in their original configuration.

The fourth option also deserves additional elaboration. The discussion of reorganization in this thesis has generally focused on the replacement of senior personnel casualties with personnel of a junior grade. That replacement sequence could also be reversed. If an essential squad weapon system operator becomes a casualty and no other squad members can assume that role, then the squad leader could man the weapon. This personnel substitution option is not being proposed as desirable, but may be the only option in some cases. The consequences of "losing" the squad leader (or any other leader), unit mission, and length of time before additional reconstitution actions could be expected will all have to be carefully considered in this decision.

- Training. Depending on the tactical situation and unit mission a unit undergoing reorganization may have little or no time for training. What time there is available should be used for key personnel training and for collective training to build and develop internal cohesion.

The use of battle drills and training on reorganization actions themselves may pay dividends here as an attrited unit should be prepared to better handle any required reorganization action.

It is worth noting here the importance of two particular intangible factors in this reorganization process. One intangible factor is initiative. While the unit commander and other leaders will be evaluating and directing reorganization actions, this may take some time -- time that is not available to a unit in combat. Initiative exercised at all levels by all soldiers will go far in restoring a unit's combat effectiveness. Soldiers who see and then appropriately respond without direction to unit problems such as weapons losses, personnel casualties, communications disruptions, and unit supply difficulties will greatly facilitate the job of unit leaders. This initiative must be supported and encouraged, not stifled, during unit training.

The second intangible factor is that of leadership. Leaders will be required to recognize the indicators of problems such as low morale, combat stress, and fatigue. Corrective actions should be implemented where required.

For each of the above reorganization elements, the unit commander will have to make judgments as to what actions to take, the degree of emphasis to be placed on one or more elements, and the priorities for implementation of corrective actions. As is usually the case, these judgments will depend on the situation itself and the actual status of each of the reorganization elements.

5. Steps in the Reorganization Process.

As with the above discussion on reorganization elements, this section will discuss the steps for the reconstitution process as outlined in the TRADOC Interim Operational Concept for Reconstitution of Combat Ineffective Units and will apply these steps to the process of reorganization. There is no established sequence for these steps. Any sequence would depend on the situation and the commander's directives. These steps will generally repeat some of the information contained in the previous discussion of the reorganization elements.

a. Command actions.

- Determination of unit effectiveness.

- Battle damage assessments.

- Decisions as to how and where an attrited unit will be reconstituted.

- Decisions on replacement priorities for personnel and equipment losses and the level of effectiveness to which an attrited unit is to be restored. The first of these decisions is important to the commander of a

unit undergoing reorganization because all "replacement" personnel and equipment will come internally from the unit itself. Major shifts of personnel may create additional problems through the creation of a vacancy each time a personnel shift is made, especially if that new vacancy itself must then be filled. Damaged equipment will be returned to service through organizational maintenance efforts.

- Decisions on the time by which reconstitution efforts will be completed. For a unit undergoing reorganization this time limit is less structured than that for a unit undergoing regeneration or redistribution. The decision will often be to reorganize as quickly as possible. The friendly situation, enemy threat, and unit mission may affect the urgency with which reorganization actions are executed.

b. Staff and reconstitution support unit actions.

The infantry company has no staff organization and reconstitution support units have no direct impact on reorganization actions. Some of the following actions, however, will have to be addressed to some degree by an unit undergoing reorganization.

- Battlefield recovery and evacuation. Actions here will consist of recovery, organizational maintenance, and preparation for evacuation.

- Decontamination and change of NBC protective clothing, if required. A unit undergoing reorganization will have to use what assets it has on hand to perform decontamination actions. These assets might include personal and vehicular decontamination kits.

- Reconstitution site security. For a unit undergoing reorganization, security requirements will probably be those normally employed given the tactical situation. The reorganization site will probably not be a special area set aside for such actions, but will be wherever the unit happens to be when reorganization is required.

- Reestablish command, control, and communications (C^3) links. At the same time that a reorganizing unit is reestablishing its own C^3 links it will also be attempting to reestablish any degraded C^3 links with adjacent and higher headquarters and support units.

- Maintenance and medical support. No outside support can be expected. Organizational maintenance activities and the use of attached medical personnel will be the extent of such support for a unit undergoing reorganization. The unit commander will have to establish priorities based on the unit situation and mission.

- Class I-IX resupply and personnel replacement actions. No outside support can be expected. These activities

will be modified internally by the attrited unit and will be reflected in any cross-leveling actions as decided by the unit commander.

