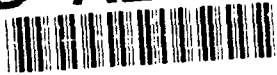


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UNION AND CONFEDERATE INFANTRY DOCTRINE
IN THE BATTLE OF CHICKAMAUGA

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

MASTER OF MILITARY ART AND SCIENCE

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by

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Fort Leavenworth, Kansas
1991

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ABSTRACT

UNION AND CONFEDERATE INFANTRY DOCTRINE IN THE BATTLE OF CHICKAMAUGA by Major Raymond Scott Eresman, USAF, 182 pages.

This study investigates whether the infantry doctrine used by the Union and Confederate armies in the Battle of Chickamauga followed published doctrine and determines what effect infantry doctrine had on the battle.

Beginning with a review of each side's formal doctrine, the study divides the battle into sixty-eight engagements and focuses on organization, formations used, terrain, use of skirmishers, engagement distances, use of breastworks, and engagement results to determine the doctrine used and its impact on the battle.

The armies' organizations and formations indicate that each used a different doctrinal source; Union forces appeared to use Brigadier General Silas Casey's manual while the Confederates used Lieutenant General William Hardee's and Lieutenant General Winfield Scott's manuals. Casey's doctrine gave the Union army greater potential flexibility within their brigade, division, and corps formations, but the cost of that potential was less combat power in the line of battle and vulnerability on the flanks.

Engagement analysis indicates that both sides deviated from tactics by fighting prone during heavy firefights. Union breastworks in this battle were almost invulnerable. The final conclusion is that while initial engagement distances were largely determined by terrain, minimum ranges seemed to be influenced by the increased lethal range of the rifled musket.

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CHAPTER 1

INTRODUCTION

Wars are fought and won by men, not by machines. The human dimension of war will be decisive in the campaigns and battles of the future just as it has been in the past.¹

Today, success on the battlefield requires an army to have a sound tactical doctrine which takes into account current weapons technology. The linkage of tactics to technological changes is not just a recent phenomenon. Despite the ending of the American Civil War over one hundred and twenty-five years ago historians and military analysts still engage in lively debates on the role of tactics in the outcome of the many battles and of the war. In particular, the controversy centers on whether or not the introduction of the rifled musket made massed formations, used so effectively by Napoleon and favored by leaders of both sides of the Civil War, obsolete.

Two recent books examined Civil War doctrine and reached divergent conclusions on the effectiveness of the tactics used by both the North and the South. In Attack and Die, Grady McWhiney and Perry D. Jamieson asserted that the South lost the Civil War because their offensive oriented tactics, used successfully by Americans in the Mexican War,

were much less effective because the rifle had vastly improved the strength of the defense. The Confederates, with their smaller manpower base could not afford the heavy losses that these tactics demanded.² Paddy Griffith, on the other hand, argued in Battle Tactics of the Civil War, that the rifle and entrenchments did not have a significant effect on the outcome of Civil War battles. He contended that human factors in battle were much more important in determining the outcomes of the battles.³ Which is correct? Because both books describe operations which covered the entire war, are the authors making generalizations which may not hold true for specific battles?

The purpose of this study is to examine and analyze the effectiveness of the infantry doctrine used by both sides in only one battle, Chickamauga. I will describe and evaluate the brigade and division engagements of September 19th and 20th, 1863. In particular I will determine what effect the rifled musket and field fortifications had on the tactics used and on the casualties sustained by the two sides in the battle. Finally, I will review the theses presented by the authors of Attack and Die and Battle Tactics of the Civil War in light of the conclusions reached on the battle of Chickamauga.

Tactical doctrine is but one ingredient which determines the success or failure of an army in battle. FM 100-5 lists three elements that the Army believes is

critical to winning battles and wars. First the Army depends on soldiers and leaders with the determination to win. Next it requires a sound, well-understood warfighting doctrine and finally the Army requires sufficient weapons and warfighting equipment.⁴ Timeless in their application, these three components are a good starting point for an analysis of the battle of Chickamauga.

The battle of Chickamauga occurred in the closing days of summer in the third year of the Civil War. Three years earlier, "on 31 December 1860, the strength of the U.S. Army stood at 16,367 officers and men, present and absent."⁵ Many of these resigned and deserted when the Southern states succeeded, but by the beginning of 1863 the Union had approximately 555,958 men present for duty while the Confederacy had approximately 325,000.⁶ Although Congress passed the Draft Act on 3 March 1863 the law did not take effect until July, so all but a very few of the 124,000 men who fought at Chickamauga were there as volunteers fighting for their respective causes.

The rapid expansion of the Union army and formation of the Confederate army posed major training problems for both sides. Although not faced with the challenges of training in today's technological battlefield, both sides nevertheless had to train many raw recruits in the art of war. Civil War leaders had few doctrinal manuals from which to train their people. The major tactical manuals that did

exist, William J. Hardee's being the most popular, were little more than glorified drill manuals translated from French manuals. Several authors, Henry Halleck and Dennis Mahan being the most notable, attempted to apply practically the drill maneuvers in battlefield situations; however, neither side ever developed a comprehensive training program that incorporated drill maneuvers with battlefield scenarios. Although the war had been in progress for some time and many tactical lessons learned, both sides appeared to be using the same tactical doctrine that existed at the beginning of the war.

The North and the South entered the war with a tactical doctrine developed originally for an army using smoothbore muskets. The only previous combat experience for any Civil War leaders was the Mexican War. In the 12 years since that war had ended, the United States Army adopted the rifled musket which used the Minie bullet and percussion cap. This weapon was more accurate and had a longer range than the musket upon which the published infantry tactics were originally designed. During this time interest increased in the use of field fortifications. Whether an answer to the increased effectiveness of the rifle or an answer for effectively using untrained "militia", field fortifications became a common part of every Civil War battlefield.

The Battle of Chickamauga provides an ideal example of determining the impact of the rifle and the use of field fortifications on the infantry tactics used by the volunteer armies of both sides. Fought on September 19th and 20th, 1863, this contest was, by total casualties, the second bloodiest battle of the American Civil War; approximately 37,129 men were killed, wounded, and missing by the end of the battle.⁷

Chickamauga was a battle between opposing infantry formations; the dense woods and heavy undergrowth minimized the impact of both artillery and cavalry. This battle consisted of two entirely different types of engagements. The first, on September 19th, was a meeting engagement where both sides met on the march and jockeyed for position on the battlefield. The second, on September 20th, was a deliberate attack by the Confederates on fortified Union defensive positions. During the battle there were numerous attempts to flank the opposing side's lines, costly frontal attacks and one of the most successful penetrations of a line of battle during the entire war.

A tremendous volume of literature exists to provide background information and support for an analysis of infantry tactics at Chickamauga. The bulk of the primary sources used to analyze the battle were the commanders' battle reports found in the War of the Rebellion Volume XXX. Written within a few days of the battle these reports

provide a point of view not distorted or embellished because of the passage of time. Although these reports are probably the most accurate record of the battle, they lack information needed to fully reconstruct the individual engagements in the battle.

Several reasons account for the reports' failure to give complete accounts of the battle. First, like so many government records, battlefield reports were not written with a consideration for their future historical value. Much information of a tactical nature including troop numbers, casualties, deployments, terrain, and time, are missing. One reason may be that the reports were, for the most part, written to a commander who had been on the battlefield also; the subordinate commanders may not have felt the need to report detailed information the commander already knew. Second, unlike today, there was no standard of time used by everyone on the battlefield. Reports seem to be written using numerous different time references including outright guessing. Third, position awareness was a problem. Most commanders had never been on the battlefield before the fight, and moving through the thick woods and underbrush, they tended to overestimate both distance and terrain contours. This is most apparent in the reports of engagements east of the Lafayette road on the first day of the battle.

There were other reasons for incomplete reports. Incomplete intelligence on one's adversary (i.e. the particular brigade or division) in combination with the limited range of visibility in the woods caused problems when trying to determine who fought in each engagement. Also, many of the brigade and regimental commanders in the battle were killed, wounded, captured, or transferred and their reports were never written or lost. Finally, the reports on both sides appear to have been written to justify and glorify one's own actions. Consequently, tactical successes were magnified, and tactical failures were largely omitted. Very few commanders discussed lessons learned or critiqued performance.

The second most important source of information on the battle are the diaries and letters of soldiers who participated in the battle. In many cases these provide additional perspective and information to help fill in the gaps where reports were incomplete or missing. These writings also suffer from many of the same problems found in using the official records. Often written by enlisted men and company-grade officers they become very focused on action occurring on a small piece of ground and often are vague in reporting tactical information. Many are extremely useful, however, because they are unencumbered by official ego; they candidly report who made what decision and what subsequently happened.

