AD-A190 470 HOW CAN WE BE SURE? THE SEARCH FOR TRUTH IN TACTICAL LESSONS LEARNED(U) ARMY COMMAND AND GENERAL STAFF COLL FORT LEAVENWORTH KS SCHOO.. W A VANDERBEEK 04 DEC 87 1/1

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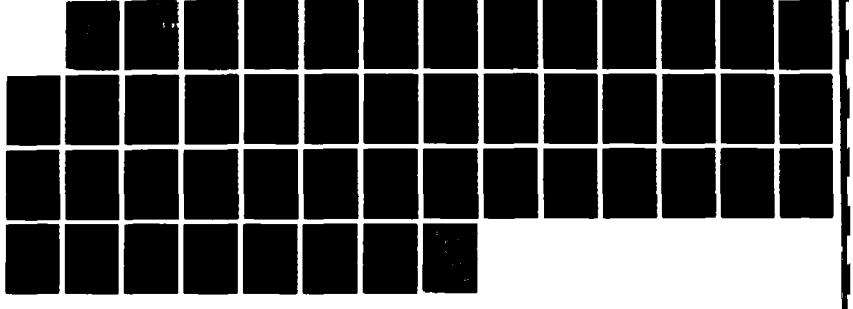

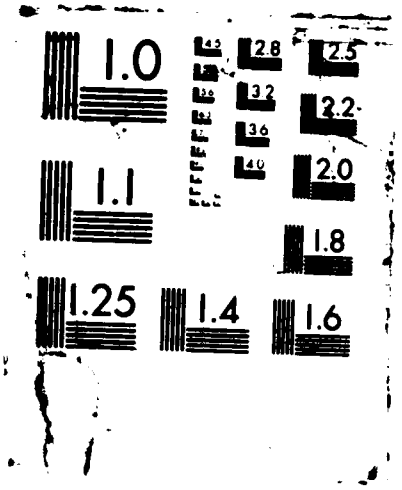
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How Can We Be Sure? - The Search For Truth In Tactical Lessons Learned

by

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4 December 1987

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SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

Form Approved
OMB No 0704-0188
Exp. Date Jun 30, 1986

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited.
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S)	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION School of Advanced Military Studies, USAC&GSC 6b. OFFICE SYMBOL (If applicable) ATZL-SWV	7a. NAME OF MONITORING ORGANIZATION
6c. ADDRESS (City, State, and ZIP Code) Fort Leavenworth, Kansas 66027-6900	7b. ADDRESS (City, State, and ZIP Code)
8a. NAME OF FUNDING/SPONSORING ORGANIZATION 8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (City, State, and ZIP Code)	10. SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO. / PROJECT NO. / TASK NO. / WORK UNIT ACCESSION NO
11. TITLE (Include Security Classification) How Can We Be Sure? - The Search For Truth In Tactical Lessons Learned (U)	
12. PERSONAL AUTHOR(S) MAJ Walter A. Vanderbeek, USA	
13a. TYPE OF REPORT Monograph 13b. TIME COVERED FROM _____ TO _____ 14. DATE OF REPORT (Year, Month, Day) 87/12/05 15. PAGE COUNT	
16. SUPPLEMENTARY NOTATION	

17. COSATI CODES		
FIELD	GROUP	SUB-GROUP

18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)
tactical doctrine
doctrinal development
doctrine analysis
tactical lessons learned
doctrine validation

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

This monograph examines the development of a set of criteria that can be utilized to validate observations and lessons learned derived from tactical training exercises. The paper is based on the premise that there exsist within these observations and lessons learned the keys for the development of effective tactical doctrine. The thesis of the paper is that criteria can be developed and applied to the lessons learned from various exercises to validate them sufficiently prior to their incorporation into doctrine. The objective of the paper is to identify certain criteria of a given nature that can be applied against tactical observations to determine with a reasonable degree of accuracy their doctrinal validity. Keywords:-

A brief introduction establishes the importance of the subject in historical and contemporary context.

Next, the paper examines the theoretical propositions that relate to the question and provide the purpose for the paper itself. A suggested set of criteria is presented

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT ☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT ☐ DTIC USERS	21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED
22a. NAME OF RESPONSIBLE INDIVIDUAL MAJ Walter A. Vanderbeek	22b TELEPHONE (Include Area Code) (913) 634-2138 22c OFFICE SYMBOL ATZL-SWV

DD FORM 1473, 84 MAR

83 APR edition may be used until exhausted
All other editions are obsolete

SECURITY CLASSIFICATION OF THIS PAGE
UNCLASSIFIED

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for use in the analysis of tactical observations and lessons learned.

The next section contains an historical analysis of two major inter-war exercises. The first exercise was conducted by the British Army in 1927 and 1928 to test the tactical concepts of armored and mechanized warfare. The second exercise evaluated was the American General Headquarters Maneuvers of 1939. These maneuvers were designed to test the combat readiness of the United States Army. The analysis of these exercises examines what techniques have worked and what have not worked in the past. The proposed criteria are evaluated by utilizing them to analyze selected observations of these exercises. This analysis is then compared to the historical validity of the actual lessons learned.

The next section of the paper addresses factors of combat that have changed since the exercises evaluated above. The significance of these changes is evaluated concerning their impact upon the validation process. This section also addresses the current systen of collection and analysis of lessons learned.

The conclusions recommend that the proposed set of criteria be used for the determination of the validity of tactical observations and lessons learned by the division chiefs of the Center for Army Lessons Learned and by doctrinal developers in the TRADOC community.

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The Search For Truth In Tactical Lessons Learned

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Approved for public release; distribution is unlimited

88-2145

School of Advanced Military Studies
Monograph

Name of Student: Major Walter A. Vanderbeek
Title of Monograph: How Can We Be Sure? ~ The Search for Truth in Tactical Lessons Learned

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Accepted this 14th day of December 198_.