- Training, as required. Training will consist primarily of on-the-job training for personnel and units as a unit undergoing reorganization may not have the luxury of a period of time to undergo individual and unit training.

c. Sequencing of reorganization actions.

The reorganization process is not one that has a well-defined set of sequential actions. Some actions may be pursued consecutively, while others are pursued concurrently. There must be a determination that some reorganization actions are required, but after that, the sequence cannot be defined. Factors contributing to this lack a discrete process include time available for evaluations and directives, degree of individual initiative in the unit, threat situation, and the degree of knowledge of unit soldiers as to the unit mission and commander's intent.

6. Reorganization -- Two Categories of Actions.

a. General.

The reorganization discussion thus far has been general in nature with no comment about when reorganization actions should take place. While the three variables of attrited unit situation, threat situation, and unit mission preclude a discussion of all possible decisions on reorganization actions, a few comments in that regard are appropriate. This discussion will divide reorganization actions

into two categories. The first is comprised of those reorganization actions that are spontaneous; i.e., those actions taken during a combat engagement with minimal leader direction. The second category consists of those reorganization actions that are more deliberate; i.e., those actions taken after a combat engagement, but prior to regeneration or other reconstitution actions.

b. Spontaneous reorganization actions.

As a battle progresses between opposing forces personnel and equipment attrition can be expected under most circumstances. In order for a unit to improve its chances of success in combat, that attrition of personnel and equipment should be countered with adjustments of remaining personnel and equipment. Leaders and key weapons systems operators must be replaced, and adjustments must be made to account for damaged or destroyed weapons systems and equipment. This process should be immediately implemented as losses occur in order to maintain control in the small unit and to maintain the unit orientation on its mission and objective. Failure to initiate such actions upon enemy contact may result in loss of the established chain of command, loss of the use of key equipment, and complete disintegration of the unit. Because unit leaders may have control problems, it is important that all members of the unit be familiar with reorganization actions so that unit combat effectiveness can be efficiently maintained or restored. In addition to knowledge of the reorganization process itself, these factors also contribute to reorganization in the absence of

control: soldier initiative, unit cohesion, extent of unit training, and knowledge of unit mission and commander's intent.

Spontaneous reorganization actions take place prior to a unit becoming completely combat ineffective. This is an area not considered in the TRADOC document on emerging reconstitution doctrine. It is worth noting the title of this soon-to-be-published TRADOC document: Interim Operational Concept for Reconstitution of Combat Ineffective Units. Of particular significance here is the term "ineffective." While it is true that ineffective units need to undertake one, or a combination, of the reconstitution alternatives, it just may be that concerted reorganization efforts during the battle may preclude the unit's degradation into a combat ineffective status. Reorganization actions can, and should, commence at the first sign of unit attrition or combat effectiveness degradation.

This TRADOC document also provides some guidelines for determining when to initiate reconstitution actions. These are reproduced below:

> "When the commander perceives that his unit's potential for effective combat (in terms of leadership, organizational climate, soldier motivation, and unit cohesion) is severely degraded to a point of ineffectiveness. Of these, the single most apparent will be the condition of his soldiers as manifested by fatigue and discipline.
>
> When personnel strength approaches 60 percent.
>
> When availability of major equipment approaches 70 percent."[27]

The percentages provided in the guidelines certainly cannot be considered as the only major determinants for initiation of

reconstitution actions. Equally important, if not more so, are a variety of other factors. The overall tactical situation certainly has a major impact. For example, is the unit conducting offensive or defensive actions, is the battle just beginning or winding down, what is the nature of the threat, etc? Unit mission and intangible factors such as unit cohesion, morale, soldier fatigue, and leadership are also very important in this determination.

Reorganization actions should be continuous attempts to maintain the highest degree of combat effectiveness throughout combat. A unit commander cannot depend on the existance of an "attrition trigger" that signals the initiation of such actions.

c. *Deliberate reorganization actions.*

While the spontaneous reorganization actions may serve to counter the affects of personnel and equipment attrition, the intensity of the battle may preclude a completely organized effort. Therefore, reorganization actions assume a more deliberate form at the conclusion of a combat engagement. At this time, the unit leaders can focus their attention more directly at the required reorganization effort. Cross-leveling of personnel, supplies, and equipment can be coordinated and conducted in a more effective manner. Additionally, the formation of composite subordinate elements can be planned and implemented if required. It is during these actions that the attrited unit should be restored to the highest level of combat effectiveness consistent with the commander's directives and the remaining unit tangible and intangible capabilities.