Finally, unit histories, biographies and autobiographies are available which describe the events of the battle. These were the least reliable source of information. Often written decades after the battle they contain information synthesized and sometimes embellished over time from other accounts. Accounts written by or about unit commanders reflect attempts to protect or restore reputations damaged in the battle. Because numerous accounts survive, many conflicts exist in recollections as to precisely where the individual units fought and what happened.

This project is limited to an examination of the skirmishes and engagements which occurred on 19 September and 20 September 1863. To keep the amount of information presented manageable I will discuss the events at the brigade and division levels only; therefore, the thesis will not be a complete account of the battle. Although artillery and cavalry were present and used in the battle, the nature of the battlefield minimized their effectiveness. Analysis of their impact on the battle will not be part of this study. I will use primary source material as much as possible to support my conclusions.

The study contains five chapters. Chapter 1 presents the purpose, background and scope of the project. Chapter 2 describes the development of the infantry doctrine used by the North and the South in 1863. Chapter 3 describes the

meeting engagements of the armies on the 19th of September and Chapter 4 reviews the South's tactical offense and penetration of the Union defenses on the 20th of September. Chapter 5 summarizes the results of the two-day fight, reviews the adequacy of the doctrine used as well as highlights any changes or variations in doctrine. The thesis concludes with a reexamination of Attack and Die and Battle Tactics of the Civil War.

The infantry tactics used by both sides in the battle of Chickamauga are far removed from the tactics of today. Yet, there are lessons that may be learned from that battle which are timeless in nature. If we learn from these mistakes we may not, to paraphrase George Santayana, be condemned to repeat them.

ENDNOTES

- ¹ FM 100-5, (Washington, DC: Department of the Army, 1986), 5.
- ² Grady McWhiney and Perry D. Jamieson, Attack and Die, (Tuscaloosa, AL: The University of Alabama Press, 1982), xv.
- ³ Paddy Griffith, Battle Tactics of the Civil War, (New Haven: Yale University Press, 1987), 27.
- ⁴ FM 100-5, 5.
- ⁵ W. Glenn Robertson, "First Bull Run," America's First Battles, ed. Charles E. Heller and William A. Stofft, (Lawrence: University Press of Kansas, 1986), 133.
- ⁶ Allan Nevins, The War for the Union: The Organized War, (New York: Charles Scribner's Sons, 1960), 6.
- ⁷ Glenn Tucker, Chickamauga: Bloody Battle in the West, (Indianapolis, Bobbs-Merril Co., 1961; reprint, Dayton, OH: Press of Morningside Bookshop, 1984), 389.

CHAPTER 2

THE ARMIES DEVELOP A DOCTRINE

An army's fundamental doctrine is the condensed expression of its approach to fighting campaigns, major operations, battles, and engagements.¹

FM 100-5 describes doctrine as rooted in time-tested theories and principles, yet flexible enough to adapt to changing missions and technology. To be effective, it must be studied and fully understood by all who use it. An analysis of the battlefield engagements at Chickamauga necessarily begins with an understanding of what the opposing sides were trying to accomplish tactically. This is not as easy a task as it sounds. Unlike current military doctrine few manuals existed in the mid-1800s prescribing how an American army should fight engagements, battles, operations or campaigns. Those that did exist, focused on smaller units such as companies and battalions, saying little about how to conduct operations with a large army in a campaign. Another source of knowledge for Civil War armies was experience gained in the Mexican-American War. Since a large portion of the senior officers in the Confederate Army at the beginning of the Civil War previously served in the United States Army, the tactical doctrine they used in the beginning was almost identical to

that of the Union Army. This chapter reviews the development of tactical doctrine before and during the Civil War up to the Battle of Chickamauga.

Since the Revolutionary War American military doctrine traced its formal roots to Europe. In the introduction to his 1863 book, Infantry Tactics, Silas Casey acknowledged the French contribution to American tactics.

The following volumes of infantry tactics are based upon the French ordinances of 1831 and 1845, for the manoeuvres of heavy infantry and chasseurs a pied. Both of these systems have been in use in our service for some years; the former having been translated by Lieutenant General Scott and the latter by Lieutenant Colonel Hardee.²

The Baron Friedrich Wilhelm von Steuben published the first drill manual in 1779. Although this manual was based on a Prussian model, the American military drifted gradually towards the French methods of warfare so that by the time of Waterloo American military leaders were directly copying French ideas. Dennis H. Mahan, one of the early American theorists, explained that "the French systems are the results of a broader platform of experience, submitted to the careful analysis of a body of officers, who, for science and skill combined, stand unrivaled."³

The first major American drill manual based on a French drill manual was the Infantry Tactics or Rules for the Exercise and Manoeuvres of the United States Infantry, published in 1835. Winfield Scott translated an 1831 version of a 1791 French drill book.⁴ Printed in three

volumes, Scott's work successively dealt with individual soldier training and small company movements, movements of the regiment, and movements of a corps of regiments.

According to Scott the basic formation to be used on the battlefield was the line of battle. Beginning at the company level and through to brigade level, the line of battle consisted of two or three ranks of men, each following the other by thirteen inches. This formation was compact; each man was close enough to the person on his side that their elbows touched. The line of battle gave the commander the most firepower along his front. Any deeper formation necessarily shortened the line and prevented those in the rear from firing. Scott provided instructions on another type of battlefield formation, the column. The column formation compacted the line by stacking units to a greater depth. A battalion column, for example, contained five rows of two companies instead of one line of ten. Although this reduced firepower, it gave an offensive line depth to penetrate defensive lines.

To effectively advance in line of battle, not only did the soldiers need to maintain close order, they also needed to march in precise steps and at a regulated cadence. The normal march step was 28 inches, and the normal march speed was 90 steps a minute.⁵ Scott also prescribed quick step which was the same 28 inch step at 110 steps a minute. Because the accuracy of the musket was no better than 50 to

60 yards, these speeds allowed opposing units to safely close while the other side reloaded. Although Scott provided skirmishers a double quick step of 140 steps per minute, he felt that speeds faster than quick step in a line of battle made maintaining alignment extremely difficult.

Scott's manual, as well as Hardee's and Casey's which followed later, was really nothing more than a complicated drill manual and did very little to instruct a commander on how to use the formations on the battlefield. Furthermore, it was difficult to use. In his memoirs, one of the Union brigade commanders at Chickamauga, John Beatty, wrote of the struggle to learn Hardee, an updated version of Scott:

Hardee for a month or so was a book of impenetrable mysteries. The words conveyed no idea to my mind, and the movements described were utterly beyond my comprehension; but now the whole thing comes almost without study.⁶

Although this may seem at first to make the manual a poor basis for infantry tactics, drill served a very useful purpose in the army. Through drill soldiers learned a sense of cohesion and unity that kept them together in ranks under the stress of combat. This esprit de corps was used to "reinforce the impression in the enemy's mind that your men had an irresistibly high standard of organization and training."⁷ In his report on the first day of battle at Chickamauga, Major William D. Williams described his brigade commander's actions after his unit, the 89th Illinois

Infantry, had been thrown in confusion by the enemy's artillery:

At this point Brigadier General Willich came forward, and standing in front of the regiment and amid the shower of bullets poured into us, complimented the regiment for its impetuous advance, calmed their excitement, instructed them how to advance firing and maintain their alignment with the advance of the brigade, and by his own inimitable calmness of manner restored order and confidence in the regiment, and after dressing them and drilling them in the manual of arms for a short time, ordered them to advance about 30 paces to the edge of an open space. They did so in good order; lay down and kept the enemy in check for the next two hours.⁸

Drill also had the benefit of providing "tactical articulation in the period leading up to close combat."⁹ Tactical articulation was the ability to move large numbers of men quickly from one place to another, according to the demands of the battle.¹⁰ Through drill this movement became more organized, and perhaps more importantly, more synchronized so that movement of large numbers of people was accomplished very quickly. The drill manual provided the commander with the recipe for doing this. A successful movement of troops ensured that they were properly formed in the proper order upon engaging the enemy.

There are two other features in Scott's work which affect any analysis of infantry doctrine used at Chickamauga. First, Scott wrote a section on the deployment of skirmishers. In this section he provided information on how to tactically deploy and use skirmishers. He instructed

infantrymen how to move in loose files; directed movement between shots; and advised taking advantage of ground obstacles to protect themselves from enemy fire. Hardee, and later Casey, updated this section. Regiments and brigades on both sides at Chickamauga appeared to be using these ideas in their maneuvers. Second, Volume III, which provided instruction on brigade maneuvers, placed all regiments or battalions of a brigade in a single line of battle. The suggested line of battle consisted of eight battalions forming a corps d'armee of two divisions or four brigades.¹¹ Because Hardee, in his later revision to Scott's manual, did not update volume three, both the Union and the Confederacy used Scott's volume three at the beginning of the Civil War.