Abstract

How Can We Be Sure?----The Search for Truth
in Lessons Learned

by Major Walter A. Vanderbeek, USA 32 pages

This monograph examines the development of a set of criteria that can be utilized to validate observations and lessons learned derived from tactical training exercises. The paper is based on the premise that there exist within these observations and lessons learned the keys for the development of effective tactical doctrine. The thesis of the paper is that criteria can be developed and applied to the lessons learned from various tactical exercises to validate then sufficiently prior to their incorporation into doctrine. The objective of the paper is to identify certain criteria of a general nature that can be applied against tactical observations to determine with a high degree of accuracy their doctrinal implications.

A brief introduction establishes the importance of the subject in historical and contemporary context.

Next, the paper examines the theoretical propositions that relate to the question and provide the purpose for the paper itself. A suggested set of criteria is presented for use in the analysis of tactical observations and lessons learned.

The next section presented is an historical analysis of selected inter-war maneuvers to examine what techniques have worked and what have not worked in the past. The proposed criteria are evaluated by utilizing them to analyze selected observations of those exercises. This analysis is then compared to the historical validity of the actual lessons learned.

The next section of the paper addresses factors of combat that have changed since the exercises evaluated above. The significance of these changes is evaluated concerning their impact upon the validation criteria. This section also addresses the current system of collection and analysis of lessons learned.

The conclusions recommend that the set of criteria be used for the determination of the validity of tactical observations and lessons learned that have doctrinal implications.

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I. Introduction

> I am tempted to declare dogmatically that whatever doctrine the Armed Forces are working on now, they have it wrong.1

This statement by Michael Howard appears to be a sad commentary concerning the general inability of any military institution to develop a valid tactical doctrine in time of peace. Throughout this century, modern armies have been generally confounded in their attempts to develop a system that would ensure the development of effective tactical doctrine. They have characteristically gone through an extremely hurried process to correct doctrinal shortfalls that were realized only during the course of a conflict. This was necessary because doctrine developed during peacetime was proven to be generally ineffective during the course of a war.

Recent history has shown that the battlefield effectiveness of modern armies has been largely dependent upon their ability to analyze correctly lessons learned through observations of peacetime tactical exercises. Successful armies have been able to apply this knowledge in the development of tactical doctrine and arrive at a superior method for the conduct of battles. These relatively few successful armies prepared to fight the "right" war, as their tactical preconceptions became the dominant force on the battlefield. This dominance led to initial overwhelming tactical success and directly contributed to the subsequent operational victories.

But how can an army determine before actual combat what tactical doctrine will work and what will not, and with what degree of certainty? Is there a method available to prevent the development and adoptin of doctrine that is tactically incorrect? If there is such a method then we may be able to avoid the fate that befell the French Army in World War II when it formulated a doctrine, organized and equipped its units, and trained its soldiers for the wrong type of war.2

There is general agreement among modern military thinkers that the tempo of the next war will far surpass anything yet experienced. The anticipated loss rates in terms of personnel and equipment, and the subsequent breakdown in unit effectiveness, will severely tax an army's ability to sustain combat effectively. Indeed, the next conflict may be decided based on combat that lasts only weeks or months. We will no longer have the luxury we had in the two previous world wars of evaluating the tactical performance of our allies prior to our entry into combat. In all probability the American Army will not have the time to sort out effective from ineffective tactics, since we will most probably be in the fight from the start. In light of these parameters, the American Army needs to enter the next conflict equipped with a tactical doctrine that is at worst not too badly wrong.3

It is therefore of utmost importance to the Army that its leaders recognize the opportunities available to establish effective tactical doctrine. But how can this be done? There have been numerous notable tactical

exercises conducted by the armies of several nations since the early 1900's. The result of the evaluations of these exercises have impacted directly upon the tactical doctrine developed by these armies. It is revealing that when the utility of these lessons learned is evaluated, there is a great deal of inconsistency in the observations. Generally speaking, there has been very little qualitative consistency in the lessons learned, even though some armies have had noticeably more success in this endeavor than others.

The historically poor results demonstrated by peacetime armies to determine effective tactical doctrine would seem to be proof that there is very little chance to develop an institutionalized system intended to validate lessons learned from tactical exercises. However, it is through the thorough analysis of peacetime tactical exercises that armies can obtain the doctrinal insights required to formulate an effective means of conducting combat in order to achieve victory.

The monograph presumes that the keys to the development of effective tactical doctrine are contained in the volumes of collected observations and lessons learned derived from numerous tactical field exercises. The thesis presented herein is that criteria can be developed and applied to the lessons learned from tactical exercises to validate them sufficiently for their incorporation into tactical doctrine with a reasonable degree of confidence that the resulting doctrine will be effective on a future battlefield.

II Theory

Theory indicates that the establishment of an institutionalized system to identify correctly tactical lessons learned will be very difficult. One immediately encounters the major problem of being able to visualize the future battlefield and determine the applicability of current tactical doctrine. The ability to anticipate future requirements requires visionary depth to a degree seldom found, but such vision is a prerequisite for the establishment of a validation process.

In an essay entitled "Military Science in an Age of Peace" appearing in the Journal of the Royal United Services Institute, Michael Howard has stated that the establishment of a validation process is difficult at best and impossible at worst. According to Professor Howard, the major stumbling block in this process is the impossibility of verifying the correctness of your ideas. One must always wait until the next war to see whether he is right.4 Another problem concerning the theoretical nature of doctrinal development is the inability of the military scientist to see how time-honored tactical principles can be applied in an environment in which all phenomena are changing, how they are relevant in new situations, how to retain the essentials firmly in one's mind and not be confused by inevitable but bewildering changes.5 In addition to the complexities established by an ever-changing battlefield environment, the

process is further complicated by the existence of military bureaucracies which have an aversion to innovation and original thought. The conservative approach to doctrinal development stifles the development and incorporation of tactical doctrine that appears to be contrary to the established methods of "doing business." All this contributes to an atmosphere where it becomes difficult to analyze correctly observations and implications from tactical exercises. Still, Professor Howard states that this is really unimportant, that what really matters is the ability of military scientist to prevent peacetime tactical doctrine from being too badly wrong and to maintain a capacity to get it right quickly when the war starts.6