7. Mechanized Infantry Company Organization.

a. General.

This section contains a look at some of the details of the personnel and equipment structure of the Army of Excellence (AOE) mechanized infantry company. This discussion is based on the Table of Organization and Equipment (TOE) 07247J410 for the mechanized infantry rifle company.

In order to set the stage for this discussion the mechanized infantry battalion, company, platoon, and squad organization is shown in Figures IV-1, IV-2, IV-3, and IV-4, respectively. Listings of the personnel found in the company headquarters, platoon headquarters, and the rifle squads are found in Tables IV-1, IV-3, and IV-5, respectively. Rather than reproducing the entire equipment list for the mechanized infantry company, the author selected the most mission essential items of equipment. This determination was based on those equipment items comprising these general categories: major weapons systems, vehicles, and essential C^3 systems. Selected equipment items for the company headquarters, platoon headquarters, and infantry squads are found in Tables IV-2, IV-4, and IV-6, respectively.

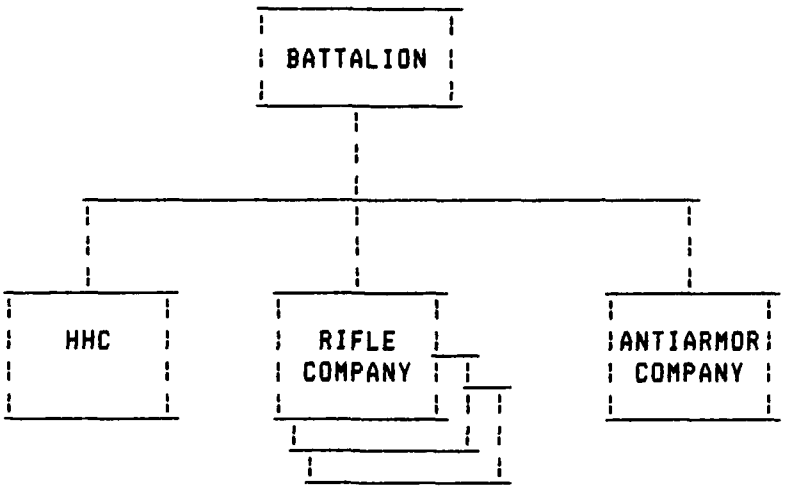


FIGURE IV-1. MECHANIZED INFANTRY BATTALION.

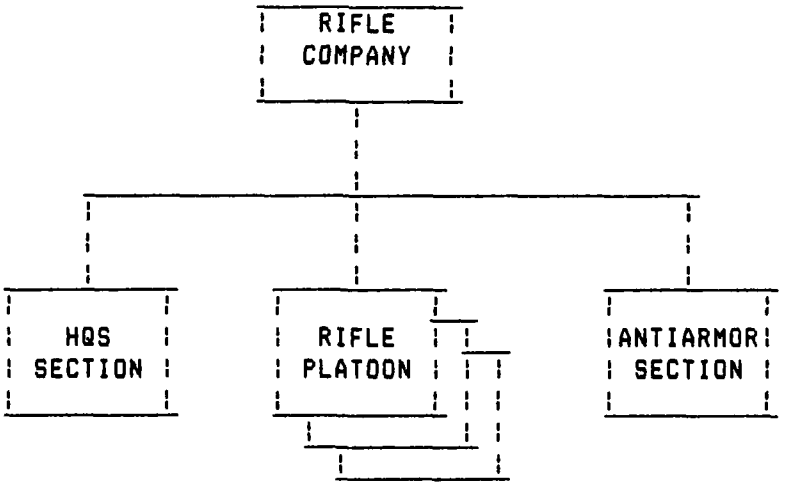


FIGURE IV-2. MECHANIZED INFANTRY RIFLE COMPANY.

