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APPLICATION OF AIRLAND BATTLE DOCTRINE TO SMALL UNIT
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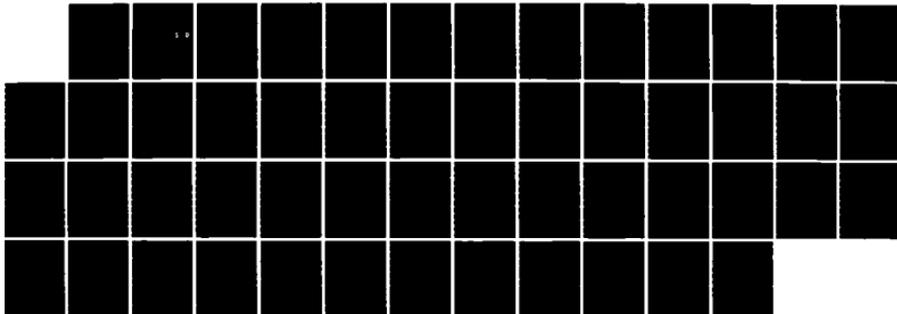
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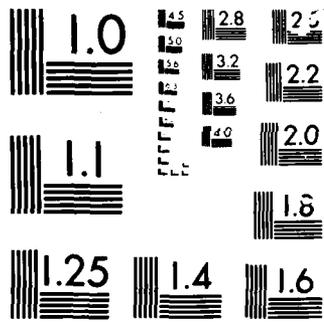
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Application of AirLand Battle Doctrine
to Small Unit Tactics

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by

Major Mark L. Hanna
Infantry

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School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

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ABSTRACT

Application of AirLand Battle Doctrine to Small Units. by Major Mark L. Hanna USA. 46 pages.

This study is an analysis of how to apply the fundamentals of AirLand Battle doctrine to the tactics of company and platoon level maneuver units. The fundamental tenets and imperatives of AirLand Battle doctrine described in FM 100-5, Operations, are the basis for the development of U.S. Army tactical doctrine for all types of units at all echelons.

The mechanized infantry company team is used as a representative U.S. Army unit and the German Army's 1917-1944 experience is used as a source for historical lessons learned. During this period, the German Army constantly updated tactical doctrine and implemented new organizations and equipment to produce an extremely high degree of combat effectiveness.

The study concludes that, to be effective, tactical doctrine should be based on sound, time-tested fundamental principles and historical experience applied to modern conditions. Doctrine should be presented as guidance to prepare for combat and not as an inflexible formula which inhibits innovation and creativity. Doctrinal fundamentals must be thoroughly and uniformly understood and small units and soldiers must be capable of executing them. This can be accomplished by thorough training of units and leaders at all levels in doctrinal fundamentals and the dynamics of small unit training and operations.

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SECTION I - INTRODUCTION

The purpose of this study is to determine how to apply the fundamentals of AirLand Battle doctrine to tactical operations of platoon and company sized maneuver units. The fundamental principles of AirLand Battle are the AirLand Battle tenets and combat imperatives described in FM 100-5, Operations. These fundamentals form the basis for the development of U.S. Army tactical doctrine for any type of unit at all echelons.

The fundamental tenets of AirLand Battle doctrine are the basis for the development of all U.S. Army doctrine, tactics, and techniques...AirLand Battle imperatives provide more specific guidance for tactical and operational actions.¹

The application of these fundamentals to the operations and tactics of corps and divisions is more apparent than their application to smaller units such as platoons and companies. The mechanized infantry company team serves as a good representative unit through which to analyze the application of AirLand Battle doctrine to small units in general. Heavy forces of armor and mechanized infantry are the most common maneuver elements in the Army. The company is the lowest echelon involving a formal tank/infantry combined arms mix.

The U.S. Army is currently undergoing a process of implementing the new doctrine of AirLand Battle, new organizations of the Army of Excellence, and new equipment such as the M1 tank and M2 infantry fighting vehicle. There are some parallels with the situation of the German Army of 1917-1944. This time frame included two world wars and an inter-war period during which the German Army constantly updated tactical doctrine and implemented new organizations and equipment. Its combat effectiveness in both world wars is testament to the fact that the German Army effectively accomplished these requirements.

During World War II the German Army demonstrated an awesome degree of fighting power and combat effectiveness. Whether attacking or defending, the Germans consistently outfought forces which outnumbered them and which had more and better equipment. Their deserved reputation for high fighting quality has been used as a standard against which other armies are measured and compared. As a well known military historian has put it:

The record shows that the Germans consistently outfought the far more numerous Allied armies that eventually defeated them... This was true when they were attacking and when they were defending, when they had a local numerical superiority and when, as was usually the case, they were outnumbered, when they had air superiority and when they did not, and when they won and when they lost.²

This study analyzes the application of AirLand Battle doctrine to small units using the mechanized infantry company team as a representative U.S. Army unit and the German Army's 1917-1944 experience as a source for historical lessons learned. Historical analysis will focus on the fundamentals of German tactical doctrine during this period and how they were applied and executed by small units. The results are presented as lessons learned concerning the application of fundamental doctrinal principles to tactical operations of small units. Wherever possible, these lessons learned are presented as effectiveness criteria. This will be followed by an analysis of AirLand Battle doctrine and current mechanized infantry company team doctrine, in the course of which these lessons learned and effectiveness criteria will be applied. Finally, the study draws conclusions concerning the application of AirLand Battle doctrine to tactical operations of the company team.

The significance of this study lies in the critical importance of small unit tactical performance. The operational effectiveness of larger echelons is determined to a large degree by the performance of their small units. Increased range, lethality and mobility of modern weapons has accelerated the tempo of battle and forced a relentless dispersion of

units and decentralization of tactical control. The performance of these smaller units should be significantly enhanced by the successful tactical application of fundamental doctrinal principles.

SECTION II - DEVELOPMENT OF GERMAN ARMY TACTICAL DOCTRINE

Two important factors have greatly influenced the development of German Army tactical doctrine. The first of these is geography which places Germany in the center of Europe, usually surrounded by numerically superior enemies. This has necessitated the ability to move fast and fight quick, decisive battles. Numerically superior enemies on all fronts places great demands on the effectiveness of tactical doctrine. The second influencing factor is a rich legacy of brilliant military thinkers and reformers such as Gerhard von Scharnhorst, Karl von Clausewitz, Helmuth von Moltke the elder, and Alfred von Schlieffen.

Origins

The German concept of war has strongly influenced their philosophy on the purpose of doctrine. Traditionally, the Germans have had a Clausewitzian view of war as a clash of independent wills dominated by friction, uncertainty, and confusion, in which the creativity and initiative of the individual is the decisive factor.³ Clausewitz confirmed a basic tenet of Scharnhorst that the conduct of war does not lend itself to prescriptive solutions.⁴ This led to emphasis on the quality and creative expression of the individual soldier and leader. Theory and doctrine serve as guidance on how to prepare the individual for war, but not on how to conduct it.

German concepts which became known as schwerpunkt and aufrollen evolved from the influence of Clausewitz and Schlieffen. Clausewitz emphasized being stronger at the decisive point. Schlieffen saw futility in the frontal attack and emphasized operating against the enemy flanks and rear. Long, continuous fronts of modern armies meant that flanks may have to be created by massing to penetrate a weak point. From this came

the concept of schwerpunkt, roughly translated as main effort or thrust point, and aufrollen, meaning immediate exploitation of the penetration by attacking the enemy rear and newly created flanks. Schlieffen based the schwerpunkt/aufrollen concept on certain fundamental principles which we call today maneuver, mass, offensive, and economy of force.⁵

One of the most unique and pervasive concepts of traditional German doctrine is the tenet of auftragstaktik or mission-type orders requiring subordinate initiative. Most authors trace its origin as a fundamental military concept to Scharnhorst. Auftragstaktik coalesced into clearly defined doctrine under Moltke the elder in the 1870 s and appeared in the 1906 and 1908 editions of German Army regulations. The essence of auftragstaktik is the responsibility of a subordinate to do what the situation requires without waiting for orders. The subordinate was not expected to continue blindly obeying orders which no longer applied to a rapidly changing combat situation. He was expected to operate with initiative and flexibility inside the framework of his superior's concept and in harmony with conditions at his location.⁶

In addition to establishing sound fundamental concepts, the German Army evolved, within the General Staff, a systematic process of constantly analyzing and updating tactical doctrine, organization, and training. The analytic process combined historical study, recent combat experience, results of war games and training exercises, new technology, and flexible application of time-tested fundamental principles to determine what was required to win campaigns, battles and engagements. The results of this process were systematically and thoroughly applied to tactical doctrine, training, organization and equipment. In short, the Germans had discovered the secret of institutionalizing military excellence.⁷

World War I

During the last two years of World War I, the German General Staff searched for a tactical doctrine that would solve the "riddle of the trenches." What was needed was a defensive doctrine that could defeat Allied attacks while preserving German manpower and an offensive doctrine that could achieve a quick penetration to the rear of Allied fortified lines. The General Staff worked to update tactical doctrine to meet the new conditions and requirements of the Western Front. Using the process already described, the Germans conducted a systematic and thorough analysis to apply fundamental and time-tested principles to new conditions and requirements.⁸ The result was a tactical doctrine of defense in depth and, for the offense, attack by infiltration.