Scott's work was, essentially, a very detailed set of drill manuals that provided the commander a systematic way of maneuvering men to and on a field of battle; however, these manuals provided very little direction to the commander on how to use the maneuvers. Writings of American theorists helped to fill this void. The two most prominent prewar theorists were Dennis Hart Mahan and Henry Halleck.

Dennis Mahan was Professor of Military and Civil Engineering and of the Science of War at West Point since 1832. His most influential work on tactics was the book An Elementary Treatise on Advanced-Guard, Out-Post, and Detachment Service of Troops and the Manner of Posting and

Handling Them in the Presence of the Enemy, first published in 1847. In this work he defined tactics as "the art of drawing up, and moving troops systematically."¹² He divided the infantry formation into three parts: the advance guard or skirmishers that held the enemy in check and forced him to deploy; the main body that fought the main battle; and the reserve that struck the decisive blow when needed. Although Mahan favored offensive action his book provided recommendations for defensive as well as offensive action.

Defensive recommendations began by using the line of battle to increase firepower. Skirmishers were positioned further out than the normal 150 paces, out to 300 or 400 paces, if possible. How strongly the skirmishers maintained their ground depended on the strength of their position. Troops in the main line were kept out of sight as much as possible prior to going into action. Should the main line advance to support the skirmishers, Mahan recommended it use the bayonet. If the skirmishers retreated, the main line met the enemy with fire. If the enemy line wavered under the fire, Mahan recommended a charge by column when the enemy line was within 50 paces. The reserve also played an important part providing the defense a counterattack capability. When formed as a second line it was ready to replace the first line if the need arose. Finally, if forced to retreat under enemy pressure, Mahan recommended withdrawing by successive portions, each stopping and

covering the others.¹³ This maneuver was very similar to instructions for advance and retreat of skirmishers in Scott's School of the Skirmisher.

Although Mahan indicated that troops in the offense use the same fundamental dispositions as they would in the defense, he made several suggestions for conducting attacks. Skirmishers, strongly supported by the main line following close behind, should press the enemy hard and continually. The main body and the reserve advanced in column. When the skirmishers fell back, the main body deployed and fired, or charged in column. The reserve positioned itself to be able to attack quickly and keep pressure on the enemy.¹⁴ Mahan also recommended pursuing an enemy, but only to a position where it could successfully receive an enemy counterattack.¹⁵

One important aspect of Mahan's book not covered at all in Scott's manual was an extensive discussion on position. Mahan felt that the study of natural positions "with a view to turn them to account in the first dispositions for battle" was very important.¹⁶ Position was important when engaged in either the defense or the offense. A good defensive position was one that disrupted an attacker's advance and gave the defender the advantage. The attacker should not be able to turn the flanks of a properly positioned defense. In the offense, the goal was to force the enemy to abandon a defensive position, "either

by driving him from it; or by maneuvering to turn it, and so force him to fall back to secure his line of communications."¹⁷ The key to success was to identify the critical points in the enemy's position, which, if lost, forced him to retire. The main effort against these positions was accompanied by demonstrations elsewhere, to prevent the defense from reinforcing. Finally, in a remarkable premonition of September 20th at Chickamauga, Mahan warned that "if the assailed makes a firm stand at his central position, an attack upon his front will not only be bloody, but of doubtful success."

Mahan's student, Henry W. Halleck, was another influence on Civil War commanders, not only because he was General-in-Chief of the Union army at the time of Chickamauga, but also from his book Elements of Military Art and Science published in 1846. Although much of his book dealt with fixed fortifications, Halleck provided a thoughtful analysis of basic infantry doctrine and made several recommendations on the disposition of troops in battle.

Although much of Halleck's writing is similar to that of Mahan, several of his ideas provided interesting insights for examining infantry doctrine at Chickamauga. The most important one is his concern over the line of battle. The simple parallel line (two ranks as described in Scott) was the worst possible disposition for battle, "for the two

parties here fight with equal chances, and the combat must continue till accident, superior numbers or physical strength decides the day."¹⁸ Halleck felt that skill, in this situation, made little or no difference. Like Mahan, Halleck felt position, particularly in the defense, was important, and that success in the offense consisted of dislodging the enemy either by piercing or turning his line. Halleck listed four ways of arranging infantry.¹⁹ The first was the thin line of battle mentioned above. A commander used this when he wanted to increase his available firepower and planned to remain in a stationary position. The major weakness of the line of battle was that it moved slowly and was easily pierced by a deeper column. The second formation was a line of battalions in columns of attack. This gave the commander mobility and depth and was best to carry a position although it reduced available firepower. Halleck recommended diminishing the column in depth as much as possible to increase its firepower. The third formation was a combination of the first two. Under this scheme the commander divided his regiment into three battalions. The first deployed into line, and the other two formed in columns behind it. This feature combined the advantage of firepower with depth and was recommended for use in the defense although it might also be used in the offense. Halleck did not recommend the last formation, a deep formation of heavy columns of several battalions. He

believed it exposed large masses of men to artillery effects and "diminishes the mobility and impulsion of an attack without greatly adding to its force."²⁰ In all cases, Halleck recommended that the commander determine what type formation to use based on the situation he found himself in.

For many commanders in the Union and Confederate armies, the Mexican-American War of 1846-48 was their first and only experience in war prior to the Civil War. This war's precise impact has been hotly debated by historians. Some claimed that so many wrong lessons were learned that they eventually caused problems for both sides in the Civil War. For example, in the Mexican-American War "American troops often carried out many frontal assaults against large and strongly-posted Mexican forces."²¹ These attacks were generally successful and achieved with very few losses. Although accomplished prior to the adoption of the rifled musket as the standard infantry weapon and against inferior quality forces, these attacks were remembered because they succeeded. This is one of the arguments of the authors of Attack and Die. The doctrine of the offensive preached by Mahan and Halleck was reinforced by Mexican-American War experience. The tactics of Scott worked; consequently there was little impetus to change them. Mahan used examples of battles in the Mexican-American War to further illustrate his theories in his 1853 edition of the Elementary Treatise. Hardee's update to Scott's tactical

manual, published after the war, did not reflect any major modifications to Scott's work which could directly be attributed to Mexican War experience. Despite the declaration of Silas Casey in the introduction to his replacement to Hardee's manual that the revolution in artillery and infantry weapons "necessitated a departure from those processional movements and formations in order of battle," little else changed.²² The armies entered the Civil War with essentially the same tactical doctrine used in the Mexican-American War.

Perhaps the most important technological innovation following the Mexican-American War was the Army's adoption of the rifled musket. General Scott based his drill manual on the smoothbore musket firing round balls. Accuracy was not that good, 50 to 60 yards being a common effective range. "Beyond 220 yards the effect of the fire is very uncertain. Beyond 450 yards the ball seldom gives a dangerous wound."²³ Accuracy was poor enough that one author calculated that out of 100 balls fired by a line at 100 paces, 40 would touch. This decreased to one ball at 300 paces.²⁴ Because of the inaccuracy and low range of the musket "attack formations were arranged with the idea that the bayonet would decide the outcome."²⁵ This idea did not change with the introduction of the rifle.

In 1855 the United States Army adopted for use the Minie bullet and rifled musket. By 1861 Federal arsenals

were producing a standardized rifled musket of .58 caliber. The minie bullet had a hollow bottom which expanded when the propellant exploded and engaged the rifling. This imparted spin to the bullet and gave it greater velocity and accuracy.²⁶ While a ball fired from a rifled musket had a range of over 400 yards, the oblong Minie rifle bullet had an effective range of 1000 yards.²⁷ The major effect of this increase in range was that opposing lines of battle were under more accurate fire for longer periods of time, creating the potential for far greater casualties.

Along with the adoption of the rifled musket in 1855, the Army also adopted a new tactical manual in two volumes, Lieutenant Colonel William J Hardee's Rifle and Light Infantry Tactics for the Exercise and Manoeuvre of Troops when acting as Light Infantry or Riflemen. This manual provided changes to the movement of infantry formations brought about by the rifled musket, the most significant being the introduction of double quick time to large unit movements. The double quick time step was 33 inches long and performed at a rate of 165 steps a minute. This rate could be increased to 180 steps a minute, further decreasing the time an attacking unit would have to spend in the lethal rifle range of the opposing force. Another change was eliminating a three rank line of battle in favor of two ranks. Because the majority of Hardee's work was compatible with Scott's, a third volume covering the School of the

Brigade was not published. Instead the government attempted to use Scott's third volume with Hardee's new volumes. This caused problems when units tried to use the old manual because it referred them back to passages not found in Hardee.²⁸ Despite this problem, Hardee's manual received widespread acceptance and was used extensively by both sides at the beginning of the Civil War.