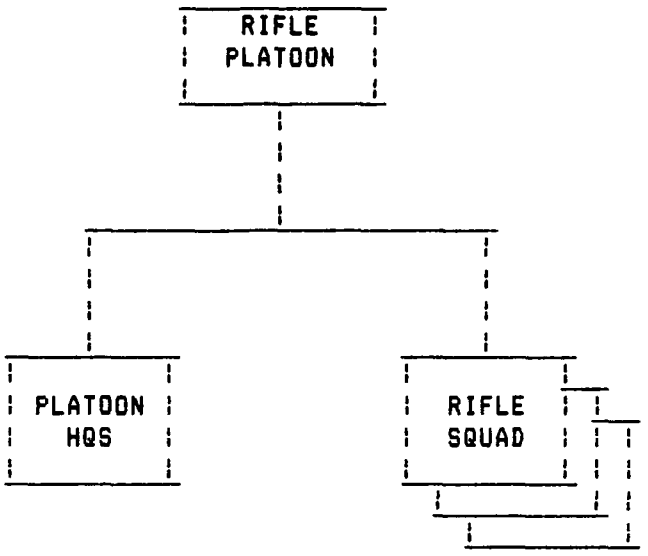
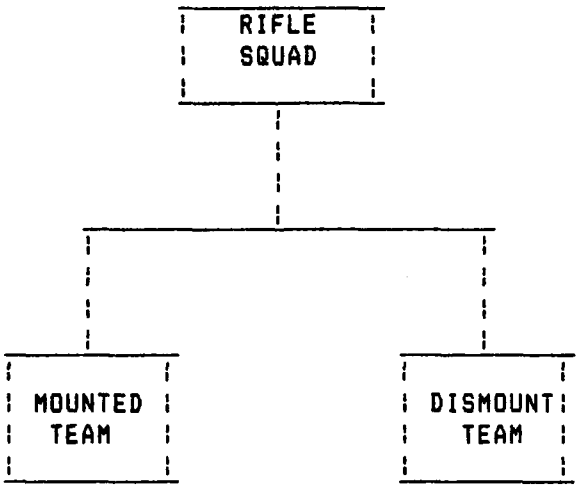


FIGURE IV-3. MECHANIZED INFANTRY RIFLE PLATOON.



Asst squad leader
Gunner
Driver

Squad leader
Auto rifleman
Auto rifleman
Grenadier
Antiarmor spec
Rifleman/sniper

FIGURE IV-4. MECHANIZED INFANTRY RIFLE SQUAD.

TABLE IV-1. RIFLE COMPANY HEADQUARTERS SECTION -- PERSONNEL.

PERSONNEL	GRADE	MOS	QTY	ASI/REMARKS
Company commander	CPT	11C00	1	11 3X
Executive officer	LT	11C00	1	3X
First sergeant	E-8	11B5M	1	10
Supply sergeant	E-6	76Y30	1	
TAC COMM chief	E-6	31V30	1	
Armorer	E-5	76Y20	1	01
IFV gunner	E-5	11M20	1	
NBC NCO	E-5	54E20	1	01
IFV/carrier dvr	E-4	11M10	1	
Radio-telephone op	E-3	11M10	1	01

EXPLANATION OF ASI/REMARKS:

11 - Armed with pistol, automatic, caliber .45.

3X - M2 Bradley Infantry Fighting Vehicle.

10 - Also reenlistment NCO.

01 - Also light vehicle driver.

TABLE IV-2. RIFLE COMPANY HEADQUARTERS SECTION -- EQUIPMENT.

EQUIPMENT	QUANTITY	ASI/REMARKS
Case: Battery Z-AIJ/TSEC	4	
Carrier personnel full tracked: armored	1	
Elec transfer keying device ETKD: KYK-13/TSEC	1	
Infantry Fighting Vehicle: M2	1	
Net Control Device NCD: KYX-15/TSEC	1	
Speech security equipment: TSEC/KY-57	8	
Tape reader general purpose: KOI-18/TSEC	1	
Truck utility: cargo/troop carrier 5/4 ton	1	
Power supply: vehicle HYP57/TSEC	6	
Wireline adapter: HYX-57/TSEC	2	
Truck cargo: 2 1/2 ton 6X6 W/E	2	538
Electronic Counter Counter Measure (ECCM) unit	3	
Radio set: AN/PRC-( ) V1	2	
Radio set: AN/PRC-( ) V5	6	
Securable Remote Control Unit	1	

EXPLANATION OF ASI/REMARKS:

538 - Equipped with ring mount.

TABLE IV-3. MECHANIZED RIFLE PLATOON HEADQUARTERS -- PERSONNEL.

(THREE PER COMPANY)

PERSONNEL	GRADE	MOS	QTY	ASI/REMARKS
Platoon leader	LT	11C00	1	3X
Platoon sergeant	E-7	11M40	1	
Gunner	E-5	11M20	1	
IFV driver	E-4	11M10	1	
Radio-telephone op	E-3	11M10	1	

EXPLANATION OF ASI/REMARKS:

3X - M2 Bradley Infantry Fighting Vehicle.