I.B. Holley, on the other hand, believes it is feasible for armed forces to develop an intellectual process of generalization from which effective and correct doctrine is derived.7 In this process, lessons learned derived from tactical exercises could be subjected to strict analysis and even further experimentation if warranted.8 He calls for the institutionalization of a codification process to study the causes of success or failure of new tactical concepts. This process should be utilized to validate those tactical concepts prior to their incorporation into doctrine. Dr. Holley is in agreement with Professor Howard that the major inhibitor to the establishment of an analytical process is the tendency of military organizations to repress anything other than the traditional and habitual. Formalism and traditionalism become the major forces that resist the evolution of tactics.9 Dr. Holley is more optimistic than

Professor Howard concerning the ability of the military scientist to arrive at fundamentally correct doctrine. Dr. Holley is quite certain that what is required is a comprehensive system or procedure to develop and evaluate tactical doctrine.10 He does not, however, provide specific analytical standards for the doctrinal developer to use in validating observations and lessons learned.

Theory suggests then it will be difficult, but perhaps possible, to develop a process to validate lessons learned from tactical exercises conducted during peacetime. If this is true, the process should contain a set of criteria that can be applied to provide validation of lessons learned. The criteria need to be of a general nature to compensate for changes over time. The process of evaluation will also require a great deal of intellectual honesty.11 If it does, the criteria and their product may be able to withstand the confrontation with the natural parochialism contained in any military establishment.

The suggested validation criteria to be applied to tactical lessons learned require the evaluation of recorded evidence in a variety of tactical cases.12 The following criteria are presented as a hypothesis to be tested against historical and contemporary experience in a search for standards for use in judging the validity of observations and lessons learned:

1) Has the action that is being evaluated been successful in greater than half of the occasions of observation? This first criterion to be used in the establishment of an institutionalized validation process

concerns the frequency and pattern of success that are displayed by a tactical action. The action responsible for the observed tactical success must have been observed in similar tactical situations and contributed to mission accomplishment. The subject action should provide for tactical advantages in at least half of the observed occasions of utilization.

2) Were the units that were responsible for generating the observation that is being evaluated trained to acceptable standards? The unit that produced the tactical observation should be trained to acceptable Army training standards. The opposing units in the exercise should also be trained to high standards in the execution of the accepted tactical doctrine of the anticipated war time adversary. This criterion helps to insure that the lessons learned are a product of a realistic tactical environment.

3) Were the characteristics of the employed weapons systems simulated accurately? This criterion ensures that observations attributable to the firepower, maneuver and protective capabilities of battlefield systems are controlled to a satisfactory degree. Control of weapons capabilities insures that this characteristic will not bias engagement results to an unrealistic degree.

4) Can the observation be applied successfully to more than one type of terrain? This evaluation includes the topographic, climatic, and cultural composition of the exercise area. These terrain characteristics are studied and conclusions drawn concerning the impact of varying terrain upon the ability of the lessons learned to repeat

observed successes. Some tactical doctrine will remain constant under any terrain conditions, but some will be terrain specific. The distinction here is to determine which is which.

5) Was the design, conduct, and analysis of the exercise free from significant bias? Bias is used to describe the existence of any distortion of judgment that would favor one action or result over another. In the search for bias, the analyst must examine the design, conduct, and analysis of the exercise. The design and execution of the maneuver should be free from the establishment of preconditions that would unduly influence personnel, equipment or unit performance and the collection of exercise data. The analyst should also seek the existence of any distortion of judgment that would favor one result over another during the analysis of exercise observations. The source of bias may differ from exercise to exercise and may be different in the design, conduct and analysis of the same matter. Some contributing factors for bias may be strong personnal opinion, parochialism, or improper and insufficient methods of data collection. There is also a question of scale or level. If an army produces effective battalions, it may still be deficient at other levels. The doctrine may not hold together above small units.

The criteria presented should allow for the establishment of a concept for the validation of lessons learned. The validation process is intended to be flexible in nature to compensate for the always changing environment

of the battlefield where the critical criteria may differ from observation to observation.13 The proposed criteria are intended to be disciplined aids for the judgmental process. They are presented for use as a common set of standards or approach to the analytical process. The proposed criteria are not intended to be a substitute for judgment. Judgment must still be applied in the evaluation of tactical lessons learned.

The next section of this monograph, tests these criteria for relevancy and sufficiency to validate the lessons learned and tactical doctrine derived from two major peacetime tactical exercises.

III Historical Background

Two series of military exercises provide sufficient occasions to observe the development of modern tactical doctrine that was derived from the application of tactical lessons learned. These exercises also provide the opportunity to test the proposed validation criteria by applying them to actual lessons learned. The results of this process can then be compared to the actual war-time performance of the derived tactical doctrine. The effectiveness of the criteria can then be measured for necessity and sufficiency.

The first exercises to be evaluated are those inter-war

maneuvers conducted by the British Army to test the tactical concepts of armored and mechanized warfare. The British Army conducted yearly exercises starting with the development of the Experimental Mechanized force (EMF) in 1927 and culminating with maneuvers involving the First Tank Brigade in 1934. This paper, however, will concentrate specifically on the exercises that were conducted on Salisbury Plain in 1927 and 1928. These maneuverA were conducted to determine the feasibility of mechanized and armored warfare. Results of these maneuvers were designed to give Army observers insights into the tactical characteristics of future warfare.

The second exercises to be evaluated are the American General Headquarters (GHQ) Maneuvers conducted in Louisianna and the Carolinas during 1941. The tactical doctrine developed from these maneuvers was utilized extensively by American forces during their initial participation in World War II. These exercises were unique because they became tactical laboratories for two new capabilities being evaluated by the Army, the concepts of armored warfare and antitank operations.14

The EMF exercises and the GHQ Maneuvers were chosen for discussion for several reasons. Primarily, these events were among the most influential and most well recorded "doctrinal workshops" conducted during modern peacetime conditions. Second, the maneuvers were conducted in a free-play tactical environment which closely approximates the manner in which current training exercises are being conducted. This condition proves a constant for the

comparison of past and present methods used to develop and validate tactical doctrine derived from the observations of exercise performance. Finally, those exercises were unique because they highlighted new technological developments destined to revolutionize tactical warfare. This fact allows us to examine how observations were validated to determine the utility of new and untried weapons systems and their associated concepts for tactical employment.