When Lieutenant Colonel Hardee resigned his commission to fight for the Confederacy, the Union published, in 1862, a new manual written by a Northerner, Brigadier General Silas Casey, entitled Infantry Tactics for the Instruction, Exercise and Manoeuvres of the Soldier, a Company, Line of Skirmishers, Battalion, Brigade, or Corps d'Armee. Casey only made minor changes to Hardee's two volume work. Unlike Hardee, Casey's manual included a third volume governing brigade and higher formations. He made two significant changes to brigade, division and corps infantry formations. One was the size of each of these formations. A corps would normally consist of three instead of two divisions. Divisions would consist of three rather than two brigades.²⁹ Although he did not specifically address the numbers of regiments in a brigade, a diagram preceding the first page of the volume's text indicated that four regiments should be a standard number for a brigade.³⁰ The other major change in this volume was his alternative ways of deploying brigades and divisions. Like Scott, a brigade

commander had the option of deploying four regiments in a single line of battle. Although discouraged by Halleck this was still a common formation. The second formation presented by Casey reflected Halleck's third suggested formation. Casey suggested putting two regiments in line of battle with two in closed column immediately behind.³¹ Although, in the tradition of Scott and Hardee, Casey did not give details on how and when to use these formations he did provide instruction on how the second line should move relative to the first. The formation of an individual division with two brigades in the first line and one in a second line as a reserve may be inferred in Casey's work. In a passage on reserves not found in Scott's work, Casey recommended that the reserve size be determined as the commander thought expedient but directed it will be one-third of the forces available.³² When depicting the division as part of a corps, Casey arranged the division with three brigades in line and the corps in two lines of divisions with two in the first line and one in the second.³³

A year after Casey published his book on tactics, the Army of the Cumberland met the Army of Tennessee on the Chickamauga battlefield. During that year John T. Richardson published a pirated version of Casey's work entitled Infantry Tactics, or Rules for the Exercise and Manoeuvre of the Confederate States Infantry. More in tune

with Hardee than Casey, a West Point assistant professor, William P. Craighill, also published in 1862 The Army Officer's Pocket Companion. These latter works, in addition to many others, all illustrated the need by both sides to provide instruction to their armies on the conduct of maneuvers.

Infantry doctrine in 1863 was thus a conglomeration of published drill manuals, theoretical writings, and practical experience in one war. The standard maneuvers used by commanders on the battlefield included attempts to maneuver their troops to take the enemy in the flank or rear by making a turning movement around one or both sides. Because a flanking movement was often difficult to accomplish in the presence of the enemy a frontal attack was the other alternative. Although seldom discussed in period literature, there were four important limitations affecting infantry operations and maneuver during the Civil War. One of these was the effect of the rifle already discussed above. The others were command and control, the influence of terrain, and the use of entrenchments.

In the 1800s army leaders commanded and controlled their troops by visual and aural means. The primary visual way of controlling troops was aligning them on the regimental colors. These flags were positioned in the center of the formation and provided alignment and direction. Scott, Hardee, and Casey described in great

detail placement of the colors and how the line of battle would be maintained using them. A commander desiring to maneuver his troops could use either verbal commands or bugle calls to signal his intentions to his men. The drill manuals used very specific terms and musical calls to direct action. A commander's control of his troops was severely affected by trees, ground cover, obstacles, and the noise of battle.

Terrain or perhaps a better term, the battlefield environment, also had a major effect on infantry maneuver and control. The line of battle envisioned in the tactical manuals could be incredibly long. Cheatham's three-brigade line of battle on the first day at Chickamauga was approximately a mile long. On a large open field proper control of this line of battle would be difficult; in slightly rolling terrain covered with trees and thick underbrush, proper control was virtually impossible. Not only was the brigade commander unable to see the men he was controlling, but his communications were made difficult by the factors listed above. Not only was control difficult but also the maneuvering of a closely packed line of infantry across hills, gullies, and other obstacles was next to impossible. Surprisingly, there was virtually no written discussion on this problem prior to the Civil War. Although Mahan discussed operations in wooded terrain in his book on

tactics, he said very little about the effect terrain would have on one's own formations and capabilities.

The final major influence on the infantry tactics used in the Civil War was the use of entrenchments by both sides. Cadets at West Point received engineering instruction in the building of fortifications. Although Mahan and Halleck emphasized building permanent fortifications in their writings, they also discussed temporary field fortifications. In a treatise on field fortifications designed for use by West Point cadets, Mahan stated that field fortifications enabled troops to fight with an advantage, because the entrenchments would "shelter them from the enemy's fire; be an obstacle in themselves to the enemy's progress; and afford the assailed the means of using their weapons with effect."³⁴ In the preface to the treatise he encouraged the use of field fortifications by untrained militia because they would provide a feeling of security and confidence when fighting a trained and discipline opponent. Two examples that supported Mahan's thesis were the behavior of the militia at Bunker Hill and New Orleans against superior British troops.³⁵ The armies' use of battlefield fortifications gained popularity throughout the war. Breastworks were a major influence in the fighting on September 20th at Chickamauga.

The two armies which fought at Chickamauga in 1863 were quite unlike the United States Army today. The armies

were composed of volunteer soldiers with varying degrees of experience and skill, and led by officers, many of whom were no more experienced in warfare than those they led.

Although the Union and the Confederate armies began the war using Hardee's work as the primary source of doctrine, new manuals were available to both before the Battle of Chickamauga. Published doctrine still did not completely meet the needs of either side; its failure to adequately deal with the advent of the rifle and with the effect of terrain and breastworks upon command and control was evident as the two sides collided in a meeting engagement on September 19th, 1863.

ENDNOTES

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- ³ Dennis H. Mahan, Advanced-Guard, Out-Post, and Detachment Service of Troops and the Posting Handling Them in the Presence of the Enemy, (New York: John Wiley, 1853), 33.
- ⁴ Paddy Griffith, Battle Tactics of the Civil War, (New Haven: Yale University Press, 1987), 99.
- ⁵ Winfield Scott, Infantry Tactics, (New York: Harper and Brothers, 1835) 30, 33.
- ⁶ John Beatty, The Citizen-Soldier; or Memoirs of a Volunteer, (Cincinnati: Wilstach, Baldwin & Co., 1879), 41.
- ⁷ Griffith, 107.
- ⁸ The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies. vol XXX, part 1, (Washington, DC: Government Printing Office, 1890), 543.
- ⁹ Griffith, 106.
- ¹⁰ Ibid., 106.
- ¹¹ Scott, vol III, 7.
- ¹² Mahan, 32.
- ¹³ Ibid., 49-50, 52.
- ¹⁴ Ibid., 51.
- ¹⁵ Ibid., 52.
- ¹⁶ Ibid., 63.
- ¹⁷ Ibid., 70.
- ¹⁸ Henry W. Halleck, Elements of Art and Science, (New York: D. Appleton and Co., 1862, C1846), 118.
- ¹⁹ Ibid., 123-125.

- 20 Ibid., 123.
- 21 Albert Castel, "Mars and the Reverend Longstreet: or Attacking and Dying in the Civil War," Civil War History 33 (November 1987): 108.
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- 26 Ibid., 253
- 27 William P. Craighill, The Army Officer's Pocket Companion, (New York: D. Van Nostrand, 1862), 71.
- 28 Grady McWhiney and Perry D. Jamieson, Attack and Die, (Tuscaloosa, AL: The University of Alabama Press, 1982), 53.
- 29 Casey, 156.
- 30 Ibid., 5.
- 31 Ibid., 5.
- 32 Ibid., 175.
- 33 Ibid., Plate 27.
- 34 Mahan, Treatise on Field Fortification, 1.
- 35 Ibid., vii.

CHAPTER 3

SEPTEMBER 19, 1863

In a fluid situation where both opponents have freedom of maneuver, movement to contact will frequently produce a meeting engagement in which each side attempts to seize the initiative and either overwhelm the other or force it into the defensive.¹

The Army of the Cumberland and the Army of Tennessee sides met on the Chickamauga battlefield on September 19, 1863 in what is currently called a meeting engagement. Throughout the day the Union troops arrived from the south and the west onto the battlefield and the Confederate troops arrived from the south and east. As the army and corps commanders fed their divisions into the battle, the fighting flowed from the north to the south with the units colliding in a fashion resembling a zipper closing. By the end of the day the two armies were in roughly parallel lines running north and south along the La Fayette road.

This chapter describes the tactical doctrine used in the engagements on September 19th. To keep the subject focused on the research question, this thesis will not present a complete picture of the Battle of Chickamauga. Instead, it focuses on the following aspects of period infantry doctrine: tactical formation, use of skirmishers,

charges, and maneuver. Because the rifled musket is central to the debate on infantry doctrine, engagement ranges and the effect of terrain are presented as well.