TABLE IV-4. MECHANIZED RIFLE PLATOON HEADQUARTERS -- EQUIPMENT.

(THREE PER COMPANY)

EQUIPMENT	QUANTITY	ASI/REMARKS
Case: battery Z-AIJ/TSEC	1	
Infantry Fighting Vehicle: M2	1	
Night Vision Sight - Tracker: Infrared AN/TAS-5	3	
Speech Security Equipment: TSEC/KY-57	2	
Small Unit Transceiver: AN/PRC-68	2	
Power Supply: Vehicle HYP57/TSEC	2	
Tracker Infrared Guided Missile SU-36 (Dragon)	3	
Radio Set: AN/GRC-( ) V6	1	

TABLE IV-5. MECHANIZED INFANTRY RIFLE SQUAD -- PERSONNEL.

(NINE PER COMPANY)

PERSONNEL	GRADE	MOS	QTY	ASI/REMARKS
Squad leader	E-6	11M30	1	93
Asst squad leader	E-5	11M20	1	
Gunner	E-5	11M20	1	
Auto rifleman	E-4	11M10	2	
Driver	E-4	11M10	1	
Grenadier	E-4	11M10	1	
Antiarmor specialist	E-3	11M10	1	C2 01
Rifleman/sniper	E-3	11M10	1	

EXPLANATION OF ASI/REMARKS:

93 - Only one squad leader is designated master gunner.

01 - Also light vehicle driver.

C2 - Dragon Gunnery (ASI).

TABLE IV-6. MECHANIZED INFANTRY RIFLE SQUAD -- EQUIPMENT.

(NINE PER COMPANY)

EQUIPMENT	QUANTITY	ASI/REMARKS
Case: Battery Z-AIJ/TSEC	1	
Infantry Fighting Vehicle: M2	1	
Speech Security Equipment: TSEC/KY-57	2	
Small Unit Transceiver: AN/PRC-68	1	
Power Supply: Vehicle HYP57/TSEC	2	
Radio Set: AN/GRC-( ) V6	1	

b. Personnel.

(1) General training requirements.

A general idea of the training requirements for the enlisted soldiers in a mechanized infantry rifle company can be gleaned from AR 611-201, Enlisted Career Management Fields and Military Occupational Specialties. Table IV-7 contains excerpts from this regulation indicating standards of grade authorizations and duty positions for the Fighting Vehicle Infantryman, 11M, found in the mechanized infantry rifle company.[28]

In order to be trained as an 11M10, selected personnel completing basic and advanced individual training as 11B10s are given additional training on the Bradley Infantry Fighting Vehicle (BIFV).[29] This BIFV Program of Instruction provides additional common subject instruction on the BIFV. At this skill level, institutional training and subsequent unit training provide trained soldiers that can be readily substituted for one another except in the case of the antiarmor specialist. This individual receives still more training on the Dragon antiarmor weapon system itself. The Dragon is a difficult system to master and requires periodic sustainment training for the gunner. This is the responsibility to the unit commander. Losses of antiarmor specialists pose a significant problem for the unit commander as there is generally no one trained to fill that position.

The 11M20 infantryman is trained to operate the 25mm automatic cannon and the TOW missile system in the BIFV turret. Within the rifle squads, the gunner and assistant squad leader, both 11M20s,

TABLE IV-7. STANDARDS OF GRADE AUTHORIZATIONS.

CODE	RANK	DUTY POSITIONS
11M10	PFC	Radio-telephone operator
	PFC	Rifleman
	PFC	Antiarmor specialist
	SP4	Automatic rifleman
	SP4	IFV driver
	SP4	Grenadier
11M20	SGT	Assistant squad leader
	SGT	Gunner
11M30	SSG	Squad leader
11M40	SFC	Platoon sergeant

remain with the vehicle when the dismount team maneuvers separate from the vehicle. Losses of these turret operators may create shortages of critical firepower due to lack of backup trained personnel. The vehicle team consists of three personnel as indicated in Figure IV-5, and all three are required to fully operate the BIFV. Turret operations are complicated and require well-trained individuals.

(2) Cross-training requirements.

Insitutional training programs attempt to produce the number of trained soldiers required to fill authorized spaces in the field. Within combat units, commanders then can focus on the sustainment training of those skills. Cross-training can also be conducted by the unit to insure qualified personnel are available to substitute for 11M20 casualties. This cross-training is essential if a unit is to effectively reorganize after suffering 11M20 casualties.

c. Equipment.

