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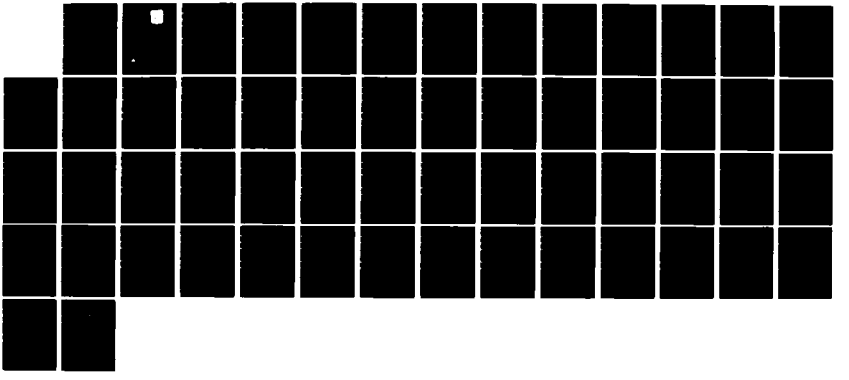

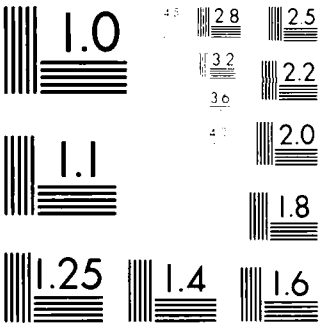
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STUDY PROJECT

ANTITANK TACTICS FOR THE LIGHT INFANTRY: CAN HISTORY HELP?

BY

LIEUTENANT COLONEL RICHARD L. ST. JOHN

7 APRIL 1986

US ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013

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Although designed primarily for low intensity scenarios, the Light Infantry Divisions can also operate in mid-to-high intensity environments, if properly augmented against an armor threat. But, what if the light units are employed in the defense, without augmentation, against such a threat? This paper addresses the adequacy of current doctrine in providing guidance for this particular situation. The methodology includes an analysis of current and past doctrine as well as a study of lessons learned from selected battles in history.
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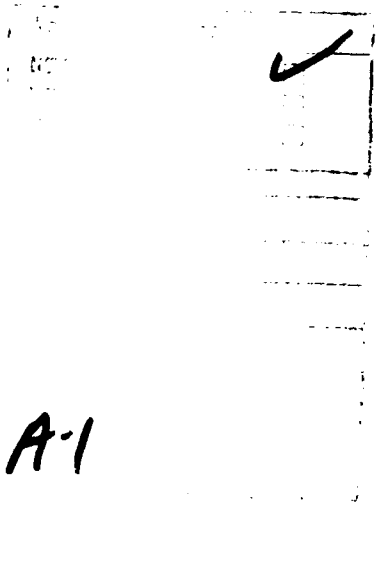

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USAWC MILITARY STUDIES PROGRAM PAPER

ANTITANK TACTICS FOR THE LIGHT INFANTRY: CAN HISTORY HELP?

AN INDIVIDUAL STUDY PROJECT

by

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7 April 1986

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ABSTRACT

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Although designed primarily for low intensity scenarios, the Light Infantry Divisions can also operate in mid-to-high intensity environments, if properly augmented, against an armor threat. But, what if the light units are employed in the defense, without augmentation, against such a threat? This paper addresses the adequacy of current doctrine in providing guidance for this particular situation. The methodology includes an analysis of current and past doctrine as well as a study of lessons learned from selected battles in history. Basically, current doctrine provides ample guidance for Light Infantry commanders on utilization of terrain, deployment of units and weapons, and other actions to be taken during the preparation phase of the defense. However, it is lacking in its treatment of actions to be taken during the conduct of the defense. Specifically, current doctrine should be revised to address: command and control, engagement criteria and massing fires, offensive actions by the defender, and continuation of the defense when enemy tanks penetrate the defensive positions.

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CHAPTER I

INTRODUCTION

BACKGROUND

On 16 April 1984 the Chief of Staff of the Army, General John A. Wickham Jr., directed the development of the finest light infantry division the US Army could field. This commitment to a new structure for selected infantry divisions was based on realization that:

*There is a place, in fact an important need, for highly trained, rapidly deployable light forces in our inventory of units. General Wickham points out operations in the Falklands, Grenada, and Lebanon by the Israelis as recent examples.[1]

*One of the Army's missions is to respond to threats to US interests anywhere in the world.[2] Through the years this threat has become more diverse and complex, with fighting Soviet Third World surrogates becoming more likely than fighting the Warsaw Pact Forces.

*Over the past 30 years, the US force structure has become progressively heavier as part of a broad modernization program and continued emphasis on the defense of NATO.[3] Strategic deployability has been traded off for battlefield capability in the European theater.

In the face of these strategic realities, it was clear that light forces with great flexibility and inherent deployability were required to meet our future needs. Hence, the order went out for the creation of "Light Infantry Divisions".

REORGANIZATION

The changeover from the current, or motorized, Infantry Division to a Light Infantry Division can best be described by examining three distinct areas in the reorganization process- structure, training, and morale- using the 7th Infantry Division (Light), the Army's first, as an example.