The defense in depth was an elastic system organized around a forward zone of outposts, a main battle zone of strongpoints in depth, and a rear zone of reserve counterattack forces. Units were not required to hold positions at all costs and were encouraged to move in order to avoid enemy artillery, counterattack, or gain a position to place fire on the flanks and rear of advancing enemy formations. The counterattack was considered essential and was employed by both large and small units. The enemy was allowed to advance into the battle zone where he was engaged from all directions by fire from the strongpoints and preplotted artillery. The attrited and disorganized enemy formation was counterattacked to restore the original defensive line. This defensive system proved effective in defeating 1917 Allied offensives with comparatively few losses on the German side.⁹

For the offense, the Germans developed a doctrine of attack by infiltration. The attacking formation was organized in depth. The leading echelon conducted reconnaissance and probing attacks to identify enemy strongpoints, weakpoints, and gaps. The next echelon consisted of

squad size groups of storm troops that moved through gaps and weakpoints with the aim of attacking into the enemy rear. The storm troops were followed by reserves which exploited the gaps and weak points to reduce enemy strongpoints from the flanks and rear. Artillery used short, surprise concentrations throughout the depth of the enemy positions. Aircraft provided close support to leading elements. Great emphasis was placed on attacking continuously to keep the enemy off balance and retain the initiative. Using these tactics in 1918, the Germans tore huge gaps in Allied lines and forced deep penetrations into rear areas. A lack of tactical mobility prevented exploitation of this success into a decisive victory.¹⁰

Both of these tactical systems were based on fundamental time-tested principles applied to new conditions and requirements. At the heart of the new German tactical doctrine of 1917-1918 was a revolutionary decentralization of tactical control and the power of maneuver. The squad was designated as the basic element of maneuver with the capability to employ movement and fire support simultaneously. Principles of tactics such as flank attack, penetration, and rolling up flanks (schwerpunkt and aufröllen) had traditionally involved large formations. Now they applied to the smallest infantry elements. Fundamental principles of surprise, security and subordinate initiative (auftragstaktik) were reemphasized and applied to tactical doctrine at all levels.¹¹

Central to the decentralization of command, control, and maneuver was the application of auftragstaktik to all echelons of command including small unit leaders and individual soldiers. The new tactics demanded initiative and independent action in small units as they responded to conditions at the scene of the fighting.¹²

Hand in hand with the increased responsibility and initiative of

small units was a revolutionary decentralization of combined arms. Squads were equipped with organic machine guns and light mortars. They were frequently supported by attached engineers equipped with demolitions and flame throwers, forming ad-hoc storm groups.¹³ Companies and battalions were reinforced with heavy weapons to form ad-hoc battle groups. Control of artillery was decentralized and infantry regiments received an organic artillery battery.¹⁴ This lower level integration of arms gave small units the tools they needed to exercise the initiative and power of maneuver provided by decentralization of command and fundamental principles.

In World War I, the German Army responded to the conditions and requirements of modern battle by formulating a tactical doctrine that represented a revolutionary decentralization of fundamental, time-tested doctrinal principles. Consistent with traditional views on the role of doctrine, the new doctrinal concepts for offense and defense were applied as guidance to prepare leaders, individuals and units for war. They were not proposed as an inflexible formula on how to conduct battle.¹⁵

Inter-war and World War II

The German Army doctrine analysis and development process continued between the two world wars. World War I tactical concepts and combined arms organizations were considered a sound application of traditional principles to modern conditions.¹⁶ Further analysis concluded that a lack of battlefield mobility had prevented decisive exploitation of tactical success in World War I.¹⁷

The battlefield mobility problem was solved by a wedding of doctrinal fundamentals to improved technology which produced what became known as blitzkrieg. Essentially, blitzkrieg consisted of the concentrated attack of mobile panzer or armored ground forces supported by aircraft infiltrating and penetrating through enemy weak points and continuing with

deep attacks against the enemy flanks and rear. This is basically the accelerated and sustained execution of schwerpunkt and aufrollen made possible by mechanization. Surprise, deception and speed of execution were central to the blitzkrieg concept. Decentralized control to cope with rapidly developing situations and requirements for quick exploitation reinforced the importance of the auftragstaktik principle at all echelons. The panzer forces which executed blitzkrieg were 100% mobile, all arms formations of tanks, infantry, engineers, artillery, and supply services. Basically, blitzkrieg was not a novel concept but simply the sustained and accelerated execution of a World War I infiltration attack.¹⁸ Although individual personalities, such as Heinz Guderian, contributed much to the development of blitzkrieg, the new doctrine was a natural result of a long-standing systematic analysis process institutionalized within the German General Staff.¹⁹ The analysis process included studying the development of mobile, armored force doctrine in other countries, to include the writing of theorists such as B.H. Liddel Hart and J.F.C. Fuller.

The fundamentals of German tactical doctrine were basically the same from 1917 through 1944. There was remarkable continuity between doctrinal methods employed in World Wars I and II. Critical analysis by the General Staff of the German Army's early World War II experiences in Poland and France yielded much self criticism but concluded that tactical concepts were sound. The recommendations that were made concerned the need for more training and for more supporting arms in maneuver elements.²⁰

The continuity of German tactical methods during World Wars I and II can be illustrated by a famous example. One of the first German Army units to employ World War I infiltration tactics was General Otto von Below's Fourteenth Army at the Battle of Caporetto in Italy, October 1917. In this battle, the Fourteenth Army achieved a decisive victory which

included a strategic penetration and the capture of 275,000 Italian prisoners.²¹ One of the distinguished small units in this battle was a detachment of the Wurtemburger Mountain Battalion commanded by Lieutenant Erwin Rommel. Employing the World War I infiltration attack concept, the Rommel detachment penetrated 15 miles through the Italian lines, capturing 9,000 men (including 150 officers) and 81 guns. Rommel's troops suffered casualties of six dead and thirty wounded.²² In 1940, Rommel commanded a panzer division in the Battle of France. Rommel's division moved faster and farther than any other in the race across France, capturing 97,000 prisoners at a cost of only 42 tanks lost.²³ Rommel had never commanded a panzer unit before and had no experience with armor or motorized forces. He simply employed the same tactical concepts that he had twenty-three years earlier at the Battle of Caporetto.

By itself, sound tactical doctrine produces nothing. To complete the process, it must be applied and executed by the army's fighting units. The next section will address how the Germans did this to produce combat performance to a degree that frustrated and astounded their enemies on all fronts of World War II.

SECTION III - APPLICATION OF GERMAN ARMY TACTICAL DOCTRINE TO SMALL UNITS

The proper application of tactical doctrine requires thorough and uniform dissemination to leaders, soldiers and units that are capable of using it. Absolute perfection in tactical concepts is useless if leaders and soldiers are not capable of executing them. And, if the capability is there, the concepts must be thoroughly and uniformly understood before they can be executed. The Germans accomplished both of these requirements, primarily through a consistent devotion to continuous and thorough training of leaders, individuals and units at all levels.

Training

The Germans recognized the demands their doctrine placed on leaders, soldiers and small units and that success would depend on the performance of individuals and small units as never before. Fluid tactics of independent action by small units to hit enemy flanks and rear required highly trained soldiers and capable subordinates who possessed initiative and knew how to operate within the framework of the higher level mission. Implementation of the auftragstaktik concept required a uniformity of thinking and reliability of action obtained only through thorough training. When the tactical concepts were first proposed in World War I, one of the strongest objections was that leaders, individuals, and small units were not capable of executing them.²⁴ The high standards of execution which made the doctrine successful were developed by a training program unprecedented in its scope, thoroughness, and devotion to the performance of small units.²⁵

The emphasis on training and small unit performance continued through the inter-war period and World War II. The official German Army manual of 1936 emphasized the decisive role of the individual and that fighting

power was determined by the quality of the commander and his men. Deficiencies in the performance of some units in the Polish, French, and early African campaigns were explained entirely as a result of a poor state of training, with a corresponding stress on training as the remedy.²⁶

Nowhere was the training emphasis greater in the Wehrmacht than on that for leaders. Selection and training of quality leaders in sufficient numbers was considered the biggest obstacle to the expansion of the army following Hitler's renunciation of the Versailles Treaty in 1935.²⁷ Throughout World War II, the General Staff steadfastly refused to curtail training time or schedules for junior officers and NCO's despite pressure from Hitler and the demands of the war.²⁸

Training of prospective officers and NCO's was thorough and demanding. Formal schooling emphasized basic military theory combined with practical, down to earth knowledge of employment of weapons and cooperation of arms. Officers of all grades and branches were trained on a common set of doctrinal fundamentals. The training period included active service in front line units to include combat duty in wartime. There was a heavy emphasis on character and leadership and forging a strong link between leader and led. The leader was expected to be a teacher, trainer, and both stern father and kind mother to his men.²⁹ Encouragement of the initiative was emphasized more than any other aspect of military performance. Especially strong emphasis was placed on the training of squad leaders, who were taught to think like officers.³⁰

Training of battalion and regimental commanders was also thorough. It included basic military theory and practical experience in maneuver and cooperation of arms, using educational tools developed by Moltke and Schlieffen such as map exercises, lectures and training maneuvers. During the winter of 1940, while Germany was at war with Britain and France, an entire infantry division was placed at the disposal of the General Staff

for the sole purpose of training these field grade officers.³¹ Beginning in 1937, the army stressed quick reaction and speed of execution. Field commanders were trained to arrive at solutions to complex tactical problems in minutes as opposed to the hours normally allowed by other armies.³² A key aspect in the training of commanders was preparing them for their responsibility to train their subordinate units.³³

Commanders were solely responsible for the training and education of their units.³⁴ Unit training in the German Army was extremely demanding and realistic. Actual conditions of battle were simulated as much as possible, using analysis of recent combat actions. In spite of wartime demands, live ammunition was used constantly to include reduced charge bursting projectiles. Small unit training consisted of numerous, repetitive exercises aimed at giving a thorough mastery of tactical fundamentals, weapons employment, and cooperation with other arms. Training was expected to continue at all times, to include during employment at the front.³⁵ Training was so demanding that units were sometimes glad for the relief provided by combat.³⁶

Cooperation of arms and units was a constant theme in German training. Live fire training included the integration and cooperation of all arms. Training stressed cooperation among all units, branches and services. Rivalry between branches was discouraged. March songs were highly regarded, but there were no songs about one branch being better than another. Athletic games and competition were encouraged, but not between unit or branch teams. All units, branches, and services were trained in a common set of fundamental doctrinal concepts. Training manuals and exercises constantly stressed cooperation with other arms and how to exploit the effects of combined arms. Training manuals for all levels and arms reflected the same fundamental principles stated in German Field

Service Regulations. Units and different arms and services were trained to operate in harmony and with initiative within the framework of the mission.³⁷

A salient feature of small unit training was the use of battle drill techniques. Broad missions such as attack and defense were broken down into phases for unit training.³⁸ Weapons employment and basic procedures for each phase were ingrained by thorough training and repetition. Application of these techniques was flexible according to the conditions of battle. Perfection in battle drill performance was combined with encouragement of the initiative.³⁹ In executing battle drill, individuals acted with initiative within the framework of the drill procedure and objective in the same manner that small unit leaders exercised initiative within the framework of the higher commander's mission. Battle drill techniques gave small units increased speed of execution and simplified command and control without sacrificing initiative. The German use of the battle drill technique actually encouraged initiative by giving the German soldier a frame of reference in the absence of orders.

The effectiveness of German training was reflected in the uniformly high quality of their leaders and soldiers. American and British officers with ground combat experience against the Germans generally conceded the superiority of the German soldier in knowledge and practical application of weapons; skill, determination and discipline; initiative and imagination; and group cohesion. Many British commanders remarked how often German soldiers excelled in comparison to their opponents, especially when operating alone or in pairs.⁴⁰ In commenting on the Norway campaign, Winston Churchill noted the superiority of German soldiers and small groups over the finest British troops (Scots and Irish Guards) who were completely baffled by German vigour, enterprize, and high level of training.⁴¹ A major factor in the excellence of German soldiers and small

units was the excellence of their leadership and the comradely bond between the leader and the group. Interviews with German prisoners of war revealed that nearly all company grade officers and NCOs were regarded by their soldiers as brave, efficient, considerate men of honor who were eminently deserving of respect.⁴² The quality of German troops and leadership can best be summed up by a quote from Erich von Manstein, considered the finest commander of the war by many German general officers:⁴³

*The decisive factor throughout was the self-sacrifice, valour, and devotion to duty of the German fighting soldier, combined with the ability of commanders at all levels to assume responsibility. These were the qualities which won us our victories. These alone enabled us to face the overwhelming superiority of our opponents.*⁴⁴

The German devotion to training matched the unprecedented demands their doctrine placed on the performance of small units. Throughout the war, the Germans placed great faith in and dependence on the success of small unit actions.⁴⁵ As well as developing capability, the German training effort insured that doctrinal concepts and principles were thoroughly disseminated and uniformly understood at all levels. This commonality of doctrinal fundamentals was reflected in World War II small unit execution.

Combat Execution

Small unit execution of defensive and offensive missions in World War II was uniformly in accordance with the tactical concepts which were introduced in World War I and continued, with adaption to new technology, through the interwar period. As already noted, the execution of blitzkrieg by panzer forces was little more than a World War I infiltration attack wedded to updated technology. The more numerous infantry forces also continued the infiltration attack concept. German offensives in France (1940), the Soviet Union (1941-42) and the Ardennes

(1944) were characterized by infantry formations breaking through enemy lines in small assault groups.⁴⁶ The defense in depth concept was also employed uniformly. Standard defensive measures employed by infantry units were strongpoints in depth, reinforced by obstacles, wire and minefields with immediate counterattacks conducted at all levels.⁴⁷ The pakfront or hedgehog defense developed on the Eastern Front was simply the World War I defense in depth adapted to Panzer formations. Strongpoints consisting of mutually supporting groups of anti-tank guns were organized in depth. The defense was backed up by strong mobile reserves to counterattack enemy formation which had been attrited and disrupted by a web of enfilade fire from the strongpoints.⁴⁸

The auftragstaktik principle continued to be a hallmark of small unit execution. In actions when things went wrong and control seemed to be lost, the boldness, initiative and imagination of small units frequently carried through to win the battle. Field Marshall Gerd von Rundstedt and other German generals considered auftragstaktik the most important facet of German tactics.⁴⁹ A large percentage of German individual awards were for cases of independent action.⁵⁰ The auftragstaktik principle bred a sense of responsibility that included not only one's own mission, but a responsibility to help and cooperate with others. This sense of helping and cooperating with others was more pervasive in the German Army than any other.⁵¹ It is closely related with the concept of combined arms.

Small unit initiative and independent action required a balanced allocation of combined arms down to the lowest levels. As the war progressed, improvised, ad-hoc battle groups were employed more and more frequently. In Panzer formations, these groups consisted of tanks, armored or motorized infantry, self propelled artillery and anti-tank guns, and engineers. In infantry formations they consisted of the same elements, non-motorized and without tanks. Even squads were organized as

teams of infantry and engineers with demolitions and flamethrowers, as well as sometimes including larger caliber towed anti-tank guns. Thanks to excellent common training and cooperation, these ad-hoc groups performed very well, showing remarkable resilience and flexibility. This balanced allocation of combined arms gave small units the resources they needed to execute fundamental concepts embodied in the schwerpunkt/aufrollen principle.⁵²

German small units made extremely effective use of the schwerpunkt and aufrollen concepts. Larger units executed this concept by maneuvering to concentrate combined arms forces against enemy weak points. At the small unit level, the concept was executed by the movement and cooperation of arms to place the effects of combined arms fire on the enemy weak point. At the small unit level, the Germans emphasized fire superiority and forming a clear point of main effort by concentrating the fire of all arms in space and time.⁵³ Volume of fire was stressed as much or more than accuracy due to its psychological effect on the will of the enemy.⁵⁴ Movement was made on covered approaches and/or covered by suppressive fire. Small unit movement aimed at gaining a position to place fire on the enemy flank or weak point. Even squads were expected to move independently seeking the enemy flank or weak point. The fire of the machine gun was the squad's schwerpunkt.⁵⁵ Panzer units exploited their cross country mobility and firepower to quickly concentrate surprise fire on the enemy flanks and rear.⁵⁶

The concepts of schwerpunkt/aufrollen, combined arms, and auftragstaktik are very closely interrelated. Small units exercised initiative within the concept of the higher mission, executing schwerpunkt/aufrollen by infiltrating to strike enemy flanks and weak points. This required decentralization of both decision-making and

weapons allocation. Unit commanders allocated weapons downward with the exception of what they needed to concentrate at the point of their own main effort or schwerpunkt. Some centralized control of key weapons was needed to control and shift the schwerpunkt as required. Leaders exercised initiative in constantly shifting the schwerpunkt to exploit success or newly discovered enemy weakness, always acting within the whole. Usually, the result on the enemy was physically and, more importantly, psychologically devastating. The enemy commander, even though he may have had overall superiority, found himself overwhelmed and outgunned at critical points of the battle. He was unable to react fast enough as attacking units aggressively exercised the initiative with combined arms to exploit success and new weak points. Enemy units found themselves cut off, attacked from the flanks and rear, and subjected to devastating concentrations of combined arms fire.

To put it another way, using what are now termed "AirLand Battle concepts" in the U.S. Army, success was gained by small units deployed in depth and attacking the enemy in depth, constantly exercising the initiative and synchronizing the effects of combined arms fire on enemy weak points. Decentralized decision-making and weapons allocation provided German small units with the agility to act and react faster than their enemies in exploiting success and newly discovered weak points. German small units executed these concepts both while attacking and defending.

The German small unit defense was based on exploiting the effects of combined arms fire. Strongpoints were sited in covered positions to obtain the most favorable fire effect. Open areas were not occupied but were covered by interlocking fires from the strongpoints sited in depth. The defense was organized around the fires of machineguns, anti-tank guns and other heavy weapons. Riflemen were positioned to provide close-in protection for these weapons. The point of main effort was determined by

the enemy and terrain, and was usually made at vulnerable terrain points. Obstacles were employed to break up and channel the enemy attack into the point of main effort where fire was concentrated from as many weapons as possible. Frequently, German soldiers employed surprise fire at close range against flanks and rear of enemy passing their positions. Penetrating enemy forces that were not destroyed by fire were quickly counterattacked. In the counterattack, small units moved seeking a position to place fire on the flank or rear of the attrited and disrupted enemy formation. They seldom closed with an enemy that could be destroyed or driven away with fire.⁵⁷

A good example of small unit execution of the defense in depth concept is offered by the account of a U.S. Army regimental attack in Italy, described in great detail in a War Department Historical Department publication entitled Small Unit Actions. In what was presented as a more or less typical action, the 351st Infantry Regiment, supported by tanks, tank destroyers, engineers and artillery, attacked elements of a German battalion at Santa Maria Infante. As units advanced into the German position, they found themselves isolated and caught in a web of machine-gun fire from strongpoints organized in depth. Frequently, German gunners would wait until elements had passed their positions before opening up with surprise fire. Tanks coming up to support the U.S. forces were blocked by expertly sited minefields and anti-tank guns. Engineers were unable to clear the mines which were covered by both anti-tank and machine-gun fire. Units which remained in the German position were attrited by machinegun and artillery fire and were subjected to counterattacks. After more than two days of bitter fighting, the U.S. infantry regiment had taken none of its objectives and had suffered over 500 casualties. The objectives were taken only after the Germans withdrew.⁵⁸

The German small unit attack also emphasized operating with initiative and exploiting the effects of combined arms fire. The infantry company commander used his attached heavy weapons and supporting artillery to form the point of main effort. The location of the main effort or schwerpunkt was selected considering enemy weakness and where the greatest success could be achieved, possibly by using terrain that facilitated a deep advance into the enemy position. The company commander organized his attack in depth on a narrow front, which allowed the fire of his heavy weapons to be concentrated. Usually, only one platoon supported by heavy weapons would make the initial assault. This platoon would advance covered by the suppressive fire of the heavy weapons and artillery and using covered terrain routes as much as possible. The lead platoon infiltrated and penetrated deep into the enemy rear. Following platoons passed through gaps made by the lead platoon and widened the penetration by reducing enemy strongpoints from the flanks and rear. The squad leader acted independently within the context of his platoon's mission. He was not required to adhere strictly to his assigned sector and was expected to aggressively seize every opportunity to advance without waiting for orders. In reducing strongpoints, the squad advanced as close to the enemy as possible, exploiting the suppressive fire of artillery and heavy weapons. The squad's machinegun employed short range, surprise suppressive fire against the enemy strongpoint while the remainder of the squad closed from the flank, rear, or blind spot to eliminate the enemy with hand grenades, demolitions, and/or flamethrowers. Usually, suppressive fire was so effective that riflemen sometimes closed on the enemy without their rifles or with rifles slung, employing only handgrenades. German soldiers almost never closed with or exposed themselves to an enemy who had not been effectively suppressed and almost never approached an enemy position from the front.⁵⁹

In an article in the January 1980 issue of Army magazine, GEN (ret) William Dubov described German small unit assault tactics using Erwin Rommel's world War I experience. The article effectively illustrates how the Germans used suppressive fire and formations organized in depth. Rommel organized his force into an assault element, suppression element, and exploitation element. The assault element was the smallest, sometimes consisting of only one or two squads for a two or three company sized attack. The suppression element concentrated a heavy volume of fire on a narrow front, allowing the assault element to advance and breach a gap in the enemy position. The exploitation element then advanced through the breach, covered by the suppressive fire, and rolled up the enemy from the flanks and rear.⁰⁰

German small unit assault tactics were instrumental in the success of large unit offensive operations. Although divisions and corps sometimes had to make frontal attacks, squads and platoons almost never did. This is well illustrated by General Manstein's conquest of the Perakop peninsula during the German Eleventh Army's Crimean campaign. Manstein was forced to make a frontal attack against a numerically superior Russian force occupying an extensively fortified defensive position ten miles deep with its flanks resting on the Black Sea and protected by Russian naval forces. The Russians had air superiority and were supported by tanks and plentiful artillery. Manstein had no tanks. The terrain was flat and open, with numerous salt marshes. The Russians defended their fortifications tenaciously and employed frequent counterattacks supported by tanks and aircraft. In spite of all the Russian advantages, the Eleventh Army broke through the Russian defenses in ten days of bitter fighting and with relatively few casualties (approximately 1,200 KIA and 5,500 WIA while capturing 15,700 Russian prisoners). Considering

that Manstein's corps and divisions had no choice but to attack frontally, this feat could only have been possible due to the excellence of small unit assault tactics.⁶¹

German small units used these offensive and defensive tactics to great effect on all fronts of World War II. The fighting quality of their small units and ability to concentrate superior combat power at decisive points allowed them to consistently outfight overall superior enemy forces. The Germans had no monopoly on knowledge of basic fundamental principles. They did have a monopoly on consistent and reliable performance throughout the army in accordance with doctrine and theory.⁶²

Summary

At this point, it is possible to draw some conclusions concerning tactical doctrine as it applies to small units, based upon the German Army's 1917-1944 experience. To be effective, tactical doctrine should have the characteristics described in the following paragraphs.

Fundamental concepts should be based on sound, time-tested principles and historical experience applied to modern conditions. Tactical doctrine should be presented as guidance for operations and training and not as an inflexible formula which inhibits creativity and innovation. Section II of this paper described how the German Army met these criteria, primarily through a systematic process of constant analysis and study to insure tactical doctrine represented the sound application of fundamental principles and historical experience to modern conditions.

Tactical doctrine must be widely and uniformly understood and the Army's units and individuals must be capable of executing it. Section III of this paper described how the German Army accomplished this, primarily through thorough, continuous, high quality training that emphasized common fundamental concepts for all type units at all echelons, down to and including the squad.

SECTION IV - AIRLAND BATTLE DOCTRINE AND THE COMPANY TEAM

Historically, U.S. Army tactical doctrine has been influenced by many factors which have had little to do with sound fundamental principles. Factors such as new weapons technology, personal desires or predilections of different military leaders, parochial clashes between branches, interservice rivalry, and a narrow focus on immediate demands of national security exerted much influence on U.S. Army tactical doctrine from the 1950's through the 1970's. These influences caused great cycles of change in doctrine during this period with corresponding confusion and misunderstandings during transitional periods. The effectiveness of tactical doctrine against a numerically superior enemy and its basis in sound principles was not an issue of great priority until recently.⁶³

Beginning in the 1970's, the U.S. was faced, for the first time, with a numerically superior enemy with equipment that was at least as good as our own. Also for the first time, success in battle against that enemy would depend almost entirely on superior combat execution. Superior execution would depend a great deal on superior tactical doctrine, training, and quality of leaders and soldiers. These demands have made the issue of sound tactical doctrine a top priority.⁶⁴ Like the Germans who were frequently surrounded by numerically superior enemies, the United States now needs an Army with the qualitative superiority to defeat a numerically larger and possibly better equipped adversary.

AirLand Battle Doctrine Fundamentals

AirLand Battle doctrine was developed to meet the demands of outfighting a more numerous and well armed adversary. The development process was based upon time-tested fundamental principles, attention to human factors and moral elements of war, lessons of history, and modern

conditions.⁶⁵ The publication of the 1982 edition of FM 100-5, Operations, signalled a return to basic and fundamental concepts that have been the bedrock of historically successful tactical doctrine.⁶⁶

The fundamentals of AirLand Battle doctrine are the tenets and combat imperatives as described in the 1982 edition of FM 100-5. These are attached in Appendix A to this paper. They reflect time-tested theories, principles, and fundamental ideas about modern war, as well as recent studies to gain insight into the likely nature of contemporary operations. The AirLand Battle tenets and combat imperatives are the basis for the development of all U.S. Army tactical doctrine.⁶⁷

AirLand Battle doctrine is not proposed as an inflexible formula to be rigidly applied in all situations. It is designed to provide a framework of fundamental concepts which can guide the planning and execution of training and operations. FM 100-5 emphasizes flexibility in planning and execution and allowing freedom for tactical variations in any situation.⁶⁸

The fundamental concepts of AirLand Battle doctrine are based on sound, time-tested principles and to historical experience applied to conditions of modern battle. These concepts are not proposed as an inflexible formula to be rigidly applied in any situation. Like the historical German Army tactical doctrine, AirLand Battle doctrine more than meets doctrinal effectiveness criteria concerning the nature of fundamental concepts and the philosophy on how they are to be used.

Fundamentals of AirLand Battle doctrine show a remarkable similarity to German fundamental doctrinal concepts. The FM 100-5 description of a fluid, confused, non-linear battlefield where human and moral elements can be decisive tracks closely with the traditional German view of war as a clash of independent wills dominated by friction, uncertainty and confusion.⁶⁹ Imperatives of "designate and sustain the main effort:"

"direct strength against weakness;" "move fast, strike hard, and finish rapidly;" and "press the fight" are almost a restatement of the schwerpunkt/aufrollen concepts. Tenets of "subordinate initiative within the higher commander's intent;" "agility in acting and reacting faster than the enemy;" "organizing friendly forces and attacking enemy forces in depth;" and "synchronizing resources to maximize combat potential are closely aligned with German concepts of auftragstaktik; offensive and defensive depth; and cooperation of arms. AirLand Battle doctrine is based on "seizing the initiative and exercising it aggressively to defeat enemy forces."⁷⁰ German doctrine was based on the same thing.

Like the German philosophy, AirLand Battle doctrine recognizes the decisive role of human elements and moral factors and that, in the final analysis, "superior combat power derives from the courage of soldiers, the excellence of their training, and the quality of their leadership."⁷¹ AirLand Battle doctrine places great demands on the performance of junior leaders and small units. Their quality and state of training will have to be higher than ever before to execute AirLand Battle doctrine successfully on the modern battlefield. This theme is emphasized repeatedly in FM 100-5, with corresponding emphasis on training and on the initiative and independent action required of junior leaders and small units. Mission-type orders implying subordinate initiative within the higher commander's concept and intent will be needed to meet the requirement for flexible response to rapidly changing conditions on the modern battlefield.

Execution and application of AirLand Battle doctrine by small units will require extremely high quality in junior leaders and small units and thorough and uniform understanding throughout the Army. As has been discussed, the Germans dealt with these same requirements, primarily

through thorough, demanding training guided by fundamental doctrinal principles uniformly reflected in training manuals and applied during training exercises.

Application of AirLand Battle Doctrine

The Germans placed great faith in and reliance on small unit tactical performance. Leaders at all levels of command were intimately concerned with and involved in maintaining high standards of small unit performance and effectiveness. AirLand Battle tactical doctrine recognizes the critical importance of training in giving individuals and small units the skills they need to be successful on the modern battlefield.

Recent doctrinal publications from the Infantry and Armor schools show a strong emphasis on and devotion to the training of tank platoons, mechanized infantry platoons, and company teams. These include field manuals describing the management and conduct of training in general, to include short and long range planning, resourcing, and executing efficient and effective training sessions and exercises. Other manuals offer more specific guidance on conducting combined arms live fire exercises and fire coordination exercises. Field circulars have been published which show company commanders and platoon leaders how to efficiently plan and conduct training for unit missions.⁷²

An encouraging aspect of these publications is the adoption of a battle drill training concept. As has been stated, the Germans used this concept to train small units effectively in routine, repetitive procedures for weapons employment and basic tactical techniques, while retaining flexibility and initiative. FM 100-5 emphasizes the use of battle drills to gain coordination and speed of execution.⁷³ Battle drills represent a novel and effective way to train small units for the demands of the AirLand Battlefield. They include immediate action drills for rapid,

flexible response to critical battle situations, and tactical training drills that efficiently organize and sequence key collective tasks required to accomplish combat missions. Individual and leader actions and performance required to execute the collective tasks properly are integrated into the training process. Battle drill benefits include reduced reaction time and increased speed of execution; development of teamwork and cohesion under stress; and efficient integration and sequencing of key individual, leader, and collective tasks.⁷⁴

The execution of Battle Drill training is similar to the German Army concept previously discussed. Standards are written in the context of general tactical principles which allow change based on conditions operative during execution. Drill execution emphasizes the need for flexible individual performance in harmony with operative conditions and within the framework of the drill objective and teamwork requirements. Tactics, which embrace the drill selection, sequencing and orientation in space and time are left open to necessary flexibility, initiative, and innovation.⁷⁵ As in the German concept, battle drills actually promote individual initiative by providing a frame of reference for the individual in the same manner that the higher commander's concept provides a frame of reference for the exercise of subordinate leader initiative.

If there is an institutional training deficiency concerning application of AirLand Battle doctrine to small unit tactics, it is probably within the U.S. Army Command and General Staff College. AirLand Battle has brought renewed emphasis, and rightfully so, on concepts such as attacking the enemy in depth and exercising the operational level of warfighting to translate tactical victories into success at the operational and strategic levels. Little attention is paid to the unprecedented demands on and critical importance of small unit performance required by AirLand Battle doctrine. Out of a total of 248 hours of

instruction devoted to tactics in the CGSC Regular Course, only 24 concern tactics of units below division level. Only 24 hours of the entire course concerns training and this is oriented primarily on resource management and time scheduling.⁷⁶ The nuts and bolts of how to train small units and recent innovations such as battle drill training are not mentioned. Doctrinal manuals for maneuver units below brigade level are not issued and are available only in extremely limited quantity and selection in the Combined Arms Research Library. The argument that small unit tactics and training are assumed to have been mastered before an officer attends CGSC does not seem valid when one considers that many officers leaving CGSC will not have had unit experience for up to six or seven years and will not have had formal education in small unit training and tactics for longer than that. Many of these officers will soon be occupying key positions such as battalion commanders, executive officers, and operations officers and will be expected to act as mentors and teachers for the small unit leaders and soldiers under their supervision. The CGSC course understandably concentrates on training field grade staff officers in conducting the tactical level of war fighting at the division and corps levels, but the critical area of small unit tactical performance is neglected. It will be difficult to conduct the operational level of war fighting if there are no tactical successes to properly sequence and exploit for higher-level success. It may be time to heed the warning of critics Richard A. Gabriel and Paul L. Savage on the schooling of the average American officer. The schooling of the American officer is, in their view,

...far too staff oriented at far too high a level and only remotely connected with the details of small-unit combat. Few officers... genuinely comprehend the details and complexities of squad-, platoon-, or company-sized battle. With the stress on staff training, there has been a deemphasis of the true skills of the soldier.⁷⁷

Company Team Tactics

The mechanized infantry company team will serve as a representative element to analyze the application of AirLand Battle Doctrine to small unit tactics in general. Investigation of the doctrinal criteria for thorough and uniform understanding of AirLand Battle doctrine by tank and mechanized infantry platoons and companies must be made by analyzing recent doctrinal publications on tactical operations of these units. There is evidence that fundamental AirLand Battle concepts are not uniformly reflected in these publications.

FM 71-1J (Draft). The Tank and Mechanized Infantry Company Team (April 1985), introduces five basic rules of combat (Move, Shoot, Communicate, Secure, Sustain) which are presented as abbreviated forms of the AirLand Battle combat imperatives. These are attached, verbatim from FM 71-1J, in Appendix B to this paper. These do not completely reflect concepts in the AirLand Battle imperatives. Key concepts of "designate and sustain the main effort;" "direct friendly strength against enemy weakness;" and subordinate leaders exercising initiative within the framework of the higher mission are not included in the five basic rules of combat. These concepts are closely related to the auftragstaktik, schwerpunkt, and aufrollen principles that were hallmarks of German small unit performance down to squad level.

FM 71-1J does have a good discussion of AirLand Battle doctrine, to include tenets and imperatives, in the opening chapter. The body of the text shows a reflection of AirLand Battle concepts included in detailed discussions of techniques to accomplish battlefield tasks and missions. The subordinate initiative principle is discussed in the command and control section. Concepts of concentrating main effort and exploiting enemy weakness are reflected under offensive operations.

A breakdown occurs in platoon manuals. FM 7-7, The Mechanized Infantry Platoon and Squad (APC) (March 1985), and FM 7-7J (Draft), The Mechanized Infantry Platoon and Squad (Bradley) (undated), contain little discussion or reflection of AirLand Battle concepts beyond what little is included in the five rules of combat. These are good descriptions of sound techniques, but little discussion of basic theory and fundamental concepts of AirLand Battle that govern employment of techniques in the same manner that German fundamental concepts guided their small unit tactical training and execution in combat.

The biggest deficiency is a lack of the encouragement of junior leader and small unit initiative. Instead, the opposite is true. In conducting a movement to contact, one of the most fluid operations, the platoon leader's initiative is actually curtailed. After the initial reaction to contact, the platoon leader can only recommend to the company commander what action he should take. The word "recommend" is underlined. Any course of action must be approved in advance by the company commander. The platoon leader is not permitted to break contact with the enemy until ordered by the company commander.⁷⁸ In the company manual, the section on command and control during execution of combat operations requires the company commander to tell the platoon leaders exactly where to go and what to do.⁷⁹ Under current small unit doctrine, the U.S. Army lieutenant is expected to exercise far less initiative than the German Army's World War I and World War II corporals.

The platoon and company manuals also need a better discussion of synchronization of combined arms. The manuals discuss attached and supporting arms in separate sections following the main body of text concerning tactics and techniques. Cooperation and integration with attached and supporting arms should be included in the discussions of

tactics for each task or type of operation. For any operation, squads and platoons must be trained to exploit the effects of combined arms fire and integrate their efforts with those of tanks, artillery, engineers, etc. Mechanized infantry squads and platoons possess a formidable array of organic weapons, including the Bradley TOW, 25 mm and 7.62 machine gun; the M60 machine gun and the squad automatic weapon; M203 grenade launcher; and Dragon and LAW anti-tank weapons. More discussion is needed on how to synchronize and concentrate the fires of these organic weapons while exploiting the fires of other attached and/or supporting weapons.

Doctrinal publications for the mechanized infantry company team and its platoons do not adequately reflect fundamental principles of AirLand Battle doctrine. These publications describe many sound techniques for executing collective tasks in combat, but the fundamental theory and concepts that should guide the employment of these techniques is lacking.

Some insight into this deficiency can be gained from the results of a 1953 study in which a group of former Wehrmacht officers were asked to evaluate U.S. Army tactical doctrine at that time. They concluded that U.S. doctrine attempted to foresee situations and lay down behavior in great detail. Procedures were stereotyped in their attempt to foresee each situation in great detail. There was not enough emphasis on the creativity and capacity for innovation of the individual warrior. German doctrine emphasized common fundamental principles as a framework within which soldiers and leaders exercised creative initiative. Excellence in executing specific techniques was left to be developed in realistic and demanding training.⁸⁰

The techniques in the company and platoon manuals are sound as examples of and points of departure for execution of collective tasks. It is imperative that fundamental principles of AirLand Battle doctrine be included in small unit manuals to insure commonality of thought and action

and quality of execution required on the AirLand Battlefield. A possible solution would be dividing small unit manuals into two parts, the first of which would be a thorough discussion of fundamental concepts and how they apply to junior leaders and small units as a frame of reference for employing sound techniques while allowing for creativity and initiative. The second part would be a book of techniques involved in executing collective tasks presented as examples and points of departure for further development and refinement in training. Discussion of techniques would reflect the application of fundamental concepts which guide the execution of small unit collective tasks. The same concepts guide the tactical sequencing and orientation of collective tasks in space and time.

SECTION V - CONCLUSION

There are many similarities between the situations of the German Army of 1917-1944 and the U.S. Army today. One of these is the requirement to implement and integrate new tactical doctrine, weapons and equipment, and organizations. Another is the existence of a more numerous and well equipped adversary. The German Army successfully met these challenges in both world wars by achieving remarkable effectiveness at the tactical and operational levels of war. A major factor in this success was the existence of a superior tactical doctrine and the application and execution of that doctrine by small units of the German Army.

Analysis of the German doctrinal development and application experience from 1917-1944 yields important lessons learned and effectiveness criteria concerning the application of fundamental doctrinal concepts to the tactical operations of small units. Tactical doctrine should be based on sound, time-tested principles applied to historical experience and modern conditions. It should be presented as guidance in preparing for combat and not as an inflexible formula which inhibits innovation and creativity. AirLand battle doctrine more than meets these criteria.

German Army historical doctrine and AirLand Battle doctrine have remarkably similar fundamental concepts. They are also alike in their emphasis on the importance of quality performance by small units guided by a uniform set of fundamental doctrinal concepts. The German Army gained this quality and uniformity of performance primarily through close attention to the training of junior leaders and small units.

In the U.S. Army there are encouraging signs of strong emphasis to insure the quality of training needed for the mechanized infantry company team and its subordinate elements to be up to the demands of AirLand

Battle doctrine. Positive measures include doctrinal publications devoted to "how to train" and adoption of a battle drill training concept similar to that used by the German Army. On a negative note, there is disturbing evidence that the U.S. Army Command and Staff College training of field grade officers neglects the critical area of small unit tactics and training. Field grade level officers are not being sufficiently educated in the dynamics and concepts of small unit training and tactics. Since opportunities for small unit experience are so limited for many senior captains and majors in the combat arms, it must be supplemented by formal school training at all levels up to and including CGSC. The role of field grade commanders and staff officers is crucial in insuring that small units are adequately trained and prepared for AirLand Battle.

Doctrinal publications for mechanized infantry company team elements do not sufficiently reflect Airland Battle concepts. This is especially true of subordinate initiative and synchronization of combined arms. Company and platoon manuals are essentially books of techniques, with little discussion of fundamental theory and concepts. In the German Army, small unit application and execution of fundamental doctrinal concepts contributed a great deal to their success. Company and platoon manuals need to contain a thorough discussion of fundamental AirLand Battle concepts early in the text. Discussion of tactics and techniques should emphasize examples of how the concepts are applied in combat execution. This is especially true of platoon manuals. If the U.S. Army is to gain the uniformity of thought and reliability of action required by AirLand Battle doctrine, then we must educate our officer corps in fundamental tactical concepts from the beginning of their careers.

APPENDIX A - AIRLAND BATTLE TENETS AND COMBAT IMPERATIVES

The following fundamental concepts of AirLand Battle doctrine are taken verbatim from FM 100-5, Operations (1982), pp. 2-2, 2-3, 2-6.

Tenets

Initiative. Initiative implies an offensive spirit in the conduct of all operations. The underlying purpose of every encounter with the enemy is to seize or to retain independence of action. To do this we must make decisions and act more quickly than the enemy to disorganize his forces and to keep him off balance. To preserve the initiative, subordinates must act independently within the context of an overall plan. They must exploit successes boldly and take advantage of unforeseen opportunities. They must deviate from the expected course of battle without hesitation when opportunities arise to expedite the overall mission of the higher force. They will take risks, and the command must support them.

Improvisation, initiative, and aggressiveness--the traits that have historically distinguished the American soldier--must be particularly strong in our leaders.

Depth. Depth, important to all US Army operations, refers to time, distance, and resources. Momentum in the attack and elasticity in the defense derive from depth. Knowing the time required to move forces, enemy and friendly, is essential to knowing how to employ fire and maneuver to destroy, to disrupt, or to delay the enemy. Commanders need to use the entire depth of the battlefield to strike the enemy and to prevent him from concentrating his firepower or maneuvering his forces to a point of his choice. Commanders also need adequate space for disposition of their forces, for maneuver, and for dispersion. Depth of resources refers to the number of men, weapon systems, and materiel that provide the

commander with flexibility and extend his influence over great areas. Commanders need depth of time, space, and resources to execute appropriate countermoves, to battle the forces in contact, and to attack enemy rear forces. The battle in depth should delay, disrupt, or destroy the enemy's uncommitted forces and isolate his committed forces so that they may be destroyed. The deep battle is closely linked with the close-in fight. All involved weapons, units, and surveillance assets must contribute to the commander's overall objective. When we fight an echeloned enemy, such operations may be vital to success. Reserves play a key role in achieving depth and flexibility. Important in any battle is the commander's decision on the size, composition, and positioning of his reserves. They are best used to strike a decisive blow once the enemy has committed himself to a course of action or revealed a vulnerability. Finally, commanders must be prepared to engage enemy airborne or airmobile forces that attack our rear areas. They must insure that combat service support units can survive nuclear and chemical strikes and still support the fast-paced battle. These are other aspects of the in-depth battle.

Agility. Agility requires flexible organizations and quick-minded, flexible leaders who can act faster than the enemy. They must know of critical events as they occur and act to avoid enemy strengths and attack enemy vulnerabilities. This must be done repeatedly, so that every time the enemy begins to counter one action, another immediately upsets his plan. This will lead to ineffective, uncoordinated, and piecemeal enemy responses and eventually to his defeat. An organization's flexibility is determined by its basic structure, equipment, and systems. Units should have an appropriate mix of soldiers and equipment to complete their tasks. Mission, enemy, terrain, troops, and time available (METT-T) should control any permanent or temporary reorganization. The mental flexibility necessary to fight on a dynamic battlefield is more difficult to describe

but easier to achieve. Our Army has traditionally taken pride in our soldiers' ability to "think on their feet"--to see and to react rapidly to changing circumstances. Mental flexibility must be developed during the soldier's military education and maintained through individual and unit training.

Synchronization. Synchronized operations achieve maximum combat power. However, synchronization means more than coordinated action. It results from an all-pervading unity of effort throughout the force. There can be no waste. Every action of every element must flow from understanding the higher commander's concept. Synchronized, violent execution is the essence of decisive combat. Synchronized combined arms complement and reinforce each other, greatly magnifying their individual effects. In AirLand Battle doctrine, synchronization applies both to our conventional forces and, when authorized, to nuclear and chemical weapons. It also characterizes our operations with other services and allies. Forceful and rapid operations achieve at least local surprise and shock effect. Commanders must look beyond these immediate effects when they plan operations. They must make specific provisions in advance to exploit the opportunities that tactical success will create.

Combat Imperatives

1. Insure unity of effort.
2. Direct friendly strength against enemy weakness.
3. Designate and sustain the main effort.
4. Sustain the fight.
5. Move fast, strike hard, and finish rapidly.
6. Use terrain and weather.
7. Protect the force.

APPENDIX B - FIVE RULES OF COMBAT

The following five rules of combat are taken verbatim from FM 71-1J (Draft) The Tank and Mechanized Infantry Company Team (1985), p. 1-4. See also, FM 7-7, The Mechanized Infantry Platoon and Squad (1985), p. 1-1, and FM 7-7J (Final Draft), The Mechanized Infantry Platoon and Squad (Bradley) (undated), p. 1-1.

Move.

- Establish moving elements.
- Get in a better position to shoot.
- Gain or maintain the initiative.
- Move fast, strike hard, finish rapidly.

Shoot.

- Establish a base of fire.
- Maintain mutual support.
- kill or suppress enemy.

Communicate.

- Keep everyone informed.
- Tell the leaders and soldiers what is expected.

Secure.

- Use cover and concealment.
- Establish local security and conduct reconnaissance.
- Protect the unit.

Sustain.

- Keep the fight going.
- Take care of soldiers.

ENDNOTES

1. U.S. Department of the Army, Operations. FM 100-5 (Draft) (July 1985), o. 2-25.
2. Trevor N. Dupuy, A Genius for War: The German Army and General Staff 1807-1945 (Fairfax, Va.: Hero Books, 1984), pp. 253-254.
3. Martin L. Van Crevelde, Fighting Power: German Military Performance 1914-1945 (Westport, Conn: Greenwood Press, 1982), pp. 28-29, 36-37.
4. Hew Strachan, European Armies and the Conduct of War (London: George Allen and Unwin, 1983), pp. 92-93.
5. F.O. Mikshe, Atomic Weapons and Armies (New York: Da Capo Press, 1942), pp. 61-62; Dupuy, p. 134; Strachan, p. 128.
6. Walter von Lossow, "Mission-Type Tactics versus Order-Type Tactics," Military Review (June 1977), pp. 87-88; Dupuy, pp. 116, 307; Van Crevelde, pp. 35-36.
7. Dupuy, pp. 255, 301-305.
8. Timothy T. Lupfer, "The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War" (Combat Studies Institute, U.S. Army Command and General Staff College, 1981), pp. viii, 8-12, 39-42; Dupuy, p. 170.
9. Lupfer, pp. 11-21.
10. Lupfer, pp. 41-42; Dupuy, pp. 170-171.
11. Trevor N. Dupuy, The Evolution of Weapons and Warfare (Fairfax, Va: Hero Books, 1984), pp. 225-229; John Allan English, A Perspective on Infantry (New York: Praeger, 1981), pp. 19, 22; Paddy Griffith, Forward Into Battle: Fighting Tactics from Waterloo to Vietnam (Sussex, Great Britain: Antony Bird Ltd, 1981), pp. 78-81.
12. Lupfer, p. 19.
13. English, pp. 19-20.
14. Jonathan M. House, "Towards Combined Arms Warfare: A Survey of 20th Century Tactics, Doctrine, and Organization" (Combat Studies Institute, U.S. Army Command and General Staff College, 1984) p. 35.
15. Lupfer, p. 57.
16. Samuel J. Lewis, "Forlorn Hope: German Army Infantry Policy, 1918-1944," Doctoral Dissertation (University of California, Santa Barbara, 1983), pp. 45, 105.
17. Dupuy, Genius, p. 214.
18. Description of German blitzkrieg compiled from the following sources: F.O. Miksche, Attack: A Study of Blitzkrieg Tactics (New York:

Random House, 1942), pp. 6-7; Dupuy, Genius, p. 254; English, p. 76; Strachan, p. 160. All of these sources agree that the fundamental concepts of blitzkrieg were the same as those of the World War I infiltration attack.

19. Lewis, p. 80; Dupuy, Genius, p. 240. Guderian was a driving force behind the development of blitzkrieg, but his work was done within the framework of the General Staff doctrine development process. There was some disagreement between Guderian and his fellow General Staff officers, but he was usually aided and encouraged in his efforts to develop Panzer forces. Although the Germans studied and used concepts of mobile armored force doctrine from other countries, most historians agree that by the late 1920's or early 1930's Guderian and his colleagues had far surpassed developing theories in other countries. The most unique and advanced features of the German doctrine concerned panzer formations as massed, fully motorized, multi-corps forces of all arms to include maintenance and supply services.

20. Lewis, pp. 150, 170, 175, 176.

21. Lupfer, pp. 37-38.

22. Sources for Rommel at Caporetto: Erwin Rommel, Attacks (Vienna, Va: Athena Press, 1979, originally published in German, 1937), pp. 201-276; David Irving, Trail of the Fox (New York: Avon, 1977), pp. 18-23.

23. Sources for Rommel in France, 1940: Erwin Rommel, The Rommel Papers, ed. B.H. Liddel Hart (New York: Da Capo Press, 1953) pp. 3-68; Irving, pp. 53-69. Rommel does not acknowledge using anyone's tactics but his own, but he was not known for sharing credit. His own descriptions of operations in both these campaigns clearly show utilization of standard German attack tactics combined with a touch of the Rommel genius.

24. English, p. 68.

25. Lupfer, p. 56.

26. Material in this paragraph compiled from the following sources: Van Creveld, pp. 28-29; Lewis, p. 148; Rommel, Rommel Papers, pp. 124-134.

27. Dupuy, Genius, pp. 236-237; Van Creveld, p. 28.

28. Ibid. p. 286.

29. Material on the training of German officers and NCO's compiled from the following sources: Infantry Journal, "The German Soldier" (Washington, 1944), p. 66; U.S. War Department Military Intelligence Service, "German Military Training" (September, 1942), p. 26; Van Creveld, pp. 137-139.

30. Dupuy, Genius, p. 304; English, p. 144. See also, "German Military Training," p. 29.

31. Lewis, p. 156.

32. English, p. 79.
33. Van Creveld, pp. 128-129.
34. Lewis, p. 110.
35. Material on German small unit training compiled from the following sources: Lupfer, pp. 23, 46-47; Van Creveld, pp. 72-73; "The German Soldier," p. 46.
36. English, p. 80.
37. Material on integration and cooperation of different arms in German small unit training compiled from the following sources: "German Military Training," pp. 27-28; Van Creveld, pp. 72-73; U.S. War Department Military Intelligence Service, "The German Squad in Combat," translation of German training manual (Washington, 1942) pp. 23-32.
38. "German Military Training," p. 90.
39. Lupfer, p. 56; Dupuy, Genius, p. 305.
40. Dupuy, Genius, pp. 4, 294-295.
41. Ibid. p. 254-255.
42. Van Creveld, p. 129. See also. Dupuy, Genius, p. 298.
43. B.H. Liddel Hart, The German Generals Talk (New York: W. Morrow, 1948), p. 94.
44. Erich von Manstein, Lost Victories (Chicago: H. Renery, 1958), p. 18.
45. English, p. 144.
46. Lewis, pp. 180, 240.
47. Ibid. p. 227.
48. Friedrich Wilhelm von Mellenthin, Panzer Battles: A Study of the Employment of Armor in the Second World War (New York: Ballantine, 1956), p. 278-281. See also. English, p. 109.
49. Lewis, p. 170.
50. Van Creveld, p. 111.
51. Dupuy, Genius, p. 304.
52. Material on small units executing the combined arms concept compiled from the following sources: Wilhelm Necker, The German Army Today (London: F. Howard Doulton Ltd, 1943), preface and p. 101; English, pp. 89, 112; Van Creveld, p. 44.
53. Ritter von Havenssheld, "Training Guidelines for Armor Commanders" (originally issued to German Armor School students in March, 1944.

reprinted by U.S. Army Training and Doctrine Command, 1983). See also, Lewis, pp. 157-158.

54. "German Military Training," p. 46.

55. English, pp. 72-74.

56. U.S. War Department Military Intelligence Service. "The German Motorized Infantry Regiment," translation of 1941 German manual (Washington, 1942), pp. 7, 24.

57. Material on German small unit execution of defense compiled from the following sources: "Manual for Command and Combat Employment of Small Units (Based on German Experiences in World War II)," prepared by a committee of former German officers (Department of the Army, Office of the Chief of Military History, 1952), p. 17; "The German Squad," p. 14-16; English, p. 144.

58. U.S. War Department Historical Division. "Small Unit Actions" (Washington, reprinted 1982), pp. 119-178.

59. Material on German small unit attack compiled from the following sources: Necker, pp. 23, 26, 30, 59-62, 80; "Manual for Command and Combat Employment of Small Units," p. 112; "The German Squad," p. 105; Lewis, p. 172; English, p. 75.

60. William E. Dupuy. "One Up and Two Back." Army (January 1980). Dupuy's material on Rommel's attack techniques comes from Rommel's book, Attacks.

61. Balkemore. Porter Randall. "Manstein in the Crimea: The Eleventh Army Campaign, 1941-1942," Doctoral Dissertation (University of Georgia, Athens, 1979) pp. 12-3-1 through 12-3-10. This paragraph describes the Eleventh Army's reduction of the southern Perekop peninsula, near Issum.

62. Dupuy, Genius, p. 302.

63. Robert A. Doughty. "The Evolution of U.S. Army Tactical Doctrine 1946-1976" (Combat Studies Institute, U.S. Army Command and General Staff College, 1979), pp. 1, 46-48.

64. Ibid.

65. John L. Romjue. "From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982" (Historical Office, U.S. Army Training and Doctrine Command, 1984), p. 55.

66. Ibid. Forward by LTG Richardson, TRADOC Commander.

67. U.S. Department of the Army, Operations, FM 100-5 (Washington: U.S. Government Printing Office, 1982), pp. 2-1 through 2-3. See also, FM 100-5 (Draft, 1985), pp. 1-12 and 2-25. The tenets and combat imperatives of AirLand Battle doctrine are virtually identical in both of these documents.

68. FM 100-5, p. 2-1. See also FM 100-5 (Draft, 1985), p. 1.

69. Ibid. pp. 1-1 through 1-2.
70. Ibid. p. 2-1. See also, FM 100-5 (Draft, 1985) p. 2-10.
71. Ibid. p. 2-6.
72. The U.S. Army field manuals and circulars referred to in this paragraph include the following: Combined Arms Live Fire Exercise, FC 71-4 (1985); Fire Coordination Exercise, FC 71-5 (1985); Training, FM 25-1 (1985), Unit Training Management, FM 25-2 (1984); Division 86 Tank-Heavy Company Team ARTEP Mission Training Plan, FC 17-16-1 (1984).
73. FM 100-5 (Draft, 1985), p. 1-10.
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75. Ibid.
76. "U.S. Army Command and General Staff College Catalogue. Academic year 1985-1986," pp. 56, 58.
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79. U.S. Department of the Army, The Tank and Mechanized Infantry Company Team, FM 71-1J (Draft, 1985), p. 2-20.
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