(1) Vehicles.

There are 13 BIFVs in each mechanized infantry rifle company. Because of the physical and operational characteristics of the BIFV, there is no other vehicle that can substitute for it in the event of a combat loss. The infantry squads and platoon headquarters are oriented around this system. There is one other tracked vehicle in the company headquarters section. This M113,

Armored Personnel Carrier, has limited operational capabilities as compared to the BIFV.

In the area of wheeled vehicles, the mechanized infantry company has two 2 1/2 ton trucks and one 5/4 ton truck. These are important cargo carriers and losses to any or all of them would adversely impact on the cargo carrying capablity of the unit.

(2) Weapons.

A great percentage of the mechanized infantry company's firepower in vehicle oriented. The 25mm automatic cannon and two-tube TOW launcher are organic to the vehicle. These two systems constitute critical antiarmor systems. There is no redundant capability for the 25mm automatic cannon. The infantry squad has the Dragon antiarmor that supplements the TOW system. The operational capabilities of the Dragon are significantly lower than those of the TOW system.

(3) Communications systems.

Communications systems are essential to the command and control functions within the company. There are no "spare" radios provided for the company, so any radio losses will result in some degradation in command and control. Alternatives to combat losses include closing certain radio nets, co-locating communications nodes and control elements, and using other means such as visual devices. The one communications device that has no backup is the Electronic Transfer Keying Device used in linking secure radios.

8. Factors Affecting the Reorganization Process.

a. General. Regardless of the tactical situation there are certain tangible and intangible factors that singly or in combination facilitate or hinder the reorganization actions of an attrited unit. An understanding of these factors can assist unit leaders in their reorganization efforts. Emphasis on correcting shortcomings can be applied during peacetime activities, and a knowledge of these factors can assist unit leaders during reorganization actions during combat.

b. These reorganization facilitating and hindering factors are both personnel and equipment related. In many cases the factors affect a system; i.e., weapons or equipment with designated personnel for manning or operation. Following is a discussion of these factors.

(1) Knowledge of the reorganization process. An understanding of the term reorganization, the process itself, and the requirements for reorganization will assist leaders in implementing reorganization actions. Additionally, this same knowledge by other soldiers will assist them in recognizing reorganization actions and the requirements for such actions; thereby assisting in such actions. In general, this knowledge permits prior planning in anticipation of possible reorganization requirements.

(2) Knowledge of the mission.

An orientation on the unit's mission will help keep an attrited unit focused on its objectives. Coupled with a knowledge of the unit mission is an understanding of the company commander's

intent. Together these elements will provide direction to the unit as it goes about reorganizing. This knowledge is important not only to leaders, but to all unit personnel so that the unit remains focused on a commonly understood objective.

The type unit mission may impact on which personnel positions are filled and which weapons systems are manned. This personnel and weapons system focus may change depending on the unit mission. Reorganization actions may be directed around an important subordinate element, around an essential firepower base, around a particular piece of terrain, etc.

(3) Knowledge of unit personnel and equipment status. For effective deliberate reorganization to take place, unit leaders must have some idea of who and what has become a casualty and who and what still remains an effective part of the organization. With an accurate personnel and equipment status unit leaders can issue appropriate directives to more efficiently and effectively reorganize the unit.

(4) Time.

The element of time may have a major impact on unit reorganization. There are two time-related aspects which may affect the reorganization process. The first is the time it takes to determine the status of unit personnel and equipment. Although undirected and some directed reorganization actions may be at work in an attrited unit, the unit commander and leaders cannot be certain of the correct actions to take until an accurate assessment of unit

personnel and equipment status is conducted.

The second time-related aspect is that of the time available for completion of unit reorganization actions prior to commitment to follow-on missions. The follow-on mission may in fact be a continuation of an original mission, and an attrited unit may continue with the mission even while reorganizing. In any case, the length of time available to a unit will impact on an unit's ability to effectively reorganize.

(5) Training. A well-trained unit will function more effectively during the periods of stress commonly found in combat. Unit personnel will know their jobs and may be able to anticipate future requirements. Constant supervision will not be required as each soldier will perform his task in accordance with the tactical situation and unit mission.

(6) Cross-training.

Although a component a overall unit training, cross-training requirements may have a significant impact on reorganization actions as indicated in the following quotation:

> "Due to the degradation of command and control mechanisms and the ever-increasing lethality of the battlefield, decentralized small unit an individual initiative will be paramount to mission accomplishment. Therefore, individuals must be prepared to assume the leadership role of their superiors and/or successfully employ critical equipment or weapons systems. Hence, the importance of cross-training."[30]

As key personnel become casualties, their replacement is generally essential. Key personnel include leaders and essential

weapons and equipment operators. Cross-training between key positions within squads, platoons, and the company itself is the means by which effective internal replacements for unit casualties are made available.

(7) Redundancy of equipment. The loss of a critical equipment item may hinder the reorganization process; it may adversely affect the accomplishment of the mission; or both. Built-in equipment redundancy would in great measure alleviate the problem generated by combat losses. The substitution capability of equipment is important, but leaders and soldiers must also understand the degree of substitutability between items of equipment.

(8) Intangible variables. These factors may be the most important in that they can affect those listed above and they in turn can be affected by those listed above. Effective leadership and the confidence of soldiers in that leadership, especially during times of stress, can go far in developing the cohesion that a unit needs to be fully effective. Morale may also be a determining factor as to how well a unit can implement reorganization actions. Initiative is a very important variable, especially during reorganization actions during combat. The ability of soldiers to step in and assist or replace casualties will have a direct impact on reorganization actions and overall unit effectiveness.

(9) Tactical situation. An attrited unit undergoing reorganization may still be in contact with the enemy; it may be in immediate threat of enemy contact; or it could be separated from the

enemy during a lull in the fighting. Depending on the situation the reorganization actions will be facilitated or hindered.

(10) Extent of casualties to personnel. A company losing all its officers, the first sergeant, and all its platoon sergeants is likely to have significant problems in reorganizing. Another company losing a similar number of soldiers, only not in positions as essential as these leader positions, may have an easier time in reorganizing.

(11) Extent of damage to equipment. As with the personnel discussion above, the type of equipment and the degree of damage within a company could vary widely and also significantly affect the company reorganization process. Attrition to essential weapons, vehicles, or command, control, and communications systems may each have a varying effect on reorganization depending on the tactical situation.

CHAPTER IV

END NOTES

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1. US Army Training and Doctrine Command, Interim Operational Concept for Reconstitution of Combat Ineffective Units (Fort Leavenworth, KS: US Army Combined Arms Combat Development Activity, 28 February 1985), pp. 2-3.

2. New Approaches to Reconstitution in High Intensity Conflict on the Modern Battlefield, BDM/W-79-800-TR (McLean, VA: BDM Corporation, 14 March 1980).

3. These are TRADOC's proposed definitions to be standardized throughout the Army. Once approved, these definitions will appear in official Department of the Army publications. Definitions were provided by the Low Intensity Conflict Committee, Department of Join and Combined Operations, US Army Command and General Staff College, Fort Leavenworth, KS, January 1985.

4. US Army, FM 100-5, Operations (Washington, DC, 22 August 1982), pp. 1-1 - 1-2.

5. US Army Training and Doctrine Command, Interim Operational Concept for Reconstitution of Combat Ineffective Units (Fort Leavenworth, KS: US Army Combined Arms Combat Development Activity, 28 February 1985), p. 3.

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CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

A. CONCLUSIONS

1. General.

Regardless of what the process was called in the past, reconstitution, in one form or other, has been practiced throughout the history of warfare. and other conflicts. Reconstitution actions are the means by which unit combat effectiveness is restored and maintained. These actions are essential elements to the activities of any military force.

Of the three reconstitution elements -- regeneration, reorganization, and redistribution -- reorganization will generally be the first reconstitution action taken by a unit commander. Unit reorganization actions may, or may not, be easy to implement. In any case, the affected unit commander controls the resources involved in reorganization as there will be no outside personnel or materiel assistance. Because reorganization actions will probably be among the first combat effectiveness restoration efforts implemented by an attrited unit, a knowledge of that process is essential to combat leaders and soldiers alike.