The Division was reduced from approximately 13,500 personnel to less than 10,000. With the reduction in personnel came a greater than 50% reduction in vehicles and heavy weapons. The changes experienced by an Infantry Battalion can best illustrate the extent of these reductions. From approximately 800 soldiers and over 100

vehicles, a typical Infantry Battalion was reduced to 559 soldiers and only 34 vehicles.[4] Even more drastic was the loss of heavy weapons:

	STANDARD INFANTRY BATTALION	LIGHT INFANTRY BATTALION
4.2" MORTARS	4	0
81mm MORTARS	9	4
TOW SYSTEMS	18	4
DRAGON SYSTEMS	27	18

With the reductions as shown above, the *Division* quickly reached a level of strategic deployability unheard of even with our own Airborne Divisions. Compared to current Infantry Division, as shown below, the Light Infantry Division could deploy in 1/3 the number of C141 equivalent sorties and in 1/3 the time.[5]

	STANDARD INFANTRY DIVISION	LIGHT INFANTRY DIVISION
SORTIES (C141)	1443	478
SHORT TONS	31,260	12,837
CLOSURE TIME	12.4 DAYS	4.0 DAYS

Along with the reorganization came additional training time and a renewed emphasis on traditional light infantry subjects, such as night operations, patrolling, ambush, raids, hand to hand combat, and marksmanship, in a low intensity environment. Additionally, a cadre of Ranger instructors from the US Army Ranger School at Fort Benning, Georgia was formed to assist unit commanders in their efforts and to develop high quality, rigorous training events such as those shown below:

*Light Leaders Course- A 28 day course on small unit tactics, conducted at Fort Benning, Georgia by the Ranger Department for infantry leaders.

*Rites of Passage- A 5 day basic skills course, conducted at Fort Ord, California by Ranger cadre and selected unit leaders for all soldiers in the unit. This event would become the first of many efforts to develop a feeling of eliteness in the Division.

*Light Fighter Program- A 21 day traning period on advanced light infantry tactics/techniques, conducted at Fort Hunter Liggett, California primarily by the unit's chain of command for small units in the battalion.

*School of the Bayonet- A 14 day pre-Ranger School course, conducted at Fort Ord, California by Ranger cadre

for selected small unit leaders on their way to the Ranger School at Fort Benning, Georgia.

Additional time and effort was expended by all members of the chain of command to instill a sense of pride, cohesion, confidence and eliteness far beyond that already enjoyed by the 7th Infantry Division. The goal was to develop soldiers and units renowned for their toughness, proficiency at independent operations on the battlefield and unshakeable determination in the face of hostile enemy or environments. In sum, the Division wanted to be characterized much like the United States Airborne units were during World War II- audacious, tenacious, and courageous.

CAPABILITIES

As published in the most recent Light Infantry doctrinal literature, light infantry battalions and brigades can[6]

*Conduct offensive and defensive operations, especially at night, in all types of environment.

*Conduct independent small unit operations.

*Command and control widely dispersed organic forces as well as augmenting forces.

*Conduct air assault operations.

*Conduct rear battle, when provided with ground or air transport.

*Participate in amphibious operations.

*Operate in conjunction with heavy forces.

*Conduct MOUT operations.

VULNERABILITIES

The austerre structure of Light Infantry units makes them vulnerable to:[7]

*NBC attack.

*Attack by heavy forces in open terrain.

*Attack by heavy artillery.

*Air attacks.

EMPLOYMENT

Although primarily designed for low intensity scenarios the Light Infantry Division can also:

*Operate, with little or no augmentation, in mid-to-high intensity, with an armor threat, scenarios if employed in areas that would be unfavorable to heavy forces, such as urban areas or mountains/heavy forests.

*Operate, with significant augmentation of engineers, AT capability, and transportation to name just a few from Corps assets, in mid-to-high intensity scenarios, with an armor threat, alongside of our heavy forces.

Conversely, it is widely recognized that there are also certain limitations to the Light Infantry Division's design such as limited mobility and AT capability. These structural tradeoffs in the name of strategic deployability preclude its employment on suitable armor terrain alongside our heavy forces without augmentation. Perhaps, the chart shown below can best summarize its employment capabilities.

SCENARIO	WITH AUGMENTATION	WITHOUT AUGMENTATION
LOW	YES	YES
MID-HIGH	YES	YES-if on close terrain NO-if on suitable armor terrain

CHAPTER II

STUDY DESCRIPTION

PROBLEM STATEMENT

As can be seen from the preceeding discussion, the Light Infantry Divisions are designed to be employed in specific scenarios suited to their capabilities. When the enemy's capabilities, in conjunction with suitable armor terrain, exceeds those of the Light Infantry Division, appropriate augmentation should be made available from Corps resources to improve the ratio. But, what if circumstances dictated the employment of a Light Division in an unfavorable situation ie: one in which they were neither designed nor trained for? What if, they found themselves in a mid-high intensity environment, without any augmentation, and faced with a significant armor threat on suitable armor terrain? Impossible, you say? If you are inclined to think that optimistically, then consider the following:

*History is replete with examples of light forces being thrown into battle regardless of their capabilities or the threat because our commanders felt they had little choice -- defeat or victory hung in the balance. For example, little or no thought was given to the 101st Airborne Division's limited capabilitiess to face armor when in World War II on the evening of 17 December 1944, the word went out to the 101st Airborne Division, as part of the SHAEF Reserve, to begin movement to counter a surprise German attack. Their mission would eventually take them to a small, crossroads town near the Ardennes called Bastogne to help block the last great German offensive of World War II.[8]

*History also reveals that forces can be tailored, according to the best available intelligence reports, for commitment to an area only to find the enemy situation changed so that the original task organization is totally inappropriate to meet the threat. The dilemma of the British 1st Airborne Division at Arnhem during Operation Market Garden comes to mind in this instance. The British 1st Airborne Division made an airborne assault in September 1944, to seize key bridges in the Dutch town of Arnhem, expecting to meet light resistance from rear echelon troops. Actually, they found themselves fighting elements of the II SS Panzer Corps, which had recently arrived in the area

forrest and recuperation and which appeared in no Allied intelligence reports -- an unfortunate but all to common occurence in battle.[9]

*Even when the situation is not at a critical stage, many commanders have found it difficult to resist the temptation to employ elite forces in conventional roles simply because they were available in the Theater of Operations. In fact, the longer that elite forces remain in theater, the more likely it is that they will be used for missions other than those for which they initially were designed.[10] Certainly the use of Ranger units in front-line, conventional operations during the Korean War substantiates this theory.

*Virtually every Army in the world has armored vehicles and units in their force structures, with the Soviet third World surrogates generally more advanced than most. For example, Nicauragua currently possesses five Armored Battalions, totalling approximately 120 tanks, and expanding as the years pass.[11] Hypothetically, elements of a Light Infantry Division sent to Central America for a low intensity mission could quickly find themselves facing an armor threat should Nicauragua choose to intervene or escalate with armor. Thus, while the overall campaign could be considered low intensity and within the design

capabilities of the Light Infantry structure, the Light Infantry Battalion or Brigade Commander facing this Nicauraguan force finds himself in a mid intensity, armor heavy environment in which his unit is not designed to operate.

PURPOSE OF STUDY

The dilemma, as explained above, is clear. It may never happen. But, based on history, the modernization/ mechanization of Armies and the whims of lady luck, I think it will. What is not clear, however, is what does a commander in the Light Infantry do if put into this situation ie: faced with an enemy armor formation on fairly open terrain and without heavy reinforcements? How should he employ his forces? Is this situation covered in doctrine? If not, where can he turn? From these questions comes the purpose of this project. Specifically, this project is designed to provide insights/ options to current and future light infantry leaders on how to overcome the lack of Antitank capability in their units when faced, all alone, with an armor/ mechanized force.

METHODOLOGY

The approach taken in this project will be two-fold, from a doctrinal as well as historical perspective:

*First, both past and present doctrine will be analyzed for guidance on the employment of light forces to meet an armored threat.

*Second, historical examples of light forces in contact with armored forces will be examined to determine if they support past or present doctrine; or, if they provide options which for some reason have failed to be captured in the doctrinal sources.

*Finally, the findings will be summarized and the doctrinal foundation combined with the historical perspective to provide recommendations for Light Infantry doctrine writers in the future.

SCOPE

This project is not meant to be a comprehensive study of all Light Infantry antiarmor doctrine and all battles against armored formations since the advent of the tank. Nor, is it designed to be a panacea for antiarmor warfare at all levels, from the foxhole to Corps tactical operations center. Rather, because of time and research constraints,

the scope of my effort has been confined to the areas shown below:

*Only US doctrine is used in this study.

*Historical examples are drawn from both sides during World War II due to the excellent documentation of large numbers of Light Forces, mostly airborne, thrust into battle against armor formations.

*The focus is on Battalion to Brigade/Regimental Light Forces and not on small unit operations, individual techniques or large scale formations at Division level or higher.

*Only defensive doctrine and historical examples are used.

CHAPTER III

DOCTRINAL FOUNDATION

GENERAL

Doctrinal sources for Light Infantry units, at the Battalion to Brigade/ Regimental level, can be grouped into three distinct eras:

Current doctrine. The main source was devveloped by the Light Infantry Task Force at Fort Benning, Georgia and published in Field Circular 7-13, Light Infantry Battalion and Brigade Operations and Battalion ARTEP Mission Training Plan (AMTP) in November 1985. This and other publications of the Light Infantry Task Force are the primary doctrinal sources for tactical training in the 7th Infantry Division (Light) and other units in the process of converting to Light Infantry.

World War II Era. Field manuals from both 1942 and late 1944 are included in the study. Thus, our doctrine at the beginning of the war can be compare to that developed

later in the war based on combat experience in Africa, the Pacific, Italy, and Europe.

Korean War Era. Field manuals from both 1950 and 1959-1962 are included in the study. As in the case with the World War II era analysis, this provides insights into doctrine before the war as well as that developed after we faced Chinese Communist tanks.

CURRENT DOCTRINE

Defensive Fundamentals. According to FC 7-13, Light Infantry defenses must, in general terms, be dynamic in nature and incorporate the tenents of airland battle, as shown below, into the defensive framework:[12]

*Seize the initiative locally. A premium is placed on command and control, allocation of combat power, risk taking, and small unit operations.

*Emphasize depth in positioning friendly forces as well as in attacking the length of the enemy formations.

*Maintain agility by controlling the pace of the battle. Effective moves and countermoves within the battle area prevent the enemy from massing and create opportunities for destruction of isolated enemy forces.

*Synchronize all available assets to rapidly mass decisive combat power at the critical time and place.

Antiarmor Doctrine. FC 7-13 identifies two types of heavy threats to Light Infantry- pure mounted formations and dismounted infantry with armor. A generic Light Infantry defense against a mounted heavy force is described as follows:

> "Deny them the use of their speed and firepower and they become vulnerable. Slow the enemy down by drawing him into close and restrictive terrain. Emplace obstacles at chokepoints and kill zones. Ditches, craters, abatis, and destroyed bridges are only some of the techniques you can use. Reduce his capability to deliver effective fire by using surprise and limiting visibility. By striking quickly and moving before he recovers, you can effectively avoid accurate, coordinated d. ect fires. Always employ good camouflage and concealment in your positions. Indirect fires can be used to destroy light vehicles and force heavier armored vehicles to button up, which reduces their ability to see drastically. They become extremely vulnerable to flank attacks with antiarmor weapons and tactics. Use terrain and obstacles to take away his speed and firepower, and cause him to

dismount. When he dismounts, attack him rapidly to destroy his force during this vulnerable period. Do not give him the chance to organize for dismounted operations against you."[13]

When faced with an attack by dismounted as well as mounted forces, FC 7-13 has this to say:

"When facing a combined arms force, you must separate the soldiers from their vehicles. This strips the infantry from its protection and firepower. It provides two separate and vulnerable targets which can be destroyed piecemeal."[14]

It is not until the end of the defensive chapter in FC 7-13 that any specifics are presented in a section titled- "Light Infantry Defensive Operations in the Mid to High Intensity Conflict." Even then, only one paragraph is allocated to unaugmented Light Infantry against armor while the remaining five paragraphs address a friendly light/ heavy mix in the defense. But, the one paragraph does offer some guidance which is summarized below:[15]

*Emphasize the use of proper terrain, terrain reinforcement and positioning.

*Utilize the "seamless web" technique. When used against heavy forces, this technique calls for maximum use of night operations and antiarmor ambushes. Other

characteristics of the "seamless web" defense are as follows:[16]

*Positions established off of natural lines of drift, yet providing complete coverage of the natural lines of drift.

*Mutual support between positions.

*Does not allow enemy to focus effort on the total defense at one time.

*Concentrate firepower against the enemy in an engagement area.

*Obstacles slow, stop and channelize the enemy into the engagement area.

*Supporting positions deliver direct fires into flanks or rear of any attacker.

Analysis. While some effort has been made to address the subject of Light Infantry against armor formations in open terrain in a broad sense, few specifics are provided. In general terms, the doctrine's strongpoints are its emphasis on utilizing terrain to conceal and protect friendly forces while slowing, stopping or channelizing the enemy, the basing of tactics on known Light Infantry strengths such as night operations and offensive, small unit actions, and the importance of depth in deploying friendly forces and attacking the enemy. However, the doctrine is

lacking in its treatment of "how to conduct the defense". For example,

*What of engagement techniques? Should we engage with all weapons at the longest possible range to extend our killing time, or should all fires be held until the enemy is within range of our shortest range weapons to ensure surprise and shock effect? Where is an attacking formations center of gravity? Is it perhaps, the enemy's command and control vehicles? Should we be concentrating on them?

*No mention is made of the command and control of our own widely dispersed small units, some without radios, when circumstances dictate changes to our defense. Perhaps mention of phase lines, signals or pre-arranged time schedules would be appropriate.

*Fire control is yet another area lacking any specifics. Our control of indirect fires through teams attached to Light Infantry units is assumed and in many cases trouble free. But, what of the control of all Dragon/TOW fires in the Battalion to insure flexibility and their quick concentration where needed? Organizationally, the Dragons come under the company commanders while the TOWS belong to the Battalion Commander. Doctrine should provice a basis for their coordination and concentration during combat.

WORLD WAR II ERA

Defensive Fundamentals. During the World War II era the basis for defensive doctrine remained relatively unchanged and centered around holding battle positions at all costs. The infantry's mission in the defensive, with the support of other arms, was to stop the enemy by fire in front of the battle position, to repel him by close combat if he reached it, and to eject him by counterattack if he penetrated.[17]

A typical defense was organized into security forces, holding garrisons, and a reserve. The security forces delayed, disorganized and deceived the enemy before he reached the main positions. The holding garrisons included all units defending the main line of resistance. The reserve counterattacked and occupied positions to block penetrations or flank attacks.[18]

The absolute, uncompromising nature of defensive combat in this era is best described by a passage from Field Manual 7-20, Infantry Battalion which states:

> "The success of the defense depends upon the holding of its assigned area by each unit down to and including the rifle squad. Each unit entrusted with the defense of a tactical locality must defend it to the last man,

unless otherwise ordered by higher authority."[19]

Antiarmor Doctrine. Called antimechanized defensive measures, the specifics of World War II Era antiarmor doctrine, between that used at the outbreak of war and that developed after serveral years of experience, differed little in the measures taken prior to battle, but significantly in the conduct of the defense. World War II Field Manuals generally contain guidance in three areas: antimechanized warning system, passive security measures and the actual conduct of the defense. In all cases, the antitank unit commander was responsible for the coordination of all three areas under the direct supervision of the commanding officer.

*Warning system. Signal communications, observation posts, and all reconnaissance and security elements were included in the system and coordinated with higher and adjacent units. Obviously, early warning of a mechanized threat was the goal.

*Passive measures. Positions were located to take advantage of concealment, cover, and natural obstacles. Artificial obstacles were used, in depth, to strengthen natural obstacles, and fill gaps. Antitank minefields, installed by the infantry, were the most prevalent form of artificial obstacle. Obstacles were coordinated with

antitank fires and assigned a traffic warning patrol to prevent damage to friendly vehicles.

*Conduct of the defense. The primary mission of the antimechanized defense was to stop hostile tanks before they reached the main line of resistance. The commander controlled the fires and prescribed the conditions under which the antitank guns would fire. Premature firing of weapons on enemy reconnaissance vehicles was to be avoided. In 1942, the units antitank guns were used exclusively against enemy armor. Also, during the attack any soldier not equipped with antitank weapons took cover in the foxholes or emplacements to keep from being crushed. Once the enemy tanks passed, they popped up and resumed the fight.[20] By 1944, experience on several fronts had changed the emphasis somewhat. First, secondary missions were given to antitank guns to include enemy antitank guns, other crew served weapons, bunkers and other point targets. Second, defending riflemen and machine gunners were to fire at vision slits of tanks and exposed personnel, particularly accompanying infantry. Only then were they to take cover and then, just as in 1942, pop up to resume the battle.[21]

Analysis. While current doctrine is strong on measures to be taken before the enemy attacks, World War II ear doctrine spends less time on deployments but more on the

conduct of the defense. However brief it may appear to be, the doctrine towards the latter part of the war did address fire control, engagement criteria and actions of all soldiers during the attack. The key point to be made in the analysis is the brevity of the doctrine. In relation to the numbers of infantry versus armor engagements during World War II which could have provided valuable lessons, the antiarmor doctrine appears to touch only the surface. It is unfortunate that more thoughts, based on combat, were not captured by the doctrine writers. It would have been especially valuable today in light of recent mechanization efforts worldwide.

KOREAN WAR ERA

Defensive Fundamentals. In the 1950's the "hold at all costs" defensive doctrine for infantry units continued unchanged until after the Korean War. By 1959, our doctrine had broadened to include a mobile or fluid defense which envisaged decisive combat occuring either forward of, or within, the battle area [22] -- a radical departure from the last 20 years. This fundamental shift in defensive philosophy also led to an expansion of the basic considerations for a defense as shown below:

1950[23]	1959[24]
Organization of key terrain	Proper use of terrain
Mutual support	Mutual support
All around defense	All around defense
Defense in depth	Defense in depth
Coordinated fire plan	Coordinated fire plan
Coordinated AT plan	Coordinated AT plan
Flexibility	Flexibility
	Proper use of Barriers
	Maximum use of offensive action
	Dispersion

Antiarmor Doctrine. At the start of the Korean War, antiarmor doctrine for infantry units highlighted the use of smoke to blind the attackers, continued the emphasis on all weapons/ individuals participating in the defense and made special mention of separating the enemy infantry from the tanks, isolating and then destroying them. For the first time, all mention of the anti-mechanized warning system was dropped.

By the late 1950's, the doctrine had expanded somewhat, with the primary emphasis still on separating the enemy tanks and infantry and canalizing the enemy tanks into areas of our choosing. Additionally, the doctrine revisited the fire control aspect of antiarmor doctrine by expousing

engagement at the longest ranges possible and keeping control of company AT weapons at company level.

Analysis. The trend towards a brief discussion of both deployment of forces and barriers before the attack and the actual conduct of the defense continued in the 1950's. However, its major shortcoming is the same as the World War II doctrine- brevity. A more comprehensive and detailed doctrine should have been produced.

CHAPTER IV

HISTORICAL PERSPECTIVE

GENERAL

While a comprehensive review of all light infantry actions involving defensive combat against tanks could not be undertaken, sufficient sources were reviewed to develop a relatively clear understanding of the general nature of this type of combat and the measures taken by the defending forces. In past years, as is the case today, the most dangerous threat, and the one addressed in this study, was a coordinated tank/ infantry attack supported by artillery. It is within this context that the measures taken by the defending forces will be addressed. These measures, some of which can be considered as tactics/ techniques and perhaps not appropriate for doctrinal literature, are loosely grouped into the areas shown below and explained in more detail in this chapter. By no means is this chapter a complete treatment of the defense. Basic considerations

such as mutual support, counterattack, priority of work, etc. are not addressed. Rather, this paper attempts to key on measures taken that are unique to defending against tanks or at least important enough to be highlighted. That is not to say that they could not be employed with equal success in defending against other types of threats.

*Preparation/ Deployment- Measures taken before the battle starts to position light infantry forces, for protection and concealment, and to deceive, delay, and disorganize the enemy once he arrives on the battlefield.

*Conduct of Defense (Before the Main Battle)- Offensive actions taken against the enemy, before he arrives as a coordinated force in the main battle area, to destroy his coordinated effort, disrupt his timing and generally to keep him from attacking at a time and in the formation of his choosing.

*Conduct of Defense (During the Main Battle)- Combat actions taken to destroy the enemy force once he arrives in the main battle area.

PREPARATION/ DEPLOYMENT

Before the battle began commanders of the past went to great lengths to understand and utilize the terrain to their

advantage. It appears that personal reconnaissance, sometimes even from the enemy side, by the commander was a common factor. Among the key factors of terrain analysis, the commanders looked for:

*Tank proof terrain. Terrain which they could defend from successfully, yet terrain on which enemy tanks could not move or move only with great difficulty. Examples: Destroyed villages/towns and steep or heavily wooded hillsides.

*Natural chokepoints. Points along roads, trails and natural lines of drift at which roadblocks/ obstacles could be placed and the enemy could not find maneuver room to either side. The point should be made that these roadblocks are useless without fires to destroy the enemy vehicles once they arrive. Without fires to cover the obstacles, it becomes only a minor nuisance to the enemy to be cleared and crossed quickly. In his book On to Berlin, LTG James M. Gavin (RET) includes an excerpt about a successful application of this technique. Elements of the 1st Battalion, 505th Airborne Infantry Regiment stopped a reinforced German Regiment of tanks and truck mounted infantry near Ste.-Mere-Eglise shortly after the Normandy invasion. Knowing the enemy would approach in column, the 505th set up a roadblock with mines, covered by the fires of

two bazooka teams. When the enemy column was 40 feet from the mines, it stopped to investigate. At this time, the defenders destroyed the lead tank, effectively blocking the bridge and nullifying the shock action/ firepower of the enemy tank column.[25]

*Reverse slope. Our forces in World War II quickly learned that the backside of a terrain feature, away from the enemy, concealed the defenders from enemy observation, protected the defenders from enemy direct fire and exposed the vulnerable undersides of enemy vehicles to our fires when they came over the crest of the hill. This technique was recognized early on by our airborne units in World War II as key to their survival against tanks, as it was included in many of their after action reports.[26] At the Battle of Beazza Ridge in Sicily, where the 82nd Airborne Division stopped elements of the elite Hermann Goering Division from counterattacking the beachhead and possibly stopping the invasion, the Division Commander, General Gavin defended from the front slope of the ridge but ordered his 75mm pack howitzers onto the reverse slope by saying, "You remain concealed here for the time being. If enemy tanks come over the ridge, you can hit them in their underbellies as they reach the rise."[27] In yet another variation of this same principle, German commanders would

habitually pull their troops away from the forward slopes and front line positions before they calculated the Russians would begin an attack with intense artillery preparations. Only patrols were to remain in the forward area. In this manner, they hoped the enemy would expend his destructive fires on empty trenches, saving the German soldiers for the main battle.[28]

*Trenchlines. Even the construction of defensive positions was accomplished with the threat of tanks in mind. Both sides in World War II soon discovered that a long, straight trenchline was vulnerable to flanking fires from attacking tanks. General Balck, a German Panzer leader, best explained this idea when talking about the innovations of Baron von Hauser, commander of the 11th Panzer Division's Motorcycle Infantry Battalion.

> "Next, he had some good ideas for defending against tank attacks. For instance, the danger in a tank attack is that, if you have a long trench line, the tank will place himself over the trench and will fire down the length of your trench. Hauser laid out his trenches in short, irregular zigs and zags. When the Russian tank arrived, our infantrymen could use the cover of the winding trench to close enough to use magnetic mines or demolitions."[29]

As in any type of combat, deceptions or ruses can play an important role, with antitank warfare as no exception. One classic story deals with a confrontation between Italian tanks and blankets during the Spanish Civil War. During this conflict the miners of northern Spain invented the satchel charge and readily used it in the villages to destroy unprotected Italian tanks. Soon, the Italians became extremely cautious when operating in close terrain, such as villages, where these satchel charges could be employed. In one instance, when retreating Spaniards needed to slow the advancing Italian's a line was strung across a street in the path of the tanks. On this line were hung blankets so as to make a complete screen from one side to the other. Two Italian light tanks arrived and fired their machineguns into the blankets but without success. Next, a medium tank arrived and proceeded to fire his maingun into the blankets. Finally, after half an hour a shot cut the line holding the blankets to reveal the empty street beyond.[30] A simple ruse, yet it served its purpose. Another story is told of an enterprising British company commander in May, 1940 who gained thirty precious minutes respite for his men by placing five white soup plates upside down on the road in the path of the Germans. Thinking that

they were mines, the Germans made a wide detour which gave the British time to clear the area.[31]

Clustering antitank weapons in key locations and protecting them from ground assault with infantry troops was a technique practiced to a great extent by the German Army. As early as 1918 in World War I the Germans were constructing special antitank forts on likely tank approaches. These forts contained as many antitank rifles and mortars as could be found, along with fieldguns if possible. Soldiers manning these forts were specially trained in attacking tanks and were expected to use every possible means to stop them.[32] By World War II, expecially on the Eastern Front, this concept had evolved into a "strong point system" comprised of numerous, mutually supporting and self-sufficient strongpoints deployed in depth throughout the defensive sector. As one veteran of that action, Colonel Emil Shuler, puts it,

> "Although a strongpoint might be lost here and there, the penetration point could mostly be sealed off by flanking fire from the neighboring strongpoints. If the enemy managed a deeper penetration, he could mostly be stopped by minor forces."[33]

CONDUCT OF DEFENSE (BEFORE THE MAIN BATTLE)

Before the enemy forces reached the main battle area, experienced commanders in the defense made every effort to negate the attacker's strengths (attacking with a combined arms team of tanks/ infantry at a predetermined time and place) by striking out early, forward of the defensive positions, with indirect fires and spoiling attacks. Specifically, these efforts included firing artillery concentrations on likely enemy assembly areas to disrupt his plans and delay the integration of enemy units into a combined arms force.[34] In some instances, ground attacks were conducted, mostly at night, of likely enemy assembly areas which, in effect, initiated the battle on the defenders terms.[35] While not usually decisive actions, these "offensive" operations as part of an overall defense did help. In a variation of this idea, at the Battle of Biazza Ridge discussed earlier, LTG Gavin (RET) conducted a spoiling attack from his main battle positions after the battle had been won to keep the enemy off balance and to stop him from developing another coordinated attack.[36] This use of offensive action to "take the fight to the enemy" rather than sitting back and waiting for the blow to fall seemed common in the more succesful units.

CONDUCT OF DEFENSE (DURING THE MAIN BATTLE)

Once the enemy attacked, the most critical part of the battle began. Normally, at this point in the battle, the light forces were faced with superior combat power on the part of the attacker. A simple attrition defense, whereby the defender attempted to slug it out with the stronger attacker, usually ended in defeat. However, a review of a few of the successful World War II actions does reveal certain similarities in the actions of the defenders.

*Assistance. Invariably, the first reaction of light infantry commanders was to look for friendly tanks to assist in the defense. While this may seem such a natural step to take that it shouldn't be mentioned, the following account by LTG Gavin (RET) of his forgetfullness at the Battle of Biazza Ridge shows that simple decisions may be overlooked during the heat of battle. LTG Gavin (RET) states,

> "A member of the regimental staff who was with me, Captain Al Ireland, suggested that he go back to the 45th Division and get help. It was the best idea I had heard all day. I had been so busy handling the tactical crisis I had on my hands that the possibility had never entered my mind."[37]

Records show that CPT Ireland did return later that day with tanks to reinforce the 82nd Airborne Division.

*Total effort. Most accounts of defensive battles by light forces were characterized by the total commitment by all individuals in the defense to killing enemy soldiers and destroying tanks. When faced with tanks everyone was a fighter. All weapons were used, all resources committed and nothing was held back. Whether the enemy tanks/ infantry were in front of, in or beyond the defender's positions the actions of individuals were unceasing, fanatically determined, and exceptionally brave. There were not any clean surgical or neat battles. Rather, the actions were brutal, bloody, chaotic, often fast paced and usually fought at extremely close ranges. It took a highly disciplined, confident and aggressive soldier as a member of a well-trained and cohesive unit to win the battle.

*Separate infantry from tanks. Both German and American sources stressed that the key to success was the separation of the attacking tanks from its accompanying infantry. Alone, each suffered from significant weaknesses. But, together they complemented each other and presented a formidable foe. James Lucas, in his book Panzer Grenadiers illustrates this partnership with a table taken from a 1944 German Army Field Service Regulation.[38]

STRENGTHS OF TANKS	WEAKNESSES OF DISMOUNTED INFANTRY
Protection against	Unprotected

shrapnel	
Inherent fire support	Lack of AT weapons
Speed of attack	No speed
WEAKNESS OF TANKS	STRENGTHS OF DISMOUNTED INFANTRY
Deaf and partial blindness	Hears and sees all
Large target Susceptible to close combat	Small target, highly mobile
No indirect fire capability	Indirect fire capability (mortars)
Dependent on suitable terrain	Can fight on any terrain

In one battle involving a German Regiment defending against a Russian tank attack one after action report states that well placed artillery fire separated the following infantry from the attacking tanks. Since the accompanying infantry was unable to follow, the tanks turned off and withdrew.[39] The importance of breaking up the combined arms team was also recognized by the US Airborne. In one after action report on the combat in Sicily, the statement was made that in the event the tanks do penetrate, they should be permitted to pass through and the infantry following them must be destroyed or driven off.[40] A translation of a German critique sums it up best, "When beating off a tank attack, one must always try to prevent the enemy infantry

from following the tanks by pinning them down so that the tanks alone cannot operate."[41]

*Flank and rear attacks. Whenever possible, light infantry forces moved around the flanks or rear of the attacking enemy columns, recognizing that the enemy's strength and firepower was to his front and that he was vulnerable on the flanks. Whether it was a spur of the moment platoon action of the 1st Battalion, 501st Infantry, resulting in the defeat of a two tank and 200 man enemy force, as reported by S L A Marshall in October 1944,[42] or actions of the 110th Infantry Regiment at the Battle of the Bulge as described below, the tactic was a successful one.

One of the better descriptions of this tactic is contained in the book, To Save Bastogne, which addresses the actions of the 110th Infantry Regiment of the 28th Infantry Division on the first day of the breakthrough.

> "They stayed in place and continued to block the roads. Fighting a delaying battle, supported by limited armor and artillery, individual groups time and again confronted the assault detachments of the attacking German units at dominating heights, at defiles, on both sides of gullies, and on forest paths. They let the attacking parties run into their fire, engaged them in a firefight, made evading

movements with great skill and speed, and then conducted unexpected counterthrusts into the enemy's flanks and rear."[43]

*Fire control. With antitank weapons normally in scarce supply in light infantry units and the desire,as explained earlier, to concentrate fires on one segment of the attacking formation, fire control was a key element to any successful defense. Soldiers were trained to hold fire until certain of their targets, sometimes to within 100 feet of their positions, and to concentrate their fires, especially from antitank weapons, on individual targets. On the Russian front, the Germans quickly learned that a single antitank gun, or a cluster acting independently, were ineffectual against the massive Russian tank attacks. To compensate, groups of up to ten guns were put under the command of one man responsible for concentrating their fires on a single target at a time. Such groups were deployed throughout the battle zone. The idea was to draw the attacking armor into a web of enfilade fire. Fire discipline was of primary importance, and to open fire too early was the gravest mistake that could be made.[44]

SUMMARY

In summary, a common theme throughout most accounts of World War II actions was the necessity, in some fashion, to keep the enemy from attacking with a coordinated attack by a combined arms team of armor/ infantry. It was generally recognized that the strength of an armor attack lay in the combined arms nature of its componenets ie: the infantry complementing the tanks as explained earlier in German training documents, as well as the attack coordinated with other support such as artillery. Therefore, the defender's task was to:

*Disrupt the enemy's timing and efforts to linkukp his tanks/ infantry before the fight reached the main battle positions.

*Separate the enemy infantry from his tanks once the main battle had begun so that each component of the attack could be defeated, in turn, by massed fires.

All other tactics/ techniques and lessons learned supported the accomplishment of these tasks.

CHAPTER V

CONCLUSIONS/ RECOMMENDATIONS

CONCLUSIONS

Our current Light Infantry leaders use FC 7-13, Light Infantry Battalion and Brigade Operations and Battalion ARTEP Mission Training Plan (AMTP) as a guide to prepare themselves and their units for the next war. Should that war include combat against enemy armor/ mechanized units, the doctrine they study now will form the basis for their actions on the battlefield later. Gaps in the doctrinal base could mean costly mistakes in the future. In light of a study of past doctrinal literature and an appreciation of lessons learned from previous wars, I have concluded that:

*Current doctrine provides ample guidance to the commanders on terrain appreciation, deployment of units/ weapons, and other actions to be taken when preparing for the defense.

*It places appropriate emphasis on the utilization of light infantry skills and an offensive spirit when planning and conducting the defense.

*Current doctrine, however, is lacking in its treatment of actions to be taken by the defenders to disrupt the enemy before his main attack deploys and assaults the main battle positions.

*It provides only a cursory treatment of critical elements in the defense, such as command and control and engagement criteria, once the enemy has begun his main attack.

*Current doctrine does not address the likelihood of enemy tanks penetrating the defenders position. As history has shown, this is a situation that frequently occurs. should be included in planning, and should not be allowed to detract from the cohesiveness of the overall defense.

RECOMMENDATIONS

In order to develop a more comprehensive set of guidelines for Light Infantry leaders when faced with a tank threat, my recommendations for the development of doctrine include:

*Reformat doctrine to specifically address actions to be taken in the areas shown below. This will start our leaders thinking of the defense from beginning to end, and not just the preparations and main battle segments.

Preparation/ Deployment

Conduct of Defense (Before the Main Battle)

Conduct of Defense (During the Main Battle)

*Revise current doctrine to include more guidance on the conduct of the defense. For example:

Command and control

Engagement criteria/ massing of fires

Offensive actions before the main battle

Continuation of the defense when, not if, enemy tanks penetrate.

Aditionally, it is important that our future leaders are not surprised by the brutal nature of antitank combat that they may find on future battlefields. Therefore, I propose that our professional development of junior leaders should include summaries of selected battles that convey the chaotic and bloody nature of those actions.

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