Definitions and Doctrine: Operational Language and Understanding in Combined Arms Warfare

A Monograph
by

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ABSTRACT

DEFINITIONS AND DOCTRINE: OPERATIONAL LANGUAGE AND UNDERSTANDING IN COMBINED ARMS WARFARE.. by Major Morton Orlov II, USA, 53 pages.

This monograph examines the state of the Army's operational terms as seen through its written doctrine. Operational terms play an important role in the command process and a common vocabulary is one of the defining features of a profession. The monograph examines selected operational terms within the battlefield operating system framework to determine if there are common or standard definitions across the Army.

The monograph begins with a historical examination of the importance of terminology to the study of military art and science. A survey of theorists and military writers demonstrates the importance of precision to the foundation of military theory. The monograph starts with Field Manual 100-5, Operations, and considers its impact, as the Army's keystone doctrinal manual, on operational terms and their meanings. The intelligence, fire support, mobility/survivability, and maneuver battlefield operating systems provide the doctrinal data for the remainder of the study. Each term is considered within its functional area and then in relation to the other functional areas. Field Manual 101-5-1, Operational Terms and Symbols, is used as the Army wide standard.

The monograph concludes with an example from Operation Desert Storm and determines that the Army's operational terms are not aligned in meaning across the battlefield operating systems. Additionally, three problems are identified in the use of operational terms and several possible solutions are suggested to help provide the Army with a more precise professional vocabulary.

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I. Introduction

This monograph examines the use of operational terms, at the tactical level, through the framework of the battlefield operating systems (BOS).[1] It seeks to answer the question: do the individual functional areas of the battlefield operating system use operational terms in the same way and with the same meaning? In the United States Army, the assignment of missions guides units in combat. Once assigned, units must accomplish their missions and prepare for new ones. The most frequently used method of communicating these missions is through the format of the five paragraph operations order. The issuing headquarters usually transmits the operations order through a briefing, but battalions and larger units almost always provide the order in written format as well. The purpose of an operations order, which is organized in a standard format, is to provide a common, logical, and easily understood method for relaying the mission and related information from a higher commander and his staff to a subordinate commander and his staff. The key component of the operations order is the terminology used to tell the subordinate units what to do, when and where to do it, and why it is to be done.

This leads to an important subordinate question: which operational terms are most important in the development of a clearly understood operations order? The key terminology is normally found in paragraph two of the operations order, the mission statement, and paragraph three, the execution paragraph. Paragraph two is a concise statement that describes who will execute the mission, when the mission will commence, where the mission will take place, and why the unit will undertake the mission. Paragraph three provides a more

detailed description of the senior commander's vision of the mission and includes the commander's intent and the concept of operation, a narrative of the scheme of maneuver and fires from the beginning to the conclusion of the operation.[2] These two paragraphs contain the key terms that specify what a unit must accomplish.

To answer the research question, this monograph examines how the separate functional areas define common operational terms and determines if there are consistencies or conflicts in meaning that might affect the production of clear, understandable operations orders. Critical to this question is understanding the role of Field Manual 101-5-1, Operational Terms and Symbols, which is the Army's dictionary of operational terms. Since the manual is part of Army doctrine, it is then, by definition, authoritative in nature. The manual should also, in theory, be as comprehensive as possible. On this last count, Field Manual 101-5-1 is lacking; there are, for example, no definitions for the words 'defeat' or 'destroy'. Clearly, these are two words that are important to the commander who is trying to communicate, in his combat instructions, what he wants done to the enemy in order to accomplish the mission.

Along with the analysis of the selected terms, it is necessary to examine the grammar that governs their use. Grammar is nothing more than the system of rules for a given language, or, in this case, the use of these operational terms within the Army's doctrine.[3] In some ways, this may be the most important subordinate issue because the current standard of usage for the terms is more important than the terms themselves. A dictionary along the lines of Field Manual 101-5-1 is relatively easy to create in the sense that, like any dictionary, it is

merely a list of words with a historical discussion of how the words have been used in the past by members of the military profession. The greater challenge is to go beyond the dictionary and examine the meanings of the terms in the context of their use in Army field manuals and in actual use in operations orders in the field.

II. Background

Over the years, military writers, for the sake of clarity and argument, have been defining the terms of their thoughts and theories about warfare. In the early nineteenth century, before standardized manuals were common in armies, professional soldiers relied on the writings of fellow professionals to provide the equivalent of modern field manuals and doctrine for the training of their soldiers. Carl von Clausewitz, an early nineteenth century Prussian general and military theorist, and the Swiss military theorist Antoine-Henri Jomini devoted considerable space to the definition of terms that were important to them. They attempted to communicate, in a summarized manner, their ideas about the conduct of war. This effort has evolved, and as armies started to write their own manuals, they have also published their own dictionaries and have provided their soldiers with general guidelines for usage.

Martin Van Creveld, the Israeli historian and strategist, observed that the problem of commanding armed forces has grown exponentially in modern times. He attributed this growth to four factors: the increased demands of present-day warfare; technological developments that increased the capability of command systems; changes in the nature of the command process; and the appearance of

new weapons systems.[4] As the complexity of command increases, so too does the requirement for clear and understandable orders. With units maneuvering over greater distances and supporting fires coming from distant units, commanders are finding it difficult to influence their subordinates through direct physical contact on the battlefield. These changes enhance the importance of written and oral communications issued in person, or transmitted electronically. If commanders are to perform more efficiently, operate more independently, and, at the same time, synchronize an increasing number of complex weapons systems and units in space, time, and purpose across the battlefield, then they must be able to communicate clearly. This monograph examines the language component of clear communications as described in army doctrine.

There is a tremendous amount of literature written about command, control, and communications. The vast majority of the writing focuses on hardware: what it does, what it costs, and how best to use it. Few authors address what army operators say after pressing the push-to-talk button on their radios. Commanders must say what they mean and subordinates must understand what they hear. An army can have the most technologically advanced communications systems available, but if soldiers do not understand what they say or hear, then they are unlikely to succeed in battle.

From these observations emerges the research question: do the individual functional areas of the battlefield operating system use operational terms in the same way and with the same meaning? Answering this question will help determine what the Army has to do in order to produce better doctrine that will allow commanders and

staffs to train and fight more successfully in the future. In a recent article in Military Review, General Gordon R. Sullivan, Chief of Staff of the United States Army, pointed out the importance of "using our approved common language--our doctrine" to achieve greater battlefield synchronization. He went on to say that "Precision of language contributes to clarity of orders and common understanding. Our school system does a good job of defining our doctrine; now we must continue to institutionalize its use in the field."[5] Professional officers must have a common understanding of their doctrine. An important part of that doctrine is its operational vocabulary. As operations become more complex, simple orders that are clear and easy for subordinates to understand will directly contribute to battlefield success. To obtain precision and clarity in orders, doctrinal literature must clearly define operational terms, explain their meanings, and demonstrate their proper use.

A current inquiry into the use of operational terms will help the Army understand how it can improve its future performance. The use and misuse of operational terms frequently causes confusion, but has received little attention within the profession. As mentioned before, much has been said about the mechanics of command, control, and communications, but little is relevant to or focused on the use of operational terms. As soldiers become better practitioners of doctrine, they will demand more from it. This monograph provides a starting point for a serious discussion of the Army's professional lexicon.

III. A Historical View of Definitions and Theory

Military writers provide definitions of key terms in their works. They provide these definitions to promote understanding. One cannot develop a theory of warfare, or anything for that matter, without having a common understanding of the lexicon. This concept applies to doctrine today. In order to properly understand, discuss, and apply doctrine, one must have a common understanding of the lexicon and grammar.

The modern origin of today's operational terms is found in the scientific investigations of soldiers during the late eighteenth century. During this period, interest in and understanding of science grew tremendously, leading to the study of the science of war. To study a topic scientifically, to describe the topic and establish a standard for further investigation, there has to exist a vocabulary. Henry Humphrey Evans Lloyd, an eighteenth century English military officer, along with contemporaries from continental Europe, established the first clear scientific thinking about military activity and set the stage for further investigation.[6]

Michael Howard, the English historian, says that "in reducing operations of war to an exact science, Lloyd laid the foundations of the vocabulary of strategic analysis which is still in current use." and he goes on to point out that "the terms 'objective' and 'base', together with Lloyd's 'lines of operations', molded military thinking until our own day."[7]

The nineteenth and early twentieth centuries were dominated by two schools of military thought that trace their theories to Carl von Clausewitz and Antoine Henri Jomini. Both men spent considerable

effort in their written works to define the terms they used in their studies of the theory of war. Howard suggests that one reason for the popularity of Jomini's theories was the clarity of his writing and precision of this language.[8] However, Howard also criticizes Jomini for his use of a cumbrous analytic vocabulary which he used to try to study more abstract aspects of the theory of war.[9] Clausewitz was not exempt from criticism. His posthumously published major work On War is, at best, a difficult read. Though Jomini and Clausewitz disagreed about much in their studies of war, they both sought to carefully define their terms.