2. Research on this thesis produced some specific conclusions about combat reorganization. These conclusions follow:

a. A comprehensive US Army doctrine for reconstitution actions

has not existed in the past. Although reconstitution was practiced, there was not a single, doctrinal reference for the process for use by TRADOC schools and centers and by field units. Work to describe the full range of reconstitution actions is reflected in relatively recent efforts. This shortcoming is being corrected in part with the current staffing and anticipated publication of the capstone TRADOC operational concept for reconstitution.

b. The soon-to-be-published operational concept for reconstitution is not sufficiently detailed to adequately describe reorganization actions. The publication defines reconstitution and its three subcomponents, but the focus of the document is on regeneration. The three processes of regeneration, reorganization, and redistribution are actually very different in scope and application. The differences between each of these should be clearly established. Reconstitution doctrine should reflect these differences as well as the similarities.

c. Reorganization actions are generally described in terms of actions to be taken in the restoration of combat effectiveness to combat ineffective units. Reorganization actions should be implemented well prior to a unit achieving the status of "combat ineffective." In fact, the judicious application of reorganization actions may counter the affects of combat attrition and prevent a unit in combat from being attrited to the point that it is combat ineffective.

B. STUDY RECOMMENDATIONS.

1. The TRADOC reconstitution doctrine, as reflected in the Interim Operational Concept for Reconstitution of Combat Ineffective Units should be finalized and published as soon as possible. In this manner, TRADOC schools and centers can further refine these standard concepts for their own particular use. Also, field commanders can incorporate reconstitution concepts into unit training through the use of field training exercises and small unit battle drills.

2. US Army doctrinal publications, primarily field manuals, should be changed to reflect the standard reconstitution concepts. Additionally, these same publications should be changed to reflect the definitions of reconstitution, regeneration, reorganization, and redistribution as reflected in the TRADOC reconstitution operational concept.

3. Leaders and soldiers at all levels of US Army organizations should be made aware of the possibility of reorganization requirements, the reorganization process, and the various positive and negative factors impacting on a unit's ability to reorganize. This awareness is important to the successful implementation of reorganization actions. If units can expect personnel casualties and equipment losses in combat, then they ought to plan for corrective actions to counter the effects of attrition.

4. Implementation of reorganization actions should be made a part of unit training exercises. The regular incorporation of

reorganization actions in ARTEP training and external evaluations, field training exercises, command post exercises, and National Training Center exercises would have practical benefits during actual combat.

5. Combat and materiel developers should consider reorganization requirements as they design units and equipment items. This consideration might have an effect on the requirements for substitutability and commonality among unit soldier skills and equipment.

C. CONSIDERATIONS FOR ADDITIONAL RESEARCH.

The focus of this thesis was restricted to a rather narrow subject. The general ideas presented in the thesis, however, would apply to other units and other combat conditions. Specific considerations for additional research include the following:

- Research reorganization concepts as they apply to different types of combat, combat support, and combat service support organizations.

- Research the effects of cross-attachments on reorganization concepts. A pure type company or battalion may have an easier time reorganizing than a company team or a battalion task force. If so, then there might be some cross-training and equipment substitutablity considerations for type units commonly cross-attached.

- Research reorganization concepts as they apply to different levels of organizations. The amount of resources and various different types of elements increase as one moves up the organizational hierarchy from company through division.

- Expand the investigation into a broader field and research the other two subcomponents of reconstitution: regeneration and redistribution.

- Investigate in depth the differences in reorganization actions across the full range of conflict possibilities found in the spectrum of conflict. These possibilities would cover combat possibilities in the low, medium, and high intensity conflict areas.

- Investigate reorganization actions across the full range of tactical missions comprising offensive and defensive operations.

GLOSSARY

GLOSSARY

AMORE	-- Analysis of Military Organizational Effectiveness
AOE	-- Army of Excellence
BIFV	-- Bradley Infantry Fighting Vehicle
CACDA	-- (USA) Combined Arms Combat Development Activity
C^2	-- Command and control
C^3	-- Command, control, and communication
CGSC	-- (USA) Command and General Staff College
CS	-- Combat support
CSS	-- Combat service support
HHC	-- Headquarters and Headquarters Company
HQS	-- Headquarters
IFV	-- Infantry Fighting Vehicle
NBC	-- Nuclear, biological, and chemical
SAW	-- Squad Automatic Weapon
SOP	-- Standing Operating Procedures
TOE	-- Table of Organization and Equipment
TRADOC	-- (USA) Training and Doctrine Command
USAIS	-- United States Army Infantry School
USAREUR	-- United States Army, Europe

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   ATTN: ATZL-CAF
   Fort Leavenworth, Kansas 66027

4. LTC Jay C. Kline
   16 Kensington Drive
   Howell, New Jersey 07731

5. MAJ Douglas R. Jorrey
   US Army Command and General Staff College
   ATTN: ATZL-SWR-M
   Fort Leavenworth, Kansas 66027

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