The primary objective of the British EMF exercises in 1927 and 1928 was to ascertain the combat capabilities of the concepts of mechanized and armored warfare.15 Mechanization relied heavily upon the gasoline engine rather than the horse as its means of tactical mobility, but they were not protected from weapons' effects. The mechanized brigade that would participate in the exercises would also contained several armored formations to employ during the exercise. The term "armored formations" refers to gasoline powered vehicles that utilized armored plating for protection against the effects of weapons. These vehicles could also carry large caliber guns. The concepts of mechanization and armored warfare could also influence tactics and operations in different ways.16 The EMF maneuvers would test the ability of mechanized forces to neutralize the tremendous firepower demonstrated by the artillery and the machinegun.

The techniques employed by the British Army to record and evaluate the observations of the exercise consisted of the extensive use of exercise umpires and observers from the War Office. These individuals recorded the performance of

the various units engaged in the maneuvers as well as the doctrine employed by the experimental force. These records were then submitted to the War Office where they were reviewed at the end of each exercise period. The observations were a subject of debate during the following months in which the utility of the findings was assessed.

The most important result of the 1927 and 1928 exercise periods dealt with the concepts of mechanization and armored warfare and how they were to be implemented in the British Army. The proposed criteria will be tested against the conceptual reorganization of the British Army as derived from the evaluation of the exercise observations.

The need for an experimental mechanized force was recognized in late 1924.17 The next three years were spent in a struggle to overcome various internal bureaucratic obstacles to the creation of the mechanized brigade. In May of 1927 the Experimental Mechanized Force (EMF) was formed at Salisbury Plain. It was a combined arms force consisting of a medium tank battalion, a battalion containing armored cars and light tanks, a machinegun battalion transported by trucks, a field artillery brigade, a light artillery battery, and an engineer company. The commander of the EMF, Brigadier General R.J. Collins was charged with the mission of testing the EMF's capability to perform strategic reconnaissance in the place of cavalry; to operate in conjunction with regular forces; and to perform independent operations at a considerable distance from the main force.18

Opposing the EMF in the 1927 exercise were forces from the 3rd Division under the command of Major General John

Burnett-Stuart. The 3rd Division was a strictly conventional force, possessing no mechanized units. Burnett-Stuarts superior was Lieutenant General Archibald Montgomery-Massingberd, the General Officer Commanding, Southern Command. He was the principle advocate of disbanding the Experimental Armoured Force and applying the same level of resources to experiments in infantry units.20 Montgomery-Massingbird's anti-mechanization feelings would influence the future evolution of armoured warfare at the conclusion of the 1928 ecercise period.

Throughout the maneuver period, the EMF performed exceedingly well, surpassing even the greatest of expectations. In the final exercise of the maneuvers, the EMF thoroughly routed the 3rd Division. This was accomplished through the EMF's exploitation of their superior qualities of mobility, firepower, and protection. The conventional forces opposing the EMF could do nothing to counter the mechanized unit's tactical mobility. There existed no effective antitank gun to counter the armored vehicles. The EMF showed itself to be a promising concept, but flaws still existed. The major drawbacks of the EMF from a tactical perspective were the lack of the ability to communicate by radio, the shortage of vehicles and the need for combat support and combat service support elements capable of closely following and supporting the mechanized formations. Both these shortcoming would require extensive efforts to correct. Despite these shortcomings, the 1927 exercises were a very encouraging start in the British Army's move towards mechanization and armored warfare.

In 1928 the EMF was redesignated as the Experimental Armored Force, but the composition remained the same as in 1927.20 Critical shortages of equipment seriously hampered the brigade's ability to function effectively. The Experimental Armored Force was once again opposed by Burnett-Stuart's 3rd Division, however, this time the division was augmented with a tank company, an armored car company, a cavalry regiment and an artillery brigade.21 The Experimental Armored force was combined with the 2nd Cavalry Brigade which exacerbated command and control problems. This working relationship was further complicated by the attachment of the light tank battalion from the Armored Force to the Cavalry Brigade.22 These peculiar arrangements coupled with the increased mobility of the 3rd Division resulted in a tactical stalemate.

The results of the 1927 and 1928 exercises clearly demonstrated the feasibility of the concepts of mechanization and of armored warfare. These results will now be used to test the validity of the proposed criteria. This evaluation will then be compared to the historical evaluation of the exercise to determine validity.

The following results are obtained when the exercise observations are subjected to the proposed criteria:

1. During the two exercise periods, the EMF and the Experimental Armored Force produced victory after victory over their conventional opponent. In only one instance, the last exercise of the 1928 maneuvers, was a clear cut tactical advantage not realized, and then both forces had a mechanized and armored capbility.

2. Both forces, the EMF, and their opponents, the 3rd Division, can be considered to be well trained because the maneuvers took place after lengthy period of unit training. However, neither was explicitly trained in the tactics of a potential aggressor.

3. Weapons systems characteristics were represented in a satisfactory manner. There were no instances of infantrymen destroying a tank with rifle fire or of single tanks decimating large troop formations.

4. The terrain characteristics were fairly generic in nature and would have neither favored or hindered the concept of mechanization. What would have worked on the Salisbury Plain would also have worked on the Continent.

5. The analysis of exercise results was subject to a considerable degree of bias. Lieutenant General Montegomery- Massingbird's influence within the military establishment led to the disbanding of the Experimental Armoured Force in 1928 despite its tactical achievements and displayed potential. His pursuit of his own agenda, the evolutionary rather than revolutionary reform of the British Army was a major factor in this decision.23

The above criteria would appear to validate the concepts of mechanization and armored warfare. However, in 1928 the British army dispersed the Armored Force, ending a significant episode in the evolution of armored warfare.24 The exercise results were analyzed by Colonel Charles Broad who codified these observations and produced the world's first manual on mechanized and armored warfare, titled Mechanised and Armoured Formations.25

It is interesting to note that the reasons for the termination of the Experimental Armoured Force were not primarily tactical in nature. There were other significant factors affecting this decision. First, it was considered a financially prudent action. Moneys were scarce and this action allowed the redistribution of funds to perfect the concept of mechanization throughout the Army. Second, it represented a deliberate decision to postpone the testing of armored warfare. Finally, Montgomery-Massiingbird's overt opposition to the continuation of the armored experiments was the "kiss of death" to this concept. He felt that because of a shortage of mechanized equipment, the British Army would have to fight primarily with cavalry and infantry only at the start of the next war. Because of this, he proposed to conduct a study concerning of how to mechanize these two arms and support them with tanks, which adversely affected the future development of independent armored formations.

In summary of the EMF maneuvers, the proposed criteria are shown to be necessary and sufficient. They provide results that are verified by historical experiences.

The primary objective of the American GHQ maneuvers was to produce a battle-ready army. These exercises were the culmination of the Army's pre-war training program, and marked the point at which the inter-war Army gave way to the Army of World War Two.27 The GHQ maneuvers also provided the opportunity to evaluate several tactical concepts under conditions of force-on-force, free play mock battle. The concepts involving the mechanization and composition of

armored formations were of major concern to Army tacticians. The use, capabilities, effectiveness and organization of antitank units were also studied.

The techniques utilized to observe, record and evaluate the lessons learned were critical to the results of these maneuvers. Exercise umpires were employed as a control mechanism throughout the maneuvers. Every company-sized formation and each battalion and larger headquarters element had assigned umpires. These men resolved simulated combat and assessed unit casualities and equipment damage. In addition to the umpires, GHQ provided numerous observers who recorded the performance of personnel, units, and weapons systems. They also provided doctrinal feedback for use in after action reviews concerning tactical observations recorded during the maneuvers. These reviews were supplemented by the records submitted by participating unit commanders and ranking members of the Army present during the maneuvers.

Immediately after the conclusion of the exercises, a critique of the army's performance and discussion of the lessons learned was conducted in Washington D.C.28 The critique resulted in the incorporation of numerous lessons learned into tactical doctrine. The lessons learned concerning antitank and armored force employment will now be evaluated according to the proposed validation criteria.

A major lesson learned from the maneuvers concluded that an armored force could be defeated by a strong, mobile antitank formation. Exercise observations showed that over 900 of the nearly 1000 tanks destroyed during the Carolina

phase of the maneuvers were attributable to fire from the antitank units.28 Throughout the course of the exercise, armored forces appeared to be effectively countered when engaged by an equal force of tank destroyers. This conclusion was the basis for General McNair's persistent recommendation calling for the formation of a massive antitank force of at least 220 battalions.30 When the exercise conditions and the lessons learned are subjected to the proposed validation criteria, he following results are obtained:

1. The use of antitank forces to destroy armored formations achieved favorable results in an overwhelming proportion of engagements. This propensity of success would validate the lesson learned in relation to this criterion.

2. The state of training of the units involved in the action was high, as the exercises were conducted at the end of an extensive training period.

3. The weapons systems characteristics were simulated to a surprisingly accurate degree. This criterion would therefore receive satisfactory evaluation.

4. The physical characteristics of the exercise terrain closely approximated those of the anticipated battlefield, Western Europe. Terrain would therefore not significantly impact upon the doctrinal employment of the weapons system's predicted success or failure in future combat.

5 The design, conduct, and analysis of the exercise was not free from significant bias. General McNair a strong antitank advocate, drew up the rules for antitank

engagements and interpreted battlefield results himself.31 The existence of this condition seriously affected the production of realistic observations or the objective analysis of legitimate lessons learned.

The following conclusions are arrived at by reviewing the criteria for the validation of antitank tactical doctrine. Of the five criteria presented, the lessons learned appeared to be conclusively validated in only two areas: those concerning the frequency of success and the representation of weapons systems characteristics. The tactical concept earned unfavorable evaluations concerning criteria that dealt with the presence of bias in the design conduct and analysis of the exercise. This seriously biased the observations and data used in the decision process.

These conclusions would lead me to believe that the use of massed, highly mobile antitank formations to stop armored attacks as derived from the lessons learned in the GHQ maneuvers was flawed. This concept should have been subjected to further scrutiny and experimentation as time allowed before its adoption and implementation as tactical doctrine.

An historical analysis of antitank doctrine utilized in World War II verifies those findings. Exercise results were based upon observations obtained against massed tank-only attacks. This circumstance rarely occurred during the war, as German armored doctrine stressed strong infantry and combined arms support. This negated antitank capabilities. The tank destroyers learned these lessons in combat, at great price. The failure of the analysis of observations

during the maneuvers to identify this flaw in doctrine resulted primarily because of the influence of General McNair. He was too close to the issue at hand. It was left to the field commanders, in time of war, to develop and implement effective anti-tank doctrine. This was done at a very high cost considering that there were numerous peacetime indicators which revealed potentially flawed tactical concepts.

The second of the lessons learned from the GHQ maneuvers concerned a shift in the previously accepted concept concerning armored division tactics. In the time preceding the exercises, it was generally held that the tanks of the division would fight on their own while the infantry did the same at another location on the battlefield. The tactical doctrine executed during the maneuvers did not allow the armor and infantry to fight as a combined arms team. Each branch
was extremely parochial concerning who should support whom during combat.

The interpreted results of the exercises tended to show that operations conducted by pure armored forces usually enjoyed initial tactical success but soon faltered as the tank formations' endurance decreased from lack of infantry support. On the other hand, the division's infantry units found it hard to achieve initial tactical successes due to the lack of firepower available to assault formations. Additionally, the pure infantry organization experienced difficulty exploiting battlefield success when it was obtained because of its poor tactical mobility. Gradually,

all observers came to the realization that the best tactical results were achieved on those occasions during the exercises when there was close cooperation between infantry and armored elements of the division at the small unit level.32 This realization resulted in a shift in tactical doctrine to the formation of the Combat Commands within the armored division. These organizations were tailored to fight as combined arms teams possessing the flexibility to alter their unit composition based upon the tactical situation encountered. When the above observation is subject to the proposed validation criteria, the following results are obtained:

1. The action being evaluated was not successful in greater than half of the occasions observed. In the vast majority of the observations concerning the tactical employment of the tank and infantry formations of the armored division, the success achieved was marginal at best. Some instances of highly successful operations can be found where the elements performed autonomously, but these occasions were exceptions. These isolated examples of success did not occur frequently enough to warrant validation under this criterion. The preponderance of the evidence based on frequency of failure suggests that the tactical doctrine of separate employment of armored and infantry forces within the armored division was in error and that an alternative doctrine should be developed.

2. Again, the state of training of the units participating in the maneuvers was excellent.

3. The characteristics of the weapons systems utilized

by the forces were again accurately portrayed during the maneuvers.

4. The topographic composition of the maneuver area closely resembled the area of Western Europe where the army anticipated to fight. Therefore, this criterion would not bias exercise observations.

5. The design, conduct and analysis of the exercises were free from significant bias. There were no significant maneuver preconditions established that need to be examined in relation to their effect upon this lesson learned and its proposed solution. The armored divisions were required to execute a number of missions under varying tactical conditions. These varying conditions were necessary for the evaluation of the potential of those formations in different battlefield environments.

When evaluating the results obtained from the validation criteria, several conclusions appear. The accepted pre-exercise tactical doctrine for the organization and employment of the armored division did not perform well with regards to the frequency of success of this doctrine in contributing to the accomplishment of assigned missions. Because of the repeated failure of the divisions in tactical action, the entire concept being evaluated was considered unsatisfactory for further implementation. Alternative doctrine was developed.

The doctrine finally utilized by the armored divisions reflected the need for combined arms operations. The ratio of organic infantry to tank battalions was increased from 2-to-8 to 3-to-6. The infantry received vehicles which gave

then nearly the same tactical mobility as the armored forces. This corrected the inability of the supporting infantry to keep pace with the tankers. The armored battalions were then able to count on the presence of accompanying infantry support to eliminate antitank guns and reduce prepared positions, thus eliminating weaknesses noted in the maneuvers. This doctrine, developed as a result of analysis of lessons learned, proved very effective in combat.

The three examples previously presented show that the proposed validation criteria can be fairly accurate in their application. It is important to mention that the criteria are at best only a guide. Nothing can provide absolute answers when dealing with the future. The informal, judgmental use of these criteria in the preceding situations may have provided the catalyst for the development of more effective doctrine, had they been available to the decision makers of that time.

IV Contemporary Analysis

There have been several key factors of combat that have dramatically changed since the evaluated inter-war tactical exercises. Advances in technology, the increased tempo of the battle, the growing lethality of weapons systems, and the magnification of demands on the command and control system have all contributed to the increased complexity of the battlefield. The intricacies of the current combat

environment have increased the difficulty in finding truth in the analysis of tactical observations, while at the same time demanding that tactical doctrine be as nearly correct a possible. The task of analyzing these observations has therefore become more difficult while at the same time more important.

Technological advances have had major impact upon the battlefield since the mid 1950s. The major products of this technological watershed include new weapons systems with dramatically increased lethality, new and more efficient methods of command and control and better communications capability. The synchronization of these systems has resulted in a complexity never approached during the inter-war time period. However, this same technology allows us to design and utilize a fully instrumented maneuver area where objective data can be obtained in the observation of free-play, force-on-force training exercises. The implications concerning the proposed criteria are that objective quantitative data are now available for use in the analysis of exercise observations.

The tempo of current tactical actions has increased to such a degree that the strictly manual methods of recording observations and their subsequent analysis as used in inter-war exercises are no longer applicable to modern maneuvers. Effective real-time exercise feedback can only be obtained by the use of instrumented data collection devices that minimize the time from the occurrence of an event to its recording and subsequent storing for analysis at a later time.

The increased demands upon command and control on the modern battlefield have also required the alteration of the previously used collection and analysis process. Because the time involved in the current decision cycle is only a fraction of what it was fifty years ago, the evaluation criteria should be structured to take this into account. The validation process must seek a solution that is capable of being implemented in a tactical situation where command and control will be extremely fluid and the mechanisms not always functioning at peak efficiency.

The proposed validation criteria constitutes a system that may remain effective despite the presence of change in the nature of warfare.

The proposed criteria address battlefield fundamentals such as success. These fundamentals will remain constant despite the ever changing environment of warfare. The proponent agency for the Army's lessons learned program is currently the Center for Army Lessons Learned (CALL). Its mission is to provide combat relevant lessons learned to the Army.33 It is the focal point for the collection of all observations pertaining to Army exercises or events. Current CALL methodology is designed to collect, analyze, identify, propose a solution, and finally, track and follow-up lessons learned.

The first step in the methodology process is the collection of input. Input,in the form of observations comes from various sources, such as tactical exercises, historical studies, computer simulations, and actual combat operations. We will concern ourselves with the processing

of observations generated from tactical field exercises. As observations are received, they are cataloged and routed through the operations branch of CALL for review and comment by each analysis division. This screening allows each division to determine whether the observation has potential use.34 Each division chief applies his judgement to decide upon the appropriate action to be applied to each observation.35 He may decide upon one of five courses of action: do nothing with the observation if he feels that it contains no combat relevancy; enter the observation into the Automated Lessons Learned Management Information System (ALLMIS) for filing only; begin analysis of the observation within his division if he decides that the observation warrants further study; or decide that the observation should be worked by CALL in total as he feels the observation is relevant to more than just his division. Once an observation has been screened and the determination has been made that it warrants further consideration, the analysis phase begins. The analysis process starts with a doctrinal search to determine current doctrine related to the observation being analyzed. The analyst then determines if the observation has implications in the areas of training, organization, equipment or leadership. Once the implications are determined, the analyst determines why the performance of a unit failed to attain or exceeded doctrinal expectations. He determines if this was due to a shortcoming or merely a misapplication of accepted doctrine.