The first day of battle at Chickamauga contained over thirty separate engagements. To present information in the least confusing manner, the chapter is divided into five battlefield segments: the morning engagements near Jay's Mill and Winfrey field, the late morning and early afternoon engagements in the vicinity of Brock field, the early afternoon engagements around Brotherton field, the late afternoon engagements close to Viniard farm and the evening engagement back to the north around Winfrey field. Each segment begins with a general overview of the events during that segment and introduces the units involved. Following this, under the heading of command and control, I review the division commanders' disposition of their brigades. It becomes clear very early in the chapter that once a division was sent into battle control of movements reverted to brigades, therefore there will be very little discussion of the division commanders' control of their brigades. To avoid confusion with unit designations, particularly on the Union side, divisions and brigades are identified by the name of their commander. Regiments are identified by their number and only when necessary to avoid confusion. The rest of each segment describes the individual engagements including the formations used by each side; whether or not

skirmishers were used; the action as it occurred, taking into account the weapons used, terrain, and entrenchments; and the outcome of the engagement. Although I compare the tactics used to tactics in official doctrine occasionally during the chapter, formal analysis is in Chapter 5.

THE BATTLE IS JOINED.

Early on the morning of September 19, 1863, Brigadier General John Brannan received orders from XIV Corps Commander Major General George Thomas to capture, if possible, a Confederate force reported to be a brigade cut off on the west side of the Chickamauga Creek. At Kelly farm on the La Fayette Road, Brannan dispatched 2nd Brigade under Colonel John Croxton east towards Jay's Mill. At 7:30 A.M Croxton encountered Brigadier General H. B. Davidson's brigade of Brigadier General Nathan Forrest's cavalry less than a half mile from Jay's Mill. Shortly thereafter Brannan's 3rd Brigade, commanded by Colonel Ferdinand Van Derveer, marched down the Reed's Bridge Road towards Jay's Mill in support of Croxton and engaged Forrest's Brigade under Colonel George Dibrell. At 8:30 Colonel Claudius Wilson's brigade struck Croxton's right flank and began pushing him back to the west. Proceeding north behind Wilson, Brigadier General Matthew Ector's brigade engaged Van Derveer, reorganizing after its encounter with Dibrell.

As Croxton's brigade withdrew under Wilson's pressure, Brigadier General Absalom Baird's division arrived in support. Baird's 1st Brigade, commanded by Colonel Benjamin Scribner, flanked Wilson on the left and with 3rd Brigade, under Brigadier General John King, began pushing Wilson back. The Union brigades pursued Wilson a short distance before halting in defensible positions. Because they expected a brigade from Major General John M. Palmer's division to be on their right as support, Baird's men were extremely surprised and subsequently routed when struck by Colonel Daniel Govan's and Brigadier General Edward Walthall's brigades of Brigadier General St. John Liddell's Division. The Confederate advance also drove back Baird's 2nd Brigade under Brigadier General John C. Starkweather. Continuing north they then engaged Van Derveer's brigade and Brannan's 1st Brigade under Colonel John M. Connell. As the two Confederate brigades ended their charge under pressure of the two Union brigades, they were struck in the left flank by Croxton's brigade, reentering the battle, and were forced back past where they had started their drive.

Command and Control. The two Union division commanders formed their divisions with a two brigade front, keeping the third as a reserve. During the early engagements Brannan personally moved Connell's brigade, first to support Van Derveer, then Croxton, then back to Van Derveer, effectively supporting neither until Van Derveer's

engagement with Govan and Walthall. Brannan further reduced the combat power and effectiveness of Connell's brigade by attaching the 31st Ohio to Croxton's brigade.² General Baird kept Starkweather's brigade in reserve to protect the division's right flank. Moving near King's brigade he lost track of Starkweather when General Thomas ordered Starkweather to move left and relieve Croxton.³

Confederate commanders each deployed their divisions in different ways. Forrest actually commanded two brigades from two different divisions. Although first formed in a single line of battle, the brigades separated when Dibrell moved north to flank Croxton and engaged Van Derveer. The brigades in Walker's division entered the battle one behind the other but operated separately against different opponents. Walker was not present when his brigades engaged; Forrest directed them into the battle. Liddell's two brigades entered the battle deployed in a single line of battle.

Croxton versus Davidson 1. Expecting to find an isolated Confederate brigade, Croxton deployed his brigade in two lines with three regiments in line of battle in the first line and two regiments in the supporting line. Containing approximately 1100 enlisted men, Croxton's first line was approximately 1000 feet long.⁴ Skirmishers deployed forward. The brigade was less than 600 yards from Jay's Mill when the skirmishers were driven in, closely

followed by rebel cavalry. J. D. Myers, of the 74th Indiana, explained what happened: "We waited with a steady aim until they were within 20 paces of our lines, then let them have a volley that caused a sudden halt."⁵ Sent forward to reconnoiter, the Confederate cavalry was surprised by Croxton's brigade in the thick woods. A member of the 6th Georgia remembered them going over the crest of the first hill west of Jay's Mill, hearing two concentrated volleys, and then watching them fly back over the hill.⁶ Croxton ordered his men to fire, fix bayonets, and charge. The Confederates retired quickly, while Croxton reformed his brigade, deployed skirmishers, and continued to advance.

Croxton versus Davidson 2. Continuing their advance, Croxton's skirmishers found Davidson's line on the crest of the first hill west of Jay's Mill. With approximately 1315 men, the three Confederate regiments and one battalion were loosely dispersed in a single line of battle along the crest of a slight rise. Croxton's front line advanced and began a firefight with the Confederates. Davidson had very little natural cover. Between his lines and Croxton's was a "glade studded with pines, and black jack oak, at wide intervals, making it almost an open field."⁷ Croxton's lines were concealed in a thick fringe of jack brush which varied in height between two and eight feet.⁸ Although one participant, J. W. Minnich, reported the distance between the two lines to be 300 to 350 yards, map measurements of

the positions indicates this to be probably no more than 100 to 125 yards. The firefight continued for about one hour without any significant change of position on either side. Minnich related that during this time the Confederate line was lying down while they returned fire. The engagement ended when Wilson arrived on Croxton's right flank and pushed him back. Davidson did not follow.

Van Derveer versus Dibrell 1. Van Derveer travelled east on the Reeds Bridge Road to support Croxton's left. He formed his brigade with two regiments in line of battle in a front line approximately 700 feet long with one regiment in the supporting line. Following the sound of battle, and "perceiving from the fire upon my right that I [Van Derveer] was passing the enemy's flank, I wheeled the line in that direction and began feeling his position with my skirmishers."⁹ The line advanced until the Confederates came into view in the thick woods. Following their skirmishers, Dibrell's five regiments and one battalion formed a single line of battle. Jeremiah C. Donahower of the 2nd Minnesota reported that the Confederate brigade was met with a "volley when Colonel James George commanded 'Battalion-Ready-Aim-Fire' and followed the volley by firing at will."¹⁰ One writer placed this first engagement at a distance of 300 yards.¹¹ The lines continued to close to a distance of not over 125 yards.¹² The firefight lasted

thirty minutes, ending when the Confederates retreated. Van Derveer's brigade made no attempt to follow.

Wilson versus Croxton. As Croxton's brigade engaged Davidson, Wilson's brigade approached on his right flank. Wilson's brigade formed in a single line of battle of three regiments and two battalions. Discovering Wilson on his right, Croxton brought forward his two reserve regiments, one regiment on each side of the first line, and refused his right flank by changing the front of his two right regiments.¹³ Croxton also split his command responsibilities in half by giving Colonel Chapman command of the right side of the line. Union skirmishers were driven in. Croxton ordered his men to lie down. When the Confederate line of battle was within 75 yards, the Union line rose and began firing.¹⁴ J. W. Minnich described the scene:

A double line of blue rose at an order to fire and discharged a double volley into the grey line, and it stopped still like a man receiving a staggering blow in the face, and it appeared to me that half of the line had gone down."¹⁵

He reported that Union troops were on higher ground and, when firing after standing up, they did so without taking aim, thereby wasting shots. Wilson ordered his line to cease firing and advance. When within 25 yards of the Union line, they charged on order. The Confederate line was within 20 or 30 feet of the Union line when Croxton's line broke and his men retreated through the woods.¹⁶ After

retiring 300 to 400 yards the Union line reformed. Again engaging Wilson's brigade, it was once more forced to retire.¹⁷ After pushing Croxton's brigade about 3000 feet west, Wilson's brigade was flanked by Scribner's brigade on the left and compelled to retire. Croxton's brigade, now out of ammunition, retired for resupply.