Clausewitz demonstrates the importance of definitions early in his work On War when he carefully shows us what he meant by the word 'destroyed'.

> The fighting forces must be *destroyed*: that is, they must be *put in such a condition that they can no longer carry on the fight*. Whenever we use the phrase "destruction of the enemy's forces" this alone is what we mean.[10]

This definition and others like it provided a foundation, not only for Clausewitz's theories, but also for later military students and officers.

Jomini, in his book The Art of War, defines his terms at the beginning of a chapter, follows them with some general rules and historical examples and then ends with some maxims and conclusions. An example is his Chapter III Strategy Article XXI. Zones and Lines of Operations. He devotes a page to the definition of zones and lines of operations and then follows his definition with a historical example.[11] Jomini's works were the theoretical basis for instruction at many

military academies and for many armies' tactical doctrines during the nineteenth century.[12]

The First World War, with its devastating impact on the military establishment throughout Europe, spawned a new group of military theorists who sought to solve the dilemmas of modern combat. B.H. Liddell Hart and J.F.C. Fuller were among the most prominent of these mid-twentieth century theorists. Liddell Hart opens a key chapter in his book Strategy with an examination of Clausewitz's definition of strategy and he then goes on to offer his own definition. The purpose of his definition is to provide a foundation for "a new dwelling-house for strategic thought."[13] This same line of reasoning is valid for the study or development of new doctrine. As new doctrine is developed, it is important that key terms are reviewed and the meanings refined to remain consistent with current usage. Aleksandr A. Svechin, a Soviet military officer and theorist, expressed a similar view when he stated that "New phenomena have compelled us to make new definitions and establish new terminology."[14] He justified this view on the grounds that the development of a new military theory required the theorist to establish the meaning of his terms. In the 1920s and 30s, Liddell Hart and J.F.C. Fuller were redefining doctrine as they advocated a form of mechanized warfare that later became identified with the German blitzkrieg. Svechin was, at the same time, establishing the foundation for the future Soviet doctrine of operational art.

Also during this period of military history, the principles of war became institutionalized as part of American and British doctrine. A large part of this process was a debate that revolved around both the

meanings and rules of application of the principles of war. E.S. Johnston, an American Army officer, writing in 1934, points out some of the difficulties associated with the translation of theory into principles of war that can be used as military doctrine.

> Indeed, it is evident that Foch [Marshall Ferdinand Foch of France] invalidated his work and confused his own mental processes by that human error: failure to define his terms, as to which Lord Grey is said to have remarked, "Discussion without definition is useless."[15]

Johnston goes on to point out the consequences of this error.

> Here we have that error which is so common among soldiers: a loose use of terms without care to define them, which error leads to so much boresome and time-wasting discussion among military men as to science and art, and as to the nature of principles.[16]

Johnston identifies a problem that is neither new, nor resolved. His focus was on the necessity for a connection between military theory, doctrine, and the application of the principles of war. The problems he identifies are just as valid today as they were before World War II.

As the US Army prepared for World War II, there was a requirement to rapidly expand the force and train many new officers. Immediately before and during the war many commercial books were printed with the aim of providing instructional and reference texts for these new officers. One such text was Tactics and Techniques of Infantry. In this work, the author defines most of the operational terms this monograph will examine. An example is how the book defines 'attack'.

> The attack (which is to say, offensive action), consists of a combination of fire and movement designed to create an impulse of fire in a decisive direction, and so to insure the attainment of the objective. Every attack has the following aims:

(1) To contain or fix the enemy so that he cannot move.
(2) To direct a decisive blow at a vital area.[17]

The book goes on to say that "Attack orders should be simple."[18] and provides guidance on what should be in the attack order. Nowhere is the officer shown how to write the order, other than in the illustrative examples.

Further guidance on how to write orders was provided in the 1941 edition of Field Manual 100-5, Field Service Regulations--Operations.

> Orders must be clear and explicit and as brief as is consistent with clarity; short sentences are clearly understood. *Clarity is more important than technique.* [emphasis in original] The more urgent the situation, the greater the need for conciseness in the order....Trivial and meaningless expressions divide responsibility and lead to the adoption of half measure by subordinates. Exaggerated and bombastic phrases invite ridicule and weaken the force of an order. Expressions such as "attack vigorously," if used in orders, are not only verbose and meaningless but tend to weaken the force of subsequent orders in which such expressions do not appear.[19]

This passage was written while General George C. Marshall was Chief of Staff of the Army. Seven years earlier, while at Fort Benning, he supervised the writing and publication of Infantry in Battle, a treatise on minor infantry tactics based on examples from World War I. The authors devote an entire chapter to orders. The authors' analytical method was to give a historical example from the war and then follow with a discussion to illuminate important lessons learned. From this example one can see the importance Marshall placed on clear and concise orders.

> The construction placed on the commonplace military expression "a flank security detachment south of" is instructive. It forcefully illustrates the dangers that may lurk in many a timeworn expression. If seasoned professionals can misinterpret their own specialized vocabulary, it is certain that

> nonprofessionals will fare even worse. In peace, then, special emphasis should be laid on the language employed in orders. Leaders of all grades should be trained to test every word, every phrase, every sentence for ambiguity and obscurity. If, by even the wildest stretch of the imagination, a phrase can be tortured out of its true meaning, the chance is always present that it will be.
>
> Short, simple sentences of simple, commonplace words, will go far toward making an order unmistakable.[20]

Clearly, after World War I and during World War II, the Army realized the importance of properly using operational terms. What is not clear is how the Army has handled this problem since then.

Since the end of World War II, military theorists have written extensively about the effects of nuclear weapons on warfare. Nonetheless, some have continued to write about what is now called conventional warfare. Richard Simpkin, a retired British Army officer and military theorist, analyzing how Clausewitz defined 'destroy' went on to say that it "means that the members of the enemy force must be wounded, captured or killed."[21] He comes to the conclusion that destruction and annihilation are misleading and suggests that what is important is the condition of the enemy force at a given point in time. This is a concept he calls "rendering the enemy force operationally irrelevant."[22] A force can achieve this state in one of two ways. The first is through physical disruption (fighting with combat forces) and neutralization by fire and the second is by turning with a mobile force so as to dislocate the enemy force. Simpkin has shaped his definitions of operational terms to better fit into his theory of war. The relationship between Simpkin's views and this monograph is the observation that no meaning is permanent, that all operational terms are subject to reinterpretation as conditions change over time. This has

significant implications for the US Army, as it has recently entered into a new phase of organizational change and doctrinal revision.

William S. Lind, the former military staff assistant to Senators Taft and Hart, in his Maneuver Warfare Handbook, focuses on what he calls 'maneuver warfare', a form of warfare which he favorably compares to firepower-attrition warfare. One of two important points he makes concerning operational terms is that a term can sometimes have more than one meaning.

> the word objective has created a tremendous amount of confusion because the JCS dictionary definition is not the only one in use....Essentially, there are three different ways in which the term is used in the American military.[23]

His point about multiple meanings is valid and will apply to the construction of a valid paradigm with which to measure the indicated operational terms.

Lind's other important point is about assigning missions focused on the enemy rather than the ground. He points out that thousands of past Marine Corps operations orders used the phrase 'seize and hold' and he states that the words are improperly used because in context they have come to mean terrain, and therefore they focused the minds of the marines who received those orders on the ground rather than the enemy.[24]

There are no formal schools of thought concerning the issue of operational terms. During the late 1970s and through the late 1980s, there existed an active military reform movement. As already mentioned, the focus of the movement centered around the argument over maneuver warfare versus firepower-attrition warfare. Early in

the debate the definitions were resolved, and to some extent the continuing issues revolve around the role of doctrine.[25]

Within the Army, the most enlightening and relevant discussions have centered around the concept of commander's intent. Many officers around the army are frustrated with commander's intent. Furthermore, there are arguments about its definition: what it does and where it belongs in the five paragraph operations order. Answering these questions about commander's intent is beyond the scope of this monograph, however there is an important relationship between commander's intent and operational terms. The very terms that this monograph will examine make up the body of commander's intent. In a recent article, Major Calvin R. Sayles points to the importance of this area of study.

> the issue of commander's intent identifies the tip of a much larger iceberg. That is, there are many areas within the estimate process and the operations order format that are unclear....I personally believe that instructors, students, observer/controllers, and the entire Army require and deserve a common doctrinal lexicon, specifically a FM 101-5 and 101-5-1 that answers these questions.[26]

His article reflects a widely held perception that the Army's doctrine is not precise enough to allow the production of clear and concise operations orders.

In a School of Advanced Military Studies monograph, Major John M. House has provided a study of the meaning of operational art, center of gravity, and culminating point. He concludes that the three terms prohibit clear understanding of complex concepts and suggests that doctrine requires new terminology. In his conclusion, he sets

standards that should apply when one considers the value of operational terms.

> Clarity is essential. Simplicity makes understanding easier, which helps provide clarity. Coining new terms does not provide simplicity because the reader must learn the meaning of the new term. A new term can only lend clarity if it is sufficiently precise to represent a concept not adequately expressed in an existing term.[27]

His thoughts provide a useful guide in establishing a standard with which to evaluate current operational terms.

Other sources of current information are the positions of the various service schools. Specifically, the memorandums, student texts, and fact sheets promulgated by the Infantry School, the Armor School, and the Command and General Staff College (CGSC). These three institutions are actively involved in addressing this area. CGSC provides students with an array of student texts that amplify current doctrine. Occasionally, the schools teach terms and concepts that are not in any published source. An example is the current phrase 'defeat mechanism', which is currently not in any official doctrine sources, but is taught in the Command and General Staff Officer Course.

IV. Evidence

There is extensive documentary evidence available for study, consisting of two principle types. First, there is army doctrine, published and available in field manuals and other official sources. Second, there is unit evidence that results when units conduct combat operations or train for combat operations in peacetime.

This study focuses on current army doctrine. The Army's published doctrine covers the entire organization and is voluminous.

This study is limited to tactical doctrine that either directly or indirectly influences the use of operational terms within the selected battlefield operating systems.

Most of the second type of evidence is available in the form of historical unit records, reports, and studies from past conflicts. It is not feasible in the space provided to examine all the available evidence. This study examines the doctrinal evidence in the BOS functional areas of maneuver, fire support, intelligence, and mobility/survivability, as well as some key language aspects of Field Manual 100-5.

Combat operations are commonly categorized into two types: offensive operations and defensive operations. Evidence will have to cover each of these areas, but again, in the interest of feasibility, the study is limited to a generic consideration of terms that are used in either operation.

This monograph does not consider sister service terms or terms used exclusively for joint operations. There are also some NATO terms that have come into use due to American participation in the alliance. Examples are Follow on Force Attack (FOFA) and Reconnaissance/Interdiction Planning Line (RIPL). These terms and combined terminology issues are beyond the scope of this study. In its conclusion this paper will consider the implications of joint, interagency, and combined operations from the perspective of the Army's operational vocabulary.

The following operational terms provide the focus for this study:

attack	delay	limit
block	deny	neutralize
canalize	destroy	occupy
clear	disrupt	retain
contain	fix	secure
defeat	interdict	seize
defend	isolate	suppress
		turn

Table 1: Operational Terms

These terms frequently assign or describe tasks and missions that Army units must execute in combat. Attack and defend are the principle terms that define the operation as either offensive or defensive. The remaining terms refine or add more detail to the commander's vision of exactly how the subordinate unit will attack or defend. This monograph also considers the concept of 'combat effectiveness' and the doctrinal implications of its use.

The next five sections of this monograph examine Field Manual 100-5, Operations and the intelligence, fire support, mobility and survivability, and maneuver battlefield operating systems. The examination, for reasons of space and time, is illustrative, not exhaustive in nature. In each of the battlefield operating systems, terms are studied that have application across two or more systems in an attempt to show that the impact of operational terms reaches beyond a particular branch or school. Field Manual 100-5 is not a BOS, but as the keystone manual of the Army's operational doctrine, it provides the foundation upon which the rest of the Army's doctrine rests, therefore it plays a central role in defining operational terms.

V. Field Manual 100-5, Operations

The end of the Cold War and beginning of a new era suggests new missions for the Army or, at the least, a need to redefine its old missions. The changes in the strategic environment will present the Army with new tasks to accomplish. Army doctrine may or may not completely recognize these tasks and it will have to define them in order to create an institutional understanding of what the Army is trying to accomplish. Field Manual 100-5, Operations states that:

> Doctrine touches all aspects of the Army. It facilitates communications between Army personnel no matter where they serve, establishes a shared professional culture and approach to operations, and serves as the basis for curriculum in the Army school system.[28]

Doctrine, as expressed in Field Manual 100-5, is the means that the Army uses to think out loud about the military profession.

The 1993 edition of Field Manual 100-5 interprets the states of the environment as: war, conflict, or peace. Conducting military operations in the environment of war is recognized as the primary mission of the Army and it is the one that receives the most resources and attention. The manual, in Chapter Thirteen, provides a new definition for military operations that are conducted in the environment of conflict or peace. These operations are now called operations other than war or OOTW. Until now, the Army has identified operations in these environments as low intensity conflict operations. Low intensity conflict (LIC) describes the environment within which military operations are conducted; it is not as broad in meaning as conflict or peace and does not describe military operations in the same way as OOTW.

In any case, the challenge is not the definition of OOTW or its replacement of LIC as the term that doctrine uses to describe military operations under these different conditions. Rather, the challenge is the relationship of the term OOTW to the remainder of the operational terms and the collective understanding of the Army's leaders. A commander of a military force that is deployed to conduct humanitarian assistance or peacekeeping in support of the United Nations will obviously understand that he is involved in OOTW. The problem is the commander's ability to apply the old or conventional terminology to a new type of operation, in order to accomplish his mission. For example, in traditional military operations the end state is rather easy to define and the vocabulary is consistent with the professional vocabulary. A commander receives a mission to attack, to destroy, or to defeat an enemy force with a clear idea of what the operation, if successful, will look like upon conclusion. So end state requires a definition of success, one that is almost always provided using traditional military vocabulary.

An intellectual problem with OOTW is defining the end state in terms that are translatable to military activities. By defining a military end state using a vocabulary that is studied and understood, the Army increases the likelihood of success through the avoidance of ambiguity and confusion. If a commander is told to 'demilitarize' an area, he is doctrinally ill prepared to execute this task. He is prepared to attack, defend, defeat, or destroy, but he has received little or no training on the relationship between his current vocabulary and the potentially new meaning of that vocabulary in the context of OOTW.

This apparent weakness in Army doctrine is not without remedy. As new doctrine is written, the Army must address the subordinate vocabulary that will support OOTW. This does not imply that multiple sets of doctrine and associated vocabulary are necessary; rather, as with all languages, it suggests that terms may have different meanings based on the context in which they are used.

Field Manual 100-5 states that the "main purpose of the offense is to defeat, destroy, or neutralize the enemy force."[29] Even in the defense, these terms are used to define the tasks expected of the defending force. Therefore, it is essential to understand the meaning of defeat, destroy and neutralize.

Defeat, destroy and neutralize are words that describe what one military force attempts to do to another military force through combat. Field Manual 100-5 goes on to state that "The objective of military forces in war is victory over the opposing military forces at the least cost to US forces."[30] Victory is the object and operations that defeat, destroy, or neutralize the enemy are the method of achieving that object. Furthermore, subordinates are expected to understand the intent of the next two higher commanders so well that they can exploit battlefield opportunities even when communications fail.[31] Neither Field Manual 100-5 nor Field Manual 101-5-1, Operational Terms and Symbols provides a definition of defeat or destroy. Field Manual 100-5 says that successful attacks leave defending enemy units incapable of further resistance, but nowhere does it provide a working definition of these terms.

Defeat and destroy are defined in Field Manual 100-15, Corps Operations.

> Defeat may or may not entail the destruction of any part of the enemy army; rather, the objective is to either disrupt or nullify his plan and/or subdue his will to fight so that he is either unwilling or unable to further pursue his adopted course of action....destruction of the enemy force renders it combat ineffective unless reconstituted.[32]

The Corps manual goes on to point out that in order to properly convey the right mission all personnel must understand the definitions of these two terms. Implied in the definition of destruction is the physical damage of equipment and the killing of enemy soldiers. The definition of defeat, on the other hand, implies that other than physical means may work in achieving the desired result.

Neutralize is defined with three meanings in Field Manual 101-5-1 and its second meaning is "To render enemy personnel or materiel incapable of interfering with a particular operation."[33] Clearly, this definition provides greater latitude than either defeat or destroy in developing suitable courses of action. For example, an enemy force might have to travel along a certain route to engage an attacking friendly force. If the force is unable to reach the friendly force through the physical destruction of key bridges and tunnels, then the force, by definition, has been neutralized.

As the keystone manual for Army doctrine, it is important that Field Manual 100-5 provide a stable foundation from which a doctrinal and professional language can develop. The missing definitions of such basic terms as destroy, defeat, and neutralize raise doubts as to the comprehensiveness of this manual. Also, the introduction of the term OOTW provides a new term for military operations in a low intensity conflict environment. The Army will now have to relate the meanings of its current tactical terminology to this new term. This

process will not take place in Field Manual 100-5. Instead, it will occur in the numerous supporting manuals and articles that are, as of yet, unpublished.

Finally, Field Manual 100-5 suggests a hierarchy of tactical terminology. At the top of this hierarchy are operations which are divided into two types: war and OOTW. Operations are further defined through the method of operation: (offensive or defensive) and the forces involved: (joint, interagency, or combined). Within this framework of operations there are the missions that units must accomplish. Missions consist of a purpose and a task or tasks. In the pursuit of accomplishing missions, units, depending on their size and the scope of the mission, conduct campaigns, major operations, battles and engagements. There is some duplication in the use of the word operation, but this hierarchy provides a good framework for the understanding of operational terms. The next four sections are devoted to the battlefield operating systems. The examination of each of these functional areas illustrates the problems that develop when either the keystone manual is not comprehensive, or the individual functional area develops its own operational terms in isolation from the whole of Army doctrine.

VI. Intelligence BOS

Army doctrine uses a framework that organizes battlefield activities into deep, close, and rear operations. Doctrine emphasizes the need to shape the battlefield for success and, in particular, the close fight through the attack of enemy forces before they are able to reach direct fire ranges. This doctrine requires extensive intelligence support

and relies heavily on the ability of units to successfully target enemy forces which are out of contact.

Targeting is not a new concept, but current deep targeting doctrine suggests the need for precise language in order to synchronize attacking forces and insure understanding across the various battlefield operating systems that support the attacking forces. To support targeting, the intelligence community has helped produce target spread sheets and relative value matrices. Actual target spread sheets are classified, but, for this study, what is important is the unclassified language that is used to describe the desired effects of the attack on the enemy force.

An example of this language is provided in Field Manual 34-1, Intelligence and Electronic Warfare Operations. In this manual the terms disrupt, delay, and limit are used in the relative value matrix. None of these terms are defined in Field Manual 101-5-1 and this intelligence manual provides definitions for each. Delay and limit have different meanings depending on the enemy action (attack or defend), while disrupt remains the same in either case.[34] The following table, taken from Field Manual 34-1, shows the definitions and their relationship to enemy actions.

Enemy Action -->	Attack	Defend
Disrupt	Preclude the efficient interaction of combat and supporting systems.	Same
Delay	Alter arrival time of the forces outside planned/predicted movement schedule.	Slow defensive preparation and/or delay reinforcements.
Limit	Cause the force to shift to another avenue of approach.	Isolate the defender.

Table 2: Intelligence/Targeting Terms and Effects

The terms disrupt, delay, and limit represent the desired effects that the friendly action will have on the enemy force. These definitions provide a reasonable degree of precision and allow staff officers and commanders to visualize the effects in a fairly concrete manner. Noteworthy, though, is the absence of a definition of defeat or destroy. There is no established relationship between the desired effects (disrupt, delay, or limit) and the tactical end state of defeating or destroying the enemy force. As a result, the intelligence analyst has a difficult time translating his post attack assessments and battle damage assessments into meaningful and accurate conclusions.

The problem of battle damage assessment (BDA) is not new. As forces attack each other in depth and with increasingly precise weapons, the need to conduct BDA will grow. BDA is necessary to determine if friendly forces are achieving the desired effects against enemy forces. Operation Desert Storm has shown the difficulty of accurate BDA at the operational and tactical levels of war. Furthermore, there is no Department of Defense standard doctrine, language, or methodology for conducting BDA.[35] Without a standard doctrine and language it is impossible to evaluate all the information that the intelligence system is capable of collecting and then refine it into intelligence that will provide the commander and his staff with a commonly understood measurement of the enemy's situation and status.

Currently, doctrine supports the use of decision graphics to visually portray key information that commanders and their staffs need to have about their units. This information, when aggregated, is called the unit's combat effectiveness. Combat effectiveness is defined

as "The ability of a unit to perform its mission."[36] Field Manual 101-5-1 provides this technique for use with friendly forces, but does not discuss its use with enemy forces. Decision Graphics traditionally measure the status of personnel, key weapon systems, and essential classes of supply (ammunition and fuel). This information is commonly portrayed using a four color system of green, amber, red, and black.[37] During Operation Desert Storm the Central Command intelligence officer resorted to a color code system after trying other methods of communicating enemy combat effectiveness information to General Schwarzkopf.[38]

The intelligence challenge of providing meaningful BDA was made more difficult through a lack of common doctrinal terms. The intelligence doctrine adequately covered disrupt, delay, and limit but it was not nearly comprehensive enough to provide an accurate picture of overall combat effectiveness. Destroy, in its simplest sense, is easily understood when it is applied to a piece of equipment or a soldier. If a piece of equipment is destroyed, it is no longer functional and is non-repairable. Damaged equipment is defined as equipment that is no longer functional in its intended capacity and is repairable. Some damaged equipment can return to duty within a period of time to influence a battle or campaign or war. Equipment that continues to function at reduced capacity is probably best defined as degraded. From this discussion comes the realization that destroy, damage, and degrade are terms that can apply to BDA. The problem is converting the individual assessments and reports to an overall level of combat effectiveness. At what point is an enemy formation no longer combat effective? At what point is it defeated and at what point is it destroyed?

Doctrine does not answer these questions and, therefore, the intelligence community is required to develop definitions on its own and then 'sell' these definitions to the maneuver commander.[39]

There is a dichotomy between combat effectiveness as a concept and singular words such as defeated or destroyed. Empirical evidence suggests that most units in the army, when evaluating their own combat effectiveness use a quantitative methodology.[40] If there are 'x' tanks on hand and 'y' personnel present for duty (where x and y are numbers) then the unit is green or fully mission capable. The 'fully mission capable' phrase comes from the maintenance reporting system and harkens to the Unit Status Report which is used to measure unit readiness (combat mission readiness). In contrast, the doctrinal definition of defeat does not rely on a quantitative measure; instead it is more subjective in nature and is measured against enemy actions (is the enemy unwilling or unable to pursue his adopted course of action?). Destroy also falls into this category. From a purely objective standpoint something is either destroyed or not, but with complex organizations, like large military formations, this is harder to determine. It is unrealistic to presume that it is either necessary or possible to achieve 100 percent destruction of a large enemy formation. Friendly forces can reasonably accomplish their assigned missions with enemy destruction at less than 100 percent.

In summary, Army doctrine does not, given the current state of its terminology, provide the precision necessary to permit the intelligence community to successfully translate BDA and intelligence analysis into language that provides a clear picture of the enemy to the commander. The results of Operation Desert Storm suggests that the

Army and the military community at large have a long way to go before this problem is resolved.

VII. Fire Support BOS

According to Field Manual 6-20, Fire Support in the AirLand Battle, fire support is "the collective and coordinated use of indirect-fire weapons, armed aircraft, and other lethal and non lethal means in support of a battle plan." The manual goes on to say that the purpose of fire support is to delay, disrupt or destroy enemy forces in depth. Furthermore, "Fire support destroys, neutralizes, and suppresses enemy weapons, enemy formations or facilities, and fires from the enemy rear area."[41] Within the first chapter of the Army's keystone manual for fire support the terms delay, disrupt, destroy, neutralize, and suppress are introduced without definition. These terms are the focus for the following examination of the fire support battlefield operating system.

In Chapter Two the manual states under the effects of fire that:

> A commander will decide what effect fire support must have on a particular target. There are three types of fire: destruction, neutralization, and suppression.[42]

The manual then provides precise definitions of destruction, neutralization, and suppression.[43] These definitions are technical in nature and provide a relationship between the desired effects on the enemy and the type and amounts of fire that the friendly forces will have to expend. For example, destruction type fires will result in the target being put out of action permanently, but normally requires large expenditures of ammunition to achieve this.

The manual emphasizes the ability of fire support to disorganize, delay, and disrupt enemy elements, as well as its ability to neutralize or suppress enemy direct-fire weapons. There is also discussion of creating 'pressure' on the enemy's command and control structure and canalizing his forces, inhibiting his ability to attack friendly forces, and preventing him from reinforcing a given action. Clearly, this proliferation of terms is not designed to confuse, but rather to explain the many capabilities of the fire support system. The words pressure and inhibit are not defined, while canalize means "to restrict operations to a narrow zone by use of existing or reinforcing obstacles or by direct or indirect fires."[44]

In Field Manual 6-20-30, Fire Support for Corps and Division Operations there is a discussion of preparatory, blocking, obscuration and screening, continuous suppression, and SEAD fires.[45] The manual goes on to address other types of fires and emphasizes throughout that at issue is the desired effect on the enemy force. The tone and stated definitions focus on what effect the fires will have on the selected enemy target. In Field Manual 6-20-10, The Targeting Process a target is defined as "an enemy function, formation, equipment, facility, or terrain planned for capture, destruction, neutralization, or degradation in order to disrupt, delay, or limit the enemy."[46] This definition offers more precision than the definition in Field Manual 101-5-1 and reaffirms the relationship, from a fire support perspective, between a militarily achievable end state (capture, destruction, neutralization, or degradation) for the enemy and its possible effects on the overall aims and actions of that enemy (i.e. disrupt, delay, or limit). This relationship is implied and not clearly stated in any of the reviewed

doctrine. The terms neutralize and degrade are infrequently seen in unit orders when considered from a maneuver point-of-view.

The fire support community has refined its terminology through the use of what are called tactical and technical decisions. Simply stated, tactical decisions determine the desired effects on the target (disrupt, delay, and limit), while technical decisions provide the details of how to accomplish this effect. An enemy target is either disrupted, delayed, or limited in relation to time or terrain as the result of destructive, suppressive, or neutralizing fires.

Destroy, neutralize, and suppress are considered attack guidance terms and, in this context, have a strict technical meaning in terms of rounds expended and damage inflicted on the selected target. The manual provides the following example: "Elements of a target set could conceivably be attacked to disrupt their function, delay their arrival, and limit their approach, depending on the target and the situation."[47] How the attack is conducted is determined through the technical decisions. The fire support community has taken the terms destroy, neutralize, and suppress and has given them definitions that are used to express how the friendly force will attack a given target. Unfortunately, this conflicts with the understanding of these terms across the other BOS functional areas and explains the need for tactical and technical decisions within the targeting process.

In discussing what the fire supporter must receive from the combined arms commander, General Franks, the commander of the Training and Doctrine Command (TRADOC) said:

> The commander needs to precisely describe the effects he's trying to achieve and where and when he wants them. In

simple, straightforward language, he should describe his desired effects in the conduct of the operation[48]

This observation clearly states what the combined arms commander is supposed to do. Unfortunately, clarity and doctrinal understanding is not always practiced. A former commander of the National Training Center made the following observation less than four months after General Franks comments:

> During the battle, the commander thinks his fires aren't supporting his intent. Then he finds out in the AAR that the guidance he gave was imprecise and his intent, as stated *was* achieved. He just didn't understand the doctrinal terminology.
>
> Everyone has to know doctrine. We have to know the different terms so we don't speak *past* each other instead of *to* each other. [emphasis in original][49]

The fire support community is leading the Army in the precision of its definitions. However, it is not the fire support community's decision to determine how everybody is to use the terms destroy, neutralize, or suppress. Furthermore, it is unrealistic, on the part of the Field Artillery School, to think that its definition will work for everyone. Nonetheless, they have done more work than most and appear to understand the dangers of issuing commands using terms that are not well understood across the force.

VII. Mobility and Survivability BOS

Engineers are part of the combined arms team and, as with the other functional areas, there is a requirement to fully integrate engineer assets into the force and synchronize their efforts to enhance the force's combat power. Field Manual 5-100, Engineer Combat Operations recognizes this and emphasizes, for example, the

integration of the obstacle concept with the maneuver and fires concepts during the defense.

When planning obstacles, engineers use the concept of intent to focus the effort. Developing the obstacle intent is the responsibility of the maneuver commander in conjunction with his supporting engineer. This doctrinal requirement assumes that both understand each other's functional area terminology. The obstacle intent contains three components: an obstacle effect, a target, and a relative location on the battlefield.[50] The obstacle intent describes how, in terms of obstacle effects, the commander will use tactical obstacles to effect enemy maneuver to the advantage of his direct fire plan. It also establishes the link between the direct fire plan and the obstacle plan and "is conveyed through the use of precise terms and graphics."[51]

The precise terms used to describe the desired effects on the enemy are: disrupt, turn, fix, and block. Specifically, these terms represent exactly the effect the designated obstacles should have on the enemy's movement.[52] Additionally, there is a technical relationship between these terms, as used in the commander's intent, and the engineer force. Like ammunition to a field artillery unit, Class IV barrier material is essential to the engineer unit as it conducts its mission. The engineer community has developed resource factors which correspond to each of the desired effects.

Obstacle effect	Resource planning factor
Disrupt	0.5 / 10-30% Lethality (mines)
Turn	1.2 / 60-100% Lethality (mines)
Fix	1.0 / 30-60% Lethality (mines)
Block	2.4 / > 100% Lethality (mines)

Table 3: Obstacle Terms & Planning Factors

From this table it is easy to see that there is a substantial difference between terms once the resource planning factor is applied to a quantity of mines or other material necessary for the obstacle plan. Furthermore, for each of these terms, there is a specific definition that applies directly to the engineer units planning and preparing the obstacles and the maneuver units that will cover the obstacles with direct fire.[53] For example, within the definition of fix is found the goal of destroying the attacking enemy force, while the definition of block does not include this requirement. The definition of block only requires that there be overwhelming direct and indirect fires. If a friendly force is able to destroy an enemy force then one could reasonably assume that it has sufficient, if not overwhelming, direct and indirect fires. There is an inconsistency between these definitions. From a purely engineering perspective, block is the more difficult intent to achieve and, therefore, will probably require the greater resources and closer integration with the terrain. Fix, on the other hand, from a resource standpoint, is the less demanding mission. A maneuver and fire support perspective suggests, because of the use of the word destroy, that the opposite is true.

The engineer community has clearly improved the precision and clarity of its terminology in the last two years. Nonetheless, there is room for improvement, given that officers coming from other functional areas might easily misunderstand the desired effects of an obstacle plan using the current definitions.

VIII. Maneuver BOS

In examining the selected terms from the maneuver perspective, it becomes apparent that there are at least two different schools of thought (Fort Benning and Fort Knox), as well as several relationships that are implied in the meanings of these words. Some words have a meaning that is closely tied to terrain, while other words imply a greater relationship to the desired effect on the enemy, and some terms have a combined meaning. The table below, taken from Field Manual 7-20, The Infantry Battalion illustrates the Infantry School's position.

Terrain	Enemy	Friendly	Terrain & Enemy
seize	destroy	overwatch	reconnoiter
secure	neutralize	screen	deny
occupy	suppress	cover	contain
retain	disrupt	guard	isolate
	fix	clear	
	interdict		
	breach		
	feint		
	demonstrate		
	block		
	isolate		
	canalize		

Table 4: Infantry Maneuver Terms

The infantry school considers these terms tasks which units must perform as directed from orders that they receive. These tasks are either specified or implied in the orders that commanders write. The Infantry School says that "A task is a clearly defined and measurable activity accomplished by individuals and units. It is a specific activity that contributes to the accomplishment of a mission. Mission tactics requires a common vocabulary."[54] The Infantry School position suggests that operations, missions, and tasks are not synonymous, and that a mission must contain a stated task and purpose.[55] Field Manual

100-5 states that there are two types of military operations; operations other than war (OOTW) and war operations.[56] Tautologically speaking, it is clear that operations is the higher order, or broader term, with mission falling beneath it. Field Manual 100-5 goes on to define the mission as "the commander's expression of what the unit must accomplish and for what purpose. Orders contain both specified and implied tasks."[57] The infantry manual then goes on to provide its own definition of the terms clear, delay, destroy, deny, isolate, retain, and seize because these terms are either absent from Field Manual 101-5-1 and other reference sources, or are not sufficiently precise. The Infantry School position is understandable, but cannot be the final doctrinal answer because the Armor and the Aviation communities have an interest in these definitions.

In Field Manual 17-95, Cavalry Operations there is no identification of the aforementioned tasks. Instead, the manual identifies missions for the cavalry force. Missions are grouped into the categories of reconnaissance, security, offense, and defense. Within these general categories are found various specific missions, ranging from screen to attack. The precise meaning of offensive operations is not clear. For example, in Chapter Five, the manual states that "Offensive operations are designed primarily to destroy the enemy.", but a paragraph later the manual states that "The objective of any particular offensive operation is to defeat an enemy force or to destroy his will or capability to continue to fight." The only clearly stated view is that "Terrain...is seldom an objective itself" for the cavalry force and that if a terrain oriented objective is assigned, the attacker must either seize or secure the designated terrain feature.[58] Many of the same

terms found in the infantry manual are used in the cavalry manual. However, the cavalry manual does not provide any further refinement to their meaning.

Field Manual 71-123, Tactics and Techniques for Combined Arms Heavy Forces: Armored Brigade, Battalion/Task Force and Company/Team attempts to illuminate the different meanings of destroy, fix, and suppression. This attempt is found in the manual's discussion of attacks, where it states that "Destroy, fix, and suppress are not synonymous, and reflect the intent of the commander when assigning support-by-fire or attack-by-fire missions."[59] The manual goes on to add to the meaning of these definitions, stating that destroy means killing 75 percent of the enemy force (though it does not identify if the 75 percent is of the force as a whole or if it means 75 percent of critical items like tanks), while fix means that the friendly force must surround the enemy force, and that suppress remains essentially the same, to prevent the enemy from delivering effective fires onto friendly forces. The manual claims to provide these definitions in order to clarify the terms used in the earlier manuals Field Manual 71-1, Field Manual 71-2 and their respective Mission Training Plans (MTPs).[60]

Army aviation assets provide another means of maneuver on today's battlefield. Field Manual 1-100, Army Aviation in Combat Operations is the aviation community's keystone manual, and it says that "The primary mission of attack helicopters is to destroy enemy armored, mechanized, and helicopter forces."[61] However, as explained in Field Manual 1-111, Aviation Brigades, the mission of the division aviation brigade is to find, fix, and destroy enemy forces.[62] Find and

destroy make sense and are in consonance with the capabilities of the helicopter force, but fix seems too difficult a mission given the definitions in Field Manual 101-5-1, Field Manual 71-123, and Field Manual 7-20 that require the surrounding of the enemy. Additionally, throughout the brigade manual, the term 'blunt' is used in the context of slowing or stopping an attacking or moving enemy force, but a definition is not provided. Clearly, attack helicopters have tremendous utility and capabilities, but it is important that ground commanders fully understand any special meanings that the aviators want to apply to commonly used terms. Also, the aviation community must make sure that they use standard terms (fix) correctly and either do not use non-standard terms (blunt) or provide definitions for their use.

Maneuver doctrine is written in at least four different locations by four different agencies: the Infantry School at Fort Benning, the Armor School at Fort Knox, the Aviation School at Fort Rucker, and the Combined Arms Command at Fort Leavenworth. These commands produce doctrine that does not have an identifiable and consistent convention in its use of operational terms, except in those areas where Field Manual 100-5 provides guidance. There is a common acknowledgment that Field Manual 100-5 is the keystone manual and the structure of Field Manual 100-5 is frequently found in the subordinate manuals. Nonetheless, Field Manual 100-5 cannot, given the magnitude of the problem, provide all the answers to the problem of tactical language commonalty. Field Manual 100-5 does, however, provide a conceptual framework from which a methodology might be developed for the organization of the tactical terms discussed in this monograph. Finally, single schools largely dominate the

intelligence, fire support, and mobility/survivability BOSs and simplify the task of correcting any identified language deficiencies. However, the maneuver BOS is different and will require the full attention of the TRADOC Commander, as well as other senior leaders if they desire a common vocabulary.

X. Conclusions

A 1989 Center for Army Lessons Learned newsletter identified two common problems with the use of operational terms in the field. Commanders and their staffs did not understand the correct definition of an operational term and, at times, used an improper variation of the correct definition based on past experience. This is a failure to learn and indicates a weakness in the Army's institutional school system and, perhaps, a lack of individual self-discipline or self-development. The second problem was the use of non-standard terms during combined arms operations. This problem led to the confusion of some members of the combined arms team when they did not understand the meanings of non-doctrinal terms.[63] Both of these failures, based on empirical observations from the Combat Training Centers, hurt the performance of combined arms teams and interfered with mission accomplishment.

This monograph has identified a third problem which possibly contributes to the aforementioned problems. This third problem is present every time a soldier studies a manual or participates in institutional instruction. It is the failure of doctrine to provide precise and comprehensive definitions and rules of usage, for operational terms, that apply across the battlefield operating systems.

As demonstrated in this monograph, several branch schools have produced good definitions and rules of usage that apply to their functional areas. What is missing is the complete integration of doctrine across the BOS functional areas. Field Manual 100-5 provides a solid foundation, but it would be inappropriate, as well as too large a task, for this manual to provide resolution to all terminology problems.

Doctrine must continue to evolve and provide the means for the Army to think about war, train for war, and fight in war. Desert Storm provided an illuminating and simple example of the potential problems and dangers in the use of our operational terms. Admittedly, this example comes from the operational level, but the issues apply to the tactical level of war.

After many tries and much effort, the planning group led by then Lieutenant Colonel Joseph H. Purvis recommended and received approval from General Schwarzkopf for the following mission statement for Central Command's Operation Desert Storm:

> On order, friendly forces conduct offensive operations to ***eject*** Iraqi forces from Kuwait; be prepared to secure and defend Kuwait.[64] [emphasis added]

Eject is a non-standard doctrinal term, which is defined in Webster's Dictionary to mean: "to drive out especially by physical force."[65] This use of a non-standard term was justified on the grounds that no other operational term met the requirement.[66]

The 1992 version of Field Manual 7-20 provides a term that fits perfectly: clear. It means "To destroy or force the withdrawal of all enemy forces and reduce obstacles that may interfere with subsequent

operations."[67] Unfortunately, the manual was not published when General Schwarzkopf made his decision and, even if it had been published, it is a battalion level manual that was written for the infantry community. Surely, Colonel Purvis and his team were familiar with Field Manual 101-5-1. Clear, by itself, is not defined in that manual. The term they would have found is 'clear enemy in zone', a term that has a lower, tactical connotation.

A larger issue is the fate of the Republican Guards. The two American Corps received the following mission guidance from Central Command:

> XVIII AIRBORNE CORPS - Attack to block east/west lines of communication along "Highway 8" valley and isolate Iraqi forces in Kuwaiti Theater. On order, attack east to destroy the Republican Guard Forces in zone.
>
> VII CORPS - Attack to penetrate Iraqi defenses and destroy Republican Guard Forces in zone. Be prepared to defend Northern Kuwait border to prevent Iraq re-seizing Kuwait.[68]

In both cases the Corps identified the critical task of destroying the Republican Guards. There is little argument about the fate of the Republican Guards; they were neither destroyed in a Clausewitzian sense, nor in the sense of the definition in Field Manual 100-15, Corps Operations. In the months that followed the end of Desert Storm, Saddam Hussein would use the Republican Guards, the very forces not destroyed, to crush Kurdish and Shi'ite resistance and form the core of his new army.[69] The decision to end the campaign was largely political and did not revolve around the use of the term 'destroy' as used in unit mission statements; nonetheless, as professionals, it is our

responsibility to examine the true results of our efforts against our stated aims.

Doctrine and its operational terms shape how the Army thinks and talks about war. Words have consequences in a business that is all about the killing of people and the destruction of equipment. Doctrine is not static and the Army can achieve a higher level of precision and comprehensiveness in the use of its operational terms. Improvement is necessary, because joint, interagency, and combined operations are the future form for military actions. A solid foundation in operational terms will allow the Army to take the lead in establishing a working operational vocabulary in the joint, interagency, and combined arenas.

X. Recommendations

The answer to the research question, based on the doctrinal evidence examined, is no. The individual functional areas of the battlefield operating system do not use operational terms in the same way and with the same meaning. This is a fundamental flaw in the foundation beneath the Army's doctrine. The solution to this problem consists of three equally important parts.

First, the Army must establish a standard convention for defining operational terms and then review its doctrinal literature and school curriculums for consistency in application. The basis for the convention is the understanding that missions are assigned and accomplished to support all operations. A mission statement, traditionally a who, what, where, when, and why construction, becomes more sophisticated and precise in meaning. Specifically, the mission - 'what' - is a task assigned to a unit and the desired effect or

outcome the action will have on the enemy. The 'what' is then connected to the 'why' or purpose for which the mission is assigned to form, in conjunction with the other elements, the complete mission statement.

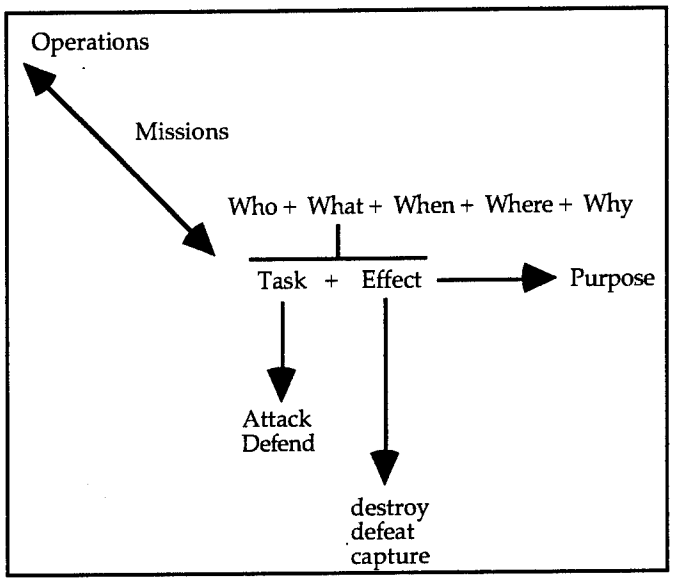

Figure 1: Operational Terms Convention

The simplistic model in Figure 1 illustrates the need for a consolidated and coordinated list of tasks and effects. Once established, the operational terms are definable within a meaningful framework that will assist the doctrine writers, as well as soldiers in the field. The Combined Arms Command is the agency best able to lead this effort, as it produces Field Manuals 100-5, 101-5 and 101-5-1, as well as the corps and division level manuals.

Second, the Army must use the Combat Training Centers to monitor and, to a certain extent, enforce the proper use of doctrinal terms through the after action review process and the lessons learned process.

Third, the Army must hold individual officers and noncommissioned officers responsible for understanding operational

terms during their institutional training and during their career long self-development efforts. Doctrine and its associated language will not remain static; both will grow and change as the situation requires. Clarity of expression enhances mission accomplishment, making it an attainable and worthy goal for the Army.

Endnotes

[1]At the tactical level of war, operating systems are called BOS. BOS are defined as the major functions occurring on the battlefield, performed by the force to successfully execute operations (battles and engagements) by the Army to accomplish military objectives directed by the operational commander.

The Maneuver BOS is the employment of forces on the battlefield through movement and direct fires in combination with fire support, or fire potential, to achieve a position of advantage in respect to enemy ground forces in order to accomplish the mission. The Maneuver BOS includes direct fire systems (e.g., small arms, tank guns, and attack helicopter fires). It does not include indirect fires that are included under the Fire Support BOS.

The tactical Fire Support BOS is the collective and coordinated use of target acquisition data, indirect fire weapons, armed aircraft (less attack helicopters), and other lethal and non lethal means against ground targets in support of maneuver force operations. The Fire Support BOS includes artillery, mortar, and other nonline-of-sight fires, naval gun fire, close air support, and electronic countermeasures.

The Intelligence BOS is the collection of functions that generate knowledge of the enemy, weather, and geographical features required by a commander in planning and conducting combat operations. It is derived form and analysis of information on the enemy's capabilities, intentions, vulnerabilities and the environment.

The Mobility and Survivability BOS describes the functions of the force that permits freedom of movement relative to the enemy while retaining the ability to fulfill its primary mission. The Mobility and Survivability BOS also includes those measures that the force takes to remain viable and functional by protection from the effects of enemy weapon systems and natural occurrences. From TRADOC Pamphlet 11-9, Blueprint of the Battlefield (Fort Monroe, Virginia: Department of the Army , 1990), pp. 23 -25.

[2]US Army, Command and General Staff College, "Student Text 100-9, The Command Estimate Process," (Fort Leavenworth, KS: Command and General Staff College, 1992), p. 5-4.

[3]An example of a grammar or convention is the symbiotic relationship between the terms firepower and maneuver. Combat power, the ability to fight, is created through the combination four elements - maneuver, firepower, protection and leadership. FM 100-5 states that "Maneuver and firepower are inseparable and complementary dynamics of combat." Units can apply firepower without maneuver and units can sometimes maneuver with applying firepower, but in doing so they miss the synergistic effect of combining the two. In this case, the Army's operational terms are normally used together to better express this employment concept.

[4]Martin Van Creveld, Command in War (Cambridge, Massachusetts: Harvard University Press, 1985), pp. 1-5.

[5]Gordon R. Sullivan, "Delivering Decisive Victory: Improving Synchronization." Military Review, September 1992, p. 8.

[6]Michael Howard, Studies in War and Peace, (New York: The Viking Press, 1971), p. 23.

[7]Ibid., p. 24-5.

[8]Ibid., pp. 29-31.

[9]Ibid., p. 34.

[10]Carl von Clausewitz, On War, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1984), p. 90.

[11]Jomine, Baron de, The Art of War, (Westport, CT: Greenwood Press pp. 91-92.

[12]From a class discussion during academic year 92/93 in the Command and General Staff Officers Course C620 The Evolution of Modern Warfare.

[13]B.H. Liddell Hart, Strategy, (New York: Frederick A. Praeger, 1968), p. 333.

[14]Aleksandr A. Svechin, Strategy, ed. Kent D. Lee (Minneapolis, Minnesota: East View Publications, 1992), p. 61.

[15]E.S. Johnston, "A Science of War," Review of Military Literature 14 (June 1934); reprinted in US Army Command and General Staff College, C610 Syllabus/Book of Readings (Fort Leavenworth: USACGSC, July 1992), p. 120.

[16]Ibid.

[17]The Military Service Publishing Company, Tactics and Technique of Infantry: Advanced (Harrisburg Pa.: The Telegraph Press, 1942), p. 741.

[18]Ibid., p. 751.

[19]US Army. FM 100-5, Field Service Regulations--Operations (Washington DC: War Department, 1941; reprint ed., Fort Leavenworth, Kansas: Command and General Staff College Press, 1992), p. 31.

[20]The Infantry Journal Incorporated, Infantry in Battle, 2nd ed.(Richmond: Garrett & Massie, 1939; reprint ed., Quantico, Va: Marine Corps Association, 1982), p. 158.

[21]Richard E. Simpkin, Race to the Swift, (London: Brassey's Defence Publishers, 1985), p. 139.

[22]Ibid.

[23]William S. Lind, Maneuver Warfare Handbook, (Boulder: Westview Press, 1985), p. 123.

[24]Ibid., pp. 127-8.

[25]Asa A. Clark IV, Peter W. Chiarelli, Jeffrey S. McKitrick, and James W. Reed, ed., The Defense Reform Debate (Baltimore: The Johns Hopkins University Press, 1984), pp. 85-7.

[26]Calvin R. Sayles, "Commander's Intent: Uniformly Known and Misunderstood," Armor, July-August 1992, p. 32.

[27]John M. House, "Do Doctrinal Buzzwords Obscure the Meaning of Operational Art?" (Student monograph, fort Leavenworth, KS: SAMS, 21 April 1989), p. 37.

[28]U.S. Army, FM 100-5, Operations (Washington: Department of the Army, 1993), p. 1-1.

[29]Ibid., p. 7-0.

[30]Ibid., p. 1-4.

[31]Ibid., p. 7-1.

[32]U.S. Army, FM 100-15, Corps Operations (Washington: Department of the Army, 1989), p. 5-0.

[33]U.S. Army, FM 101-5-1, Operational Terms and Symbols (Washington: Department of the Army, 1985), p. 1-50.

[34]U.S. Army, FM 34-1, Intelligence and Electronic Warfare Operations (Washington: Department of the Army, 1987), p. 3-56.

[35]U.S. Department of Defense, Conduct of the Persian Gulf War, Final Report to Congress, April 1992, p. C-14.

[36]U.S. Army, FM 101-5-1, Operational Terms and Symbols (Washington: Department of the Army, 1985), p. 1-15.

[37]U.S. Army, FM 71-100-2, Infantry Division Operations: Tactics, Techniques and Procedures (Washington: Department of the Army, 1993), p. Appendix-70.

[38]See U.S. Department of Defense, Conduct of the Persian Gulf War, Final Report to Congress, April 1992, p. C-14; and Rick Atkinson, Crusade: The Untold Story of the Persian Gulf War, (New York: Houghton Mifflin Company, 1993), pp. 232-236.

[39]Rick Atkinson, Crusade: The Untold Story of the Persian Gulf War, (New York: Houghton Mifflin Company, 1993), pp. 232-236.

[40]See US Army, Army Regulation 220-1, Unit Status Reporting (Washington: Department of the Army, 1993), pp. 13-31; and US Army, "2d (Commando) Brigade Tactical Standard Operating Procedures (TACSOP)" (Unit Standard Operating Procedures, 2d Brigade, 10th Mountain Division (Light Infantry), Fort Drum, New York, 1992), pp. J-4-A-1, J-5-A-1, and J-5-D-1.

[41]U.S. Army, FM 6-20, Fire Support in the AirLand Battle (Washington: Department of the Army, 1988), p. 1-2.

[42]Ibid.

[43]Destruction. Destruction puts a target out of action permanently. Direct hits with high-explosive (HE) or concrete-piercing (CP) shells are required to destroy hard material targets. Usually, destruction requires large expenditures of ammunition and is not considered economical, except for nuclear weapons.

Neutralization. Neutralization knocks a target out of action temporarily. It can be achieved by use of any type of shell-fuze

combination suitable for attacking a particular type of target. Neutralization does not require an extensive expenditure of ammunition and is the most practical type of mission. Most missions are neutralization fire.

Suppression. Suppression of a target limits the ability of the enemy personnel in the target area to perform their jobs. Firing HE/VT or smoke creates apprehension and confuses the enemy. The effect of suppressive fires usually lasts only as long as the fires are continued. Suppression requires a low expenditure of ammunition; however, since its effects are not lasting, it is unsuitable for most targets. These definitions are provided in U.S. Army, FM 6-20 Fire Support in the AirLand Battle (Washington: Department of the Army, 1988), pp. 2-7 and 2-8.

[44]U.S. Army, FM 101-5-1, Operational Terms and Symbols (Washington: Department of the Army, 1985), p. 1-13.

[45]U.S. Army, FM 6-20-30, Fire Support for Corps and Division Operations (Washington: Department of the Army, 1989), p. 4-4.

[46]U.S. Army, FM 6-20-10, The Targeting Process (Washington: Department of the Army, 1990), p. 1-1.

[47]Ibid., p. A-9.

[48]Colin K. Dunn, ed. "Preparing for Multiple Contingencies and Practicing the Versatility to Win Them," Field Artillery Magazine, June 1992, p. 10.

[49]Jerry C. Hill, ed. "Synchronizing Combat Power at the NTC," Field Artillery Magazine, October 1992, p. 7.

[50]U.S. Army, FM 5-71-100, Division Engineer Combat Operations (Final Approved Draft) (Washington: Department of the Army, 1993) p. 4-8.

[51]U.S. Army, "Tactical Commanders Development Course Battle Book" (Fort Leavenworth, Kansas: Command and General Staff College, undated), p. M/CM/S-45.

[52]U.S. Army, FM 5-71-100, Division Engineer Combat Operations (Final Approved Draft) (Washington: Department of the Army, 1993), p. 4-8.

[53]Disrupt. A tactical obstacle intent to focus fire planning and obstacle effort to break up an enemy's formation, interrupt his time table, cause the premature commitment of breach assets, and piecemeal his attack. May be used to separate combat echelons or combat forces from their logistical support. The disrupt intent is conveyed through the disrupt graphic.

Turn. A tactical obstacle intent used to integrate fire planning and obstacle effort to divert an enemy formation off one avenue of approach to an adjacent avenue in support of the scheme of maneuver. Requires well-defined mobility corridors and avenues of approach. The combination of obstacles and firs must be impenetrable at the

point (apex) where the turn begins. Fire control must be planned to maintain pressure on the enemy throughout the turn and exploit his exposed flank. The turn intent is conveyed using the turn graphic.

Fix. A tactical obstacle intent to focus fire planning and obstacle effort to slow an attacker within a specified area, normally EA. Obstacle and fires are planned in depth and build with intensity to complete the enemy's destruction within the specified area. The fix intent is conveyed using the fix graphic.

Block. A tactical obstacle intent used to integrate fire planning and obstacle effort to stop an attacker along a specific avenue of approach. Requires extensive obstacle effort and overwhelming direct and indirect fires. Obstacles must be tied into terrain and allow no bypass. The blocking intent is conveyed through the block graphics. These definitions are found in the glossary of U.S. Army, FM 5-71-100, Division Engineer Combat Operations (Final Approved Draft). Washington: Department of the Army, 1993.

[54]U.S. Army, FM 7-20, The Infantry Battalion (Washington: Department of the Army, 1992), p. 2-6.

[55]Captain Thyne, "Operations and Missions," Talking Paper used to provide a discussion of terms which have become confused in our tactical language at the United States Army Infantry School, Fort Benning, Georgia, 10 February 1988; and Donald A. Johnson, "Commander's Intent, Concept of the Operation and Mission Statement," Memorandum for Tactics Division Personnel to prescribe a common interpretation of current doctrine for use by all Tactics Division instructors at the United States Army Infantry School, Fort Benning, Georgia, 12 July 1990.

[56]U.S. Army, FM 100-5, Operations (Washington: Department of the Army, 1993), pp. 2-0 - 2-1.

[57]Ibid., p. 6-6.

[58]U.S. Army, FM 17-95, Cavalry Operations (Washington: Department of the Army, 1991), 5-2 and 5-10.

[59]U.S. Army, FM 71-123, Tactics and Techniques for Combined Arms Heavy Forces: Armored Brigade, Battalion/Task Force and Company/Team (Washington: Department of the Army, 1992), p. 3-97.

[60]Ibid.

[61]U.S. Army, FM 1-100, Army Aviation in Combat Operations (Washington: Department of the Army, 1989), p. A-1.

[62]U.S. Army, FM 1-111, Aviation Brigades (Washington: Department of the Army, 1990), p. 1-6.

[63]U.S. Army, "Non-Mechanized Forces," Center For Army Lessons Learned Newsletter, Fort Leavenworth, Kansas, Spring 1989, p. 15.

[64]Briefing presented by Colonel (Retired) Joseph H. Purvis at the School of Advanced Military Studies, Fort Leavenworth, Kansas, 9 November 1993.

[65]Webster's Seventh New Collegiate Dictionary (Springfield, Massachusetts: G. & C. Merriam Company, 1971), p. 265.

[66]Briefing presented by Colonel (Retired) Joseph H. Purvis at the School of Advanced Military Studies, Fort Leavenworth, Kansas, 9 November 1993.

[67]U.S. Army, FM 7-20, The Infantry Battalion (Washington: Department of the Army, 1992), p. 2-6.

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[69]Rick Atkinson, Crusade: The Untold Story of the Persian Gulf War, (New York: Houghton Mifflin Company, 1993), p. 489; and U.S. News & World Report, Triumph Without Victory: The Unreported History of the Persian Gulf War (New York: Times Books, 1992), p. 412.

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