Issues are the principal product of the above analysis. Issues are problems that require resolution. The problems

are identified by CALL analysts after coordination with the appropriate integrating center or proponent agency.36 The focus of effort is then on the determination of a solution to the problem. Normally, the proponent agency for the functional area indicated by the observation will provide a potential solution. This proposed solution is tested by selected units in the field during tactical exercises and the results analyzed for suitability. If the solution is determined to be functional, the proponent agencies initiate doctrinal updates or modifications, and disseminates the product to the field.

To show how the CALL methodology functions we will now trace a hypothetical observation derived from exercises at the National Training Center (NTC). A military observation team at NTC observes that artillery and close air support are most effective when controlled by battalion fire support officers rather than the brigade fire support officer, as required by doctrine. This observation is submitted to the Operations Branch of CALL where it is catalogued and routed through each analysis division. For the purpose of illustration, we will say that the combat operations division chief has determined that the observation requires further analysis. It is important to note that there is currently no codified methodology available to assist this individual in his determination of the need for further study.

Once the decision is made that further analysis is required, a doctrinal search is conducted to determine current field artillery procedures concerning artillery and

and close air support coordination. If the analyst determines that the observation has doctrinal implications, the Field Artillery Center is contacted for work on the issue. A tentative solution is determined by Fort Sill and tested in field exercises. If these tests provide positive feedback concerning the effectiveness of the proposed solution, the Field Artillery Center makes the necessary doctrinal changes.

Two points of interest concerning the preceding procedure require emphasis. First, the process has one major shortfall. The system requires the CALL division chief to review observations and make a "judgmental decision" concerning the appropriate action applicable to the observation. The complex and comprehensive mechanisms of observation and analysis are therefore dependent upon a purely judgmental call. Second, CALL functions as a coordination center for doctrinal developments based upon exercise observations. CALL does not write doctrine, but coordinates the efforts of the various proponent agencies to review, update or change existing tactical doctrine.

The proposed criteria presented earlier in this paper are of great utility in the determination of the existence of validity in a tactical observation. The utilization of proven criteria is far superior than the reliance upon a process that requires purely judgmental decisions to determine the validity of lessons learned. The universality of the criteria allows both the analyst and the doctrine developer to use the same analytic tools to determine the utility of exercise observations. This fact can greatly

simplify the analytical process.

Based upon the comparison between the two analytical systems, I feel that a methodology can be developed that incorporates the proposed criteria and the basic analytical procedures of the methodology used by CALL. The proposed criteria could be used by the CALL division chiefs to determine the utility of the observations being evaluated. In doing so, the use of the criteria would at least inform the judgmental decision to determine the degree of validity in a tactical observation.

V Conclusion

Michael Howard makes it clear that doctrinal development in peacetime is difficult at best. It is one activity where one cannot verify one's calculations because of the unique characteristics of the battlefield.37 However, Howard states that without rigorous thinking, neither technology nor resources can help in the solving of the conceptual difficulties in the formation of effective doctrine.38 The purpose of such a rigorous thought process, applied in an environment in which the paramaters are always changing, is to prevent the doctrines from being too badly wrong.39

If the above is taken at face value, it is theoretically possible to develop a set of criteria to validate the tactical lessons learned derived from observations of present day maneuvers and field exercises.

The validation criteria can be capable of developing nearly correct tactical doctrine when used in an objective manner to examine observations derived from mock engagements in a realistically simulated tactical environment.

The purpose of this study was to present a set of criteria that could be applied to the observations and lessons learned from tactical exercises to validate them sufficiently for their incorporation into tactical doctrine. These criteria should also provide the basis for a reasonable degree of confidence that the resulting doctrine will be effective on a future battlefield.

The suggested validation process includes a set of five criteria to be applied against tactical observations. The criteria may be individually weighted as the situation requires. The use of these criteria in the validation process provides an analytical checklist that will help us minimize subjective, erroneous, or incomplete analysis.

The proposed criteria were tested against historical examples and their performance measured for necessity and sufficiency. In each case, the use of the criteria were proven to be necessary to provide the intellectual control required to establish a comprehensive procedure to evaluate events that have doctrinal implications. Additionally when the criteria were tested for sufficiency,
they was found to provide an adequate degree of accuracy in analysis when compared to the results of selected historical examples.

Contemporary methods of analysis of exercise observations were also examined. The methodology utilized by

CALL appears to have one significant shortcomings. The entire analysis process currently depends upon the judgmental decisions of a division chief. This step in the methodology could be strengthened by the utilization of the proposed criteria to help ensure that correct conclusions regarding validity are drawn from the initial screening of observations for. The proposed criteria could also be utilized by each proponent agency on their individual analysis of each observation and lesson learned.

The proposed criteria permit the evaluation of the wide variety of tactical scenarios possible. These criteria may be used to examine the entire tactical system, to include logistics, as it is presented in the observed training exercise. The criteria are composed of elements that retain relevancy regardless of the scenario that is being evaluated. The proper application of the proposed criteria allows doctrinal deficiencies as well as strengths to be identified for analysis concerning possible impact upon current and future trends in training and real-world contingencies.

The U.S. Army currently is evaluating the performance of units and doctrine during numerous tactical training exercises. The use of the proposed criteria could ensure that we extrapolate the correct lessons learned from these events. The criteria would also help ensure the validity of the doctrinal implications resulting from the analysis of these observations.

In all probability the Army will never be able to have its tactical doctrine entirely correct at any given time. However the proposed criteria can be applied to validate

observations and lessons learned, and in turn help ensure that our future doctrine is not "too badly wrong."

VI Implications

The major implication associated with this study concerns the possible utilization of the proposed criteria by the division chiefs of the Operations Branch with CALL and by doctrinal developers in the TRADDOC community. It is recommended that the presented criteria be considered to initiate the screening of tactical observations within the established CALL methodology for analysis. The use of specific and relevant criteria at this stage of the analysis process would enhance the ability of the CALL analysts to recognize the actual doctrinal implications of the tactical observations. Additionally, the criteria presented in this paper are recommended for use by proponent agencies tasked with doctrinal responsibilities as a tool to help determine the extent of doctrinal implications of lessons learned from tactical field training exercises.

Endnotes

1. Michael Howard. "Military Science in an Age of Peace." RUSI Journal, (London, England: Mar, 1974), p.7.

2. LTC Robert Allen Doughty. The Seeds of Disaster, (Hamden, Conn.: Archon Book, 1985), p. 3.

3. Howard, Op.Cit., p.7.

4. Howard, Op.Cit., p.5.

5. Howard, Op.Cit., p.7.

6. Howard, Op.Cit., p.7.

7. Irving Brinton Holley, "The Doctrinal Process: Some Suggested Steps," Military Review, (Ft. Leavenworth, KS: U.S. Army CGSC, April, 1979), p.5.

8. Ibid., p.5.

9. Ibid., p.4.

10. Ibid., p.12.

11. Ibid., p.12.

12. Ibid., p.5.

13. Howard. Op.Cit., p.7.

14. Christopher R. Gable, The U.S. Army GHQ Maneuvers of 1941, Ph.D. Dissertation, The Ohio State University, (1981), p.6.

15. LTC. Harold R. Winton, "The Evolution of British Mechanised and Armored Doctrine 1919-1938," RUSI Journal, (London, England: Mar, 1984), p.58.

16. Ibid., p.58.

17. LTC. Harold R. Winton, "To Change an Army", unpublished manuscript.

18. LTC. Harold R. Winton, "The Evolution of British Mechanised and Armoured Doctrine 1919-1938," RUSI Journal International, (London, England: Mar, 1984), p.61.

19. Ibid., p.61.

20. Ibid., p.61.

21. Ibid., p.61.

22. Ibid., p.61.

23. Ibid., pp.62-64.

24. Ibid., p.61.

25. Ibid., p.62.

26. Brian Bond. British Military Policy Between the Two World Wars. (Oxford: Clarendon Press, 1980), pp.146-148.

27 Gable. Op.Cit., p.7.

28. Gable. Op.Cit., p.289

29. Gable. Op.Cit., p.255.

30. Gable, Op.Cit., p.299

31. Gable. Op.Cit., pp.334.

32. Gable. Op.Cit., pp.304-308

33. Standard Operating Procedure. Center for Army Lessons Learned (Ft. Leavenworth, KS: U.S. Army Combined Arms Training Activity, 1987), p.3.

35. Ibid., p.5.

35. Ibid., p.5.

36. Ibid., pp.7-9.

37. Howard, Op.Cit., p.7.

38. Howard, Op.Cit., p.6.

39. Howard, Op.Cit., p.7.

BIBLIOGRAPHY

Books

Bond, Brian. British Military Policy Between the Two World Wars. (New York: Oxford University Press, 1980).

Doughty, Robert Allan, LTC. The Seeds of Disaster: the Development of French Army Doctrine. (Hamden, Conn.: Archon Book, 1985).

Dupuy, Trevor N., The Evolution of Weapons and Warfare. (Fairfax, VA: Hero Books, 1984).

Holley, Irving Brinton. Ideas and Weapons: exploitation of the aerial weapon by the United States during World War One: a study in the relationship of technological advance, military doctrine, and the development of weapons. (New Haven, Conn.: Yale University Press, 1953).

Horne, Alistair. To Lose a Battle: France 1940. (new York: Little, Brown, and Co., 1969).

Larson, Robert H., The British Army and The Theory of Armored Warfare. (Newark, DE: Universitty of Delaware Press, 1984).

Macksey, Kenneth. The Tank Pioneers. (London: Janes's, 1981).

Moenk, Jean R.. A History of Large-Scale Army Maneuvers in the United States. (Ft. Monroe, VA: HQ USCAC, 1969).

Ogorkiewicz, Richard M.. Armor: A History of Mechanized Forces. (New York: Frederick A. Praeger, 1960).

Posen, Barry R.. The Sources of Military Doctrine in France, Britian, and Germany Between the World Wars. (Ithaca: Cornell University Press, 1984).

Winton, Harold R. LTC. "To Change An Army." unpublished manuscript.

Wynne, G.C., If Germany Attacks: The battle in depth in west. (London: Faber and Faber LTD., 1940).

Government Publications

AOSF Monogrpah, "U.S. Army Doctrine: Far-Sighted Visions or Transient Fad?." by LTC John A. Mills, School of Advanced Military Studies, Ft. Leavenworth, KS, May, 1987.

Standard Operating Procedure (Draft), Center for Army Lessons Learned Combined Arms Training Activity, Ft. Leavenworth, KS, March, 1987.

Articles and Periodicals

Doughty, Robert Allan, "The Evolution of U.S. Army Tactical Doctrine, 1946-76", CSI Research Survey, 1979.

House, CPT Jonathan M., "Towards Combined Arms Warfare, A Survey of 20th Century Tactics, Doctrine, and Organization", CSI Research Survey No. 2, 1984.

Gabel, Christopher R., "The U.S. Army GHQ Maneuvers of 1941", Ph.D. Dissertion, The Ohio State University, 1981.

Holley, Irving Brinton, "The Doctrinal Process: Some Suggested Steps", Military Review, April 1979.

Howard, Michael, "Military Science in an Age of Peace", Journal of Royal United Services Institute For Defence Studies, March, 1974.

Lupfer, Timothy T., "The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War", Leavenworth Papers, July, 1981.

McKenna, Charles Douglas. "The Forgotten Reform: Field Maneuvers In the Development of the United States Army, 1902-1920." Ph.D. Dissertation. Duke University. 1981.

Williamson, Murphy, "The German Response to Victory in Poland: A Case Study in Professionalism." Armed Forces and Society, VII #2. Winter 1980.

Winton, Harold R. LTC., "The Evolution of British Mechanised and Armoured Doctrine 1919-1938." Journal of Royal Services Institute for Defence Studies, March. 1984.

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