Ector versus Van Derveer. As Wilson retreated Ector was moving his brigade around behind Wilson to support his right. When Ector passed to the right of Wilson, Wilson's two right regiments joined Ector's five regiments and two battalions in a single line of battle. Continuing forward Ector's brigade engaged Van Derveer's pickets and drove them in. Van Derveer's brigade was almost in the same position as when it fought Dibrell. Van Derveer was just completing a passage of lines, replacing the 35th Ohio with the 87th Indiana in the first line. The 87th lay down until the 35th passed over, and then rose and fired into Ector's oncoming troops.¹⁸ There was some debate on what happened next. Although both Hardee and Casey expected the line of battle to remain on their feet there is some evidence to indicate that at least part of Croxton's line lay down and fired. Stephen Tanner, of the 9th Texas, wrote:

We continued to advance and fire driving the union picket in until we came in sight of the Union line of battle some 150 or 200 yards away... There were trees and undergrowth... I saw the union line lie down and knew the heavy firing would commence at once.¹⁹

A member of the 2nd Minnesota remembered, "we lay flat on the ground pumping the lead into them from our Springfields...and the enemy retreated out of sight."²⁰ Another member of Ector's brigade recalled that his men sheltered themselves behind rocks, lying down to load, then rising to their knees and firing into the Union line 60 yards away.²¹ No attempt to charge was made by either brigade. After a lengthy firefight Ector retired; Van Derveer did not follow.

Scribner versus Wilson Scribner's brigade relieved Croxton's brigade after Wilson had driven Croxton westward for nearly 3000 feet. Advancing eastward in open woods from the La Fayette Road, Scribner struck Wilson on the latter's left flank. Scribner formed his brigade with two regiments in line of battle in the first line, two regiments in the second line, and one regiment in the rear supporting the battery. As the opposing lines engaged, the 38th Indiana moved forward and took position on the right of the first line.²² Wilson's left two regiments, the 4th Louisiana and 30th Georgia, were hurt severely by the fire from Scribner's brigade.²³ No information was available to determine how close the two lines were to each other. Scribner continued to push Wilson for about 1000 feet, stopping at the edge of a cornfield. Finding this spot to be ideal for a battery and defensible, Scribner stopped and let Wilson complete his retreat.

Govan and Walthall versus Scribner. Govan's and Walthall's brigades numbered 291 officers and 2984 enlisted men on the morning of the 19th.²⁴ Govan, with five consolidated regiments, and Walthall, with five regiments, formed in a single line of battle approximately 2700 feet in length. Moving north of the Brotherton Road the line first engaged Scribner. Warned by his skirmishers of the Confederate approach, Scribner changed the front of his brigade to the south, bringing up the 10th Wisconsin on the right side to form a single line of battle of four regiments approximately 1000 feet long. Unknown to Scribner, Baird sent Scribner's fifth regiment further north, preventing it from participating in this engagement. In his diary August Bratnober of the 10th Wisconsin described being ordered to lie down directly in front of the battery. He and his fellow soldiers felt they were in a bad position lying with knapsacks on heads down hill because they could not reload in this position. He then reported the skirmishers being driven in and the enemy coming out of the timber across the ravine from the Union lines.²⁵ The Confederate line struck Scribner from the south at a point where Govan's and Walthall's brigades joined. Regiments on Govan's right and Walthall's left were in a field, the others in woods. Although no distances are given, the width of the field, measured on battlefield maps, is approximately 750 feet. Bratnober continued, "Then they charged, after the front

line fired, the next line passed through them, the first line reloading as they came on, and so on."²⁶ When Union troops finally received orders to fire, the enemy was "stunned", but being unable to load without getting up and with the enemy approaching, Bratnober's regiment retreated.²⁷ A report from one of the Confederate units in the cornfield mentioned meeting the enemy's fire at not more than 50 yards.²⁸ Another confirmed that Scribner's men were lying down waiting for the attack, fired when the line came up, and then driven by a Confederate charge which immediately followed.²⁹ The Confederates flanked Scribner's brigade on both sides and forced it to retreat in disorder; Govan and Walthall then continued their advance northward.

Govan versus Starkweather. Although Govan and Walthall maintained their line of battle, each subsequently engaged different brigades. Govan engaged Starkweather. Starkweather was slightly behind the crest of a small rise. He positioned his brigade in two lines with two regiments in line of battle in a front line and two regiments, also in line of battle, in the supporting line. Hearing firing to the south, Starkweather positioned the two lines of battle with both flanks refused. He did not appear to have deployed skirmishers. Perhaps for this reason or because of visibility in the woods, Govan caught Starkweather by surprise, striking him on the right flank and front. There are no reports indicating how close the two sides were

during their engagement. After a short firefight, Starkweather quickly retired his brigade to the northwest "to save it from destruction."³⁰ The Confederate line continued its drive northward.

Walthall versus J. King. King's brigade pushed remnants of Wilson's brigade to the east before halting on the crest of a small rise. Originally formed in two lines of battle with three battalions in the first line and two in the supporting line, King was shifting his brigade front to the south on Baird's orders when Walthall attacked him. As King redeployed his troops his formation became disorganized. Only one battalion, the 16th, was in position, lying down in front of the battery.³¹ The others were in various positions behind and to the sides of the 16th. King originally deployed skirmishers but thinking Palmer's division was on his southern flank, he recalled them. "At about 11 o'clock, in the midst of a dense wood, where the limit of vision was about 50 yards,...a long battle line came upon them from the right flank and rear in overwhelming force."³² Unable to effectively resist, King's brigade immediately routed and fled to a position behind Van Derveer's brigade.

Walthall and Goyan versus Connell and Van Derveer. After engaging and defeating Baird's three brigades, the Confederate line continued northward. Having engaged the Union brigades at different intervals with varying degrees

of resistance, Govan's and Walthall's brigades gradually became slightly separated and disorganized. The line traveled almost three-quarters of a mile from the start of its charge against Scribner before engaging Croxton's and Connell's brigades. Van Derveer's brigade formed, as before, with two regiments in the first line and one in the supporting line. As the engagement started, his fourth regiment arrived and formed on the right of the first line. Connell's brigade formed on Van Derveer's right. One of Connell's regiments was in line of battle just to the right of Van Derveer's line, the other in line of battle to the rear supporting a battery. Connell's third regiment, the 31st Ohio, was attached to Croxton. Van Derveer's and Connell's men lay down while King's troops fled over them. Colonel Newell Gleason of the 87th Indiana described the subsequent engagement:

Holding their fire until they had passed, my regiment without the least confusion, arose in a perfect line and poured a volley into the advancing ranks of the enemy, which brought him to a halt.³³

Colonel Morton Hunter of the 82nd Indiana estimated this distance to be about 50 yards.³⁴ Van Derveer's 9th Ohio accompanied by Connell's 17th Ohio and the 87th Indiana made a bayonet charge, pushed back Walthall's and part of Govan's troops almost a quarter of a mile, and halted after recapturing King's battery. The Confederate line continued

its retreat. This brief charge was costly to the 9th Ohio as 63 men were killed or wounded.

Croxton versus Govan. While engaging Connell and Van Derveer on his front to the north, Govan was attacked on his left flank by Croxton's brigade. Reenforced with the 31st Ohio (another 517 men) and resupplied with ammunition, Croxton arrayed his command in a single line of battle approximately 2000 feet long. Once again he divided the brigade in half, giving Colonel Chapman command of the right side. Govan's brigade was approaching when Croxton ordered a charge, and driving the Confederate line 300 yards, his men recovered Scribner's battery.³⁵ Although Govan tried to shift his regiments to meet Croxton's attack he was overwhelmed, and had to march his men by the right flank to retire and avoid capture.³⁶ Croxton continued his pursuit after retaking Scribner's artillery.

Van Derveer versus Dibrell 2. After his brigade repulsed Walthall, Van Derveer detected a Confederate column using the cover of terrain in an attempt to flank him from the north. Quickly changing his lines he placed his brigade in an obtuse angle, with two regiments along the right leg and one, the 35th Ohio, along the base. The men of the right side lay down behind the crest of the hill to shield them from Confederate view. Dibrell's brigade formed once again in a single line of battle. Neither side appeared to use skirmishers. Dibrell's brigade advanced, trading fire

with the 35th Ohio until its flank was opposite the Union right wing.³⁷ An officer in the 2nd Minnesota recalled that his regiment opened fire at 200 yards with carefully directed file firing. Although their ranks thinned rapidly, the Confederate line continued a steady advance to within fifty yards of the Union lines. Here, Dibrell's lines broke and retired.³⁸ Van Derveer's men did not follow.

BROCK FIELD.

As Croxton drove back Govan's brigade, Major General Benjamin Cheatham's Confederate division arrived on the battlefield. Three brigades, commanded by Brigadier General John Jackson, Brigadier General Preston Smith and Brigadier General Marcus Wright formed a single line of battle. Two other brigades, commanded by Brigadier General George Maney and Brigadier General Otho Strahl, formed a reserve line. Jackson's brigade, on the right, forced Croxton to retire. Cheatham's line then encountered two arriving Union divisions. The northernmost division was commanded by Major General Richard Johnson. Johnson's 3rd Brigade, under Col Philemon Baldwin, and 1st Brigade, under Brigadier General August Willich, engaged and began pushing back Jackson's brigade. Major General John Palmer commanded the division on Johnson's right. Echeloned to the right rear, Brigadier General William B. Hazen's 2nd Brigade, Brigadier General Charles Cruft's 1st Brigade, and Colonel William Grose's 3rd

Brigade, arrived and engaged Smith's and Wright's brigades. Later, Maney's and Strahl's brigades relieved Jackson and Smith. Johnson's 2nd Brigade under Colonel Joseph B. Dodge, advancing in the gap between the two Union divisions, made the deepest penetration of the Confederate line. Later, Brigadier John Turchin's brigade of Major General Joseph Reynolds's division relieved Hazen. Fighting continued into the late afternoon with Govan's and Walthall's brigades making one last unsuccessful attack on Johnson's division and Brigadier General E. McIver Law's brigade of Major General John Hood's division making an attack on the Union right.

Command and Control. Unlike Brannan and Baird, the two Union divisions in this part of the battlefield operated as an organized body rather than as individual brigades. General Johnson formed his division with a two brigade front supported by a reserve brigade. The reserve brigade, Dodge's, initially moved forward to support Hazen's brigade, which was running low on ammunition, and eventually filled a gap between Johnson's and Palmer's division. General Palmer's division advanced into battle in echelon refusing to the right. Suggested by General Rosecrans, the formation allowed the following brigades to protect the division's southern flank.³⁹ Once engaged these brigades formed in an extended line. Turchin's brigade of Reynolds's division filled in as Palmer's reserve.

The two Confederate divisions engaged in slightly different ways. Cheatham's entered the battle with three brigades forward in single line of battle and two in reserve. Although Cheatham planned to commit the two brigades in reserve at the same time, Smith's early retirement forced him to commit them piecemeal into the battle. Liddell's division entered as it had earlier in the day with both brigades forming a single line of battle. Law's brigade entered the battle after splitting from its parent division while advancing.

Jackson versus Croxton. After forcing Govan's brigade to retire, Croxton's single line of battle advanced to the Brotherton road where it engaged Jackson's and a part of Smith's brigades of Cheatham's division. The Confederate brigades were in single line of battle. The 4th Kentucky's commander, positioned on Croxton's right, reported the initial engagement beginning at a distance of 100 yards. There was felled timber on the Union right and open woods in front and on the left. The Confederate fire caused heavy loss. The Union line retreated, slowly firing. The brigade made several partial stands until, reaching a favorable rise in the ground, it made an effective stand for a half hour.⁴⁰ Johnson's division, arriving on the battlefield, began engaging Jackson.

Jackson versus Baldwin and Willich Johnson engaged Jackson's brigade with two brigades in his front line,

Baldwin's on the left and Willich's on the right. The Union front, approximately 1400 feet long, was slightly longer than the Confederate line. Each Union brigade formed with two regiments in the front line and two regiments in the supporting line. The engagement took place in heavily timbered terrain. Once the Union skirmishers engaged Jackson, the main line moved up rapidly. During the entire engagement with Jackson, both Willich and Baldwin used only their front lines, keeping the reserve lines in column lying down.⁴¹ Noticing Smith's brigade being pressed back on his left, Jackson became concerned about his left flank. Worried that Baldwin might be trying to turn his right flank, and running low on ammunition after an hour's fighting, Jackson retired his brigade. In the process of retreating, his battery abandoned one cannon and caisson. Willich charged and captured them.

Maney versus Baldwin, Willich, and Dodge Maney planned to enter the battle in a continuous line of battle with Strahl's brigade on his left. Smith's retirement before Jackson caused Strahl to enter the battle earlier than Maney. Maney replaced Jackson in the battle without the Union brigades realizing it. Union battle reports and diaries do not mention noticing any change in the Confederate force in front of them. The two sides engaged in a firefight, the Union brigades gradually pushing back the Confederates south of the Brotherton Road. During this

engagement Willich's brigade advanced using a technique called "advance firing." Forming in four ranks, the first rank fired a volley, then the fourth, third, and second in succession advanced to the front and fired.⁴² Opposing Willich, Colonel George Porter, commanding the 6th/9th Tennessee Regiment, reported having difficulties maintaining a correct line of battle due to the ground being covered with felled timber and piles of wood. His regiment did not have any support on the left and the Union troops were almost entirely concealed in thick timber. Porter's troops were running out of ammunition when "the enemy, having received fresh troops, made a rapid advance upon my line in both front and flank" and forced his command to fall back.⁴³ The rest of Maney's brigade also retired. The fresh troops Porter mentioned were units of Dodge's brigade moving from their reserve position into the line between Willich and Hazen. Placing his four regiments in a single line of battle, Dodge charged the retreating enemy. Willich and Baldwin also pursued, stopping at the Brotherton Road. Dodge continued forward for up to a half mile until, fearing his brigade was too far out in front, he retired it to the vicinity of the Brotherton road. There he formed his brigade in two lines on Willich's right.⁴⁴

Govan and Walthall versus Baldwin and Willich.

Baldwin and Willich stopped in the woods bordering the field where Scribner fought that morning and deployed skirmishers.

Noticing Confederate activity on his left and concerned that he might be flanked on his left, Baldwin deployed the two regiments in his reserve line to the left making a new line perpendicular to his first line.⁴⁵ Rails and other material were used to strengthen his position.⁴⁶ Willich formed on his right with three regiments in the front line and one in the reserve. Approximately a half hour after stopping in this position Baldwin and Willich were attacked by Walthall and Govan. Preceded by skirmishers, the Confederate brigades advanced in a single line of battle with Walthall on the left and Govan on the right. Moving from the Union left, the Confederate lines appeared no more than 200 yards distant in the field in front of the Union lines. The Confederates advanced closed enough to the Union position to deploy some artillery less than 75 yards away.⁴⁷ A firefight then began. Walthall brought forward the battery mentioned earlier between his and Govan's brigades. Observing Walthall's actions and fearful of being flanked, Baldwin ordered one of his regiments, the 93rd Ohio, to charge. The charge and the heavy fire from the two Union brigades forced Govan's left to give way and the adjoining regiments fell back in a ripple towards the Confederate right and left into Walthall's brigade.⁴⁸ The 93rd captured the Confederate battery and then returned to its original position.

Smith versus Hazen, Turchin, and Cruft. Shortly after Johnson's brigades engaged Jackson, Palmer's division arrived. Approaching in echelon formation, the two left brigades, Hazen's and Cruft's encountered Smith's brigade. Smith's five regiments formed a single line of battle. Hazen's brigade formed with two regiments in line of battle and two regiments in closed column in the supporting line. Cruft put all three of his regiments in a single line of battle. Because the Union line extended past Smith's left, part of Cruft's brigade on the right engaged Wright's brigade on Smith's left. As the firefight began, Hazen began pushing Smith back through the woods and through Brock field. Two reasons account for this. First, Smith's brigade appears to have been spread out further than normal. Because the strength of this brigade was not in the official reports, an average for the rest of Cheatham's division, 1195 men forming a 1075 foot front, approximates the length of a normal line for a brigade his probable size.⁴⁹ Battlefield markers and official accounts indicate that the length of Smith's line was closer to 1600 feet. Smith also had to fight while positioned in Brock's field. The Union troops did not enter the field. Due to the width of the field the engagement distance was approximately 200 to 300 feet. This engagement is one of the few on both days of the battle where a regimental commander reported firing by battalion.⁵⁰ The engagement lasted about an hour before

Smith, out of ammunition, retired. During this period Hazen used his reserve regiments and then regiments of Turchin's brigade when his own regiments ran out of ammunition. Meanwhile, Strahl relieved Smith on the east side of Brock field.

Strahl versus Turchin and Cruft. During Smith's engagement Strahl's brigade positioned his five regiments in a single line of battle in supporting distance 200 yards in the rear. Relieving Smith, Strahl advanced from behind a fence into the eastern portion of Brock's field and engaged the Union troops. Like Smith before him Strahl, most likely got to within 200 feet of the Union lines. Strahl reported that a short time after he relieved Smith, General Smith notified him that his (Strahl's) brigade left was behind the right of Wright's brigade, that his right was unsupported, and that he was about to be flanked if he did not move to the right. A little later Smith came with orders from Cheatham to move right and close the gap with Jackson. Although not wanting to do a flank maneuver in front of the enemy Strahl followed orders and his brigade subsequently suffered from a severe enfilade fire. He also reported the enemy moving toward his rear so he ordered his brigade to retire. He suffered heavy losses. Maney then came forward on his right. As soon as Strahl reformed his line he again pressed forward with the right of his brigade in advance but, again receiving enfilading fire, he retired for the

final time with total casualties of 19 killed, 203 wounded, and 28 missing from the original 1149.⁵¹

Wright versus Grose and Cruft. At the south end of Cheatham's line, Wright's brigade battled Grose's and part of Cruft's brigade. Wright advanced with five regiments in a single line of battle. Grose's brigade initially advanced with two regiments in the first line, two in the supporting line, and one in a third line. Wright initially advanced thinking he was relieving Walker in front. He deployed skirmishers to prevent his main line from accidentally firing into the rear of friendly troops. While advancing with the right side in an open corn field, he received a heavy fire from troops concealed by brush and undergrowth.⁵² Moving steadily forward out of the field and into the woods the brigade came upon Grose's brigade posted on a slight hill. The Confederate right was within 200 yards of Grose's brigade when a heavy firefight began.⁵³ Because Wright's left extended past the end of Grose's line of battle, his left regiments began to wrap around the front of Grose's lines. Grose moved two regiments to his right to counter the threat. On the left of Wright's line, the 28th Tennessee Regiment suddenly found itself within 100 yards of the Union lines. Under heavy fire its commander ordered his men to "fire and load lying down."⁵⁴ The regiment fought in this manner for over an hour until finally driven back by enfilading fire from fresh Union troops. A member of the

23rd Kentucky Regiment also reported loading and shooting during this engagement lying down.⁵⁵ During the engagement Grose used his supporting lines to replace the front lines when the latter ran low on ammunition. The two sides engaged until Van Cleve's division, arriving on Wright's left flank, forced him to withdraw.

Law versus Grose, Cruft and Turchin. Law's brigade of Hood's division, composed of five regiments, formed in a single line of battle on Brigadier General Jerome Robertson's right south of Brock field. When Hood ordered his division into action, the brigades split, Law's brigade turning north. Passing over and through Major General Alexander Stewart's division, the left regiments became mixed in with part of Brigadier General William Bate's brigade and separated from the rest of the line.⁵⁶ The right of the brigade continued north and shortly were met by a withering fire from Union troops lying down no more than sixty yards away. The Confederates initially attempted to charge but then lay down. A firefight commenced. When Union fire slackened, the 44th Alabama charged.⁵⁷ Striking obliquely across Grose's front, the Confederates routed the 84th Illinois, and began forcing back Cruft's brigade.⁵⁸ Colonel W. F. Perry, commander of the 44th Alabama, reported that his men continued the charge past the distance where prudence dictated a halt.⁵⁹ At this point, Turchin ordered a bayonet charge. Three of his regiments charged, the 11th

and 36th Ohio in the first line and the 92nd Ohio in the second. Cruft's 90th Ohio and portions of his other two regiments also charged with Turchin.⁶⁰ Successfully pushing Law's brigade back over a thousand feet, the Union regiments halted on a slight rise and held the position for a half hour with little opposition before retiring to their original positions.

BROTHERTON FIELD

As the battle in Brock field continued, Bragg and Rosecrans continued to feed divisions northward into the battle as each side struggled for control of the La Fayette Road. Brigadier Horatio Van Cleve's division was the next Union unit engaged. Leaving 3rd Brigade under Colonel Sidney Barnes in the vicinity of Lee and Gordon's Mills, Van Cleve moved his division north on the La Fayette Road, turning east into the woods just to the south of Palmer's Division. The 1st Brigade, Brigadier General Samuel Beatty commanding, was on the left, and 2nd Brigade under Colonel George Dick was on the right. Encountering the left of Wright's brigade and flanking it, these two brigades forced Wright to retire and captured his artillery battery. Positioning themselves on the top of a small rise, they were soon attacked by Brigadier General Henry Clayton's brigade of Major General Alexander Stewart's division. After repulsing Clayton, Brigadier General John Brown's brigade

engaged the Union lines, pushing them back. Brown was then replaced by Brigadier General William Bate's brigade. Reenforced on his left by Clayton, Bate drove the Union lines well beyond the La Fayette Road before being forced to retire by the arrival of Major General James Negley's and Brannan's divisions. Meanwhile, on Van Cleve's right, Reynolds's 2nd Brigade under Colonel Edward King moved forward to support Dick. It engaged two brigades of Brigadier General Bushrod Johnson's Division, those commanded by Colonel John S. Fulton and Brigadier General John Gregg. King was also pushed back across the La Fayette Road. The Confederate brigades were then taken in flank by Brigadier General Thomas Wood's 3rd Brigade, commanded by Colonel Charles Harker, and forced to retreat.

Command and Control. The Union forces engaged on this part of the field were directed into the battle at less than full strength. Van Cleve engaged with only two of his three brigades. Van Cleve initially planned to maintain a narrow front with Dick's brigade in reserve to S. Beatty's. Dick's brigade entered the engagement to the right of Beatty after the latter obliqued left to fill the gap between his brigade and Palmer's division. Colonel E. King's brigade, entered the battle as an individual brigade. Reynolds's other two brigades were on different parts of the battlefield: Turchin's brigade fought with Palmer and Wilder's brigade fought to the south in Viniard Field.

The two Confederate divisions deployed in different ways. Stewart's division was the major exception for the Confederate tactical deployment on the 19th. Limited by a small sector between Cheatham and Hood, Stewart fed his three brigades into the battle one behind the other, letting each brigade fight until forced to retire, and then immediately replacing it with the following brigade. This proved to be an extremely successful tactic. Johnson's division formed with two brigades in a single line of battle and one, also in line of battle, in the reserve line. During its attack to the northwest the front line became so attenuated that only Fulton's and a portion of Gregg's brigades engaged King.

Clayton versus S. Beatty and Dick. Around 1:30 Beatty's and Dick's brigades engaged, flanked, and drove off Wright's brigade, capturing the latter's battery. Holding their position on the crest of a slight rise each brigade formed with two regiments in line of battle in the first line and two regiments in the supporting line. A short time later they were attacked by Clayton's brigade who was moving forward to relieve Wright. Clayton's three regiments formed in a single line of battle extending approximately 1300 feet. His line was slightly larger than Beatty's 575 and Dicks 426 foot front lines.⁶¹ Clayton's overlapping front probably engaged a little with Grose's brigade. The 36th Alabama, on Clayton's right, advanced to within 100 yards of

the Union lines.⁶² The 38th Alabama, on the 36th Alabama's left, was between 30 and 60 yards from the Union line of battle.⁶³ A firefight began in an area reported to be densely wooded so that it was difficult to determine where or even who to shoot at.⁶⁴ The engagement lasted for about one hour. During the engagement, Beatty replaced the 19th Ohio, positioned on the right front of the first line, with the second line.⁶⁵ Both Union and Confederate regiments fought this engagement lying down. The 59th Ohio of Dick's brigade reported fighting in this position.⁶⁶ The commanders of the 18th and 36th Alabama regiments reported ordering their men to lie down during the engagement.⁶⁷ Clayton, wanted to charge, but cautioned by his officers that their men were almost out of ammunition, and unable to determine the strength of the Union lines through the thick undergrowth, he instead ordered his command to retire.⁶⁸ During this engagement Clayton's brigade suffered nearly 400 casualties.

Brown versus S. Beatty and Dick. Brigadier General Brown's brigade followed Clayton in a support role and his attack on the Union lines closely followed Clayton's retreat. Brown's four regiments and one battalion formed in a single line of battle. Brown found the same problems with the woods and brush that plagued Clayton. In addition, the smoke of the battle added to his visibility problems. After his skirmishers engaged the Union line, Brown's main line

pushed rapidly into the Union lines.⁶⁹ Brown's line of battle, offset to the left of where Clayton's had been, hit Dick's right compelling the front line to fall back and form on the second line. Dick rallied his men and temporarily halted Brown.⁷⁰ As the right side of the Union line fell back, the left, now without support also began retreating. Although Union artillery and heavy musket fire slowed Brown, he continued to force Beatty's and Dick's brigades back. They retired to a rise in the Brotherton field on the west side of the La Fayette road and made another stand from which Brown had difficulty dislodging them. The 75th Indiana Regiment, detached from Colonel E. King's brigade to relieve Grose, attacked Brown on his right flank. The two sides exchanged volleys at 60 yards before the Confederates were driven back. Flanked on the right and facing a heavy fire in front, Brown's brigade retired. Like Clayton his losses were heavy, 440 men killed or wounded.⁷¹

Bate and Clayton versus S. Beatty, Dick, and Hazen.

While Clayton bloodied Beatty and Dick, and Brown pushed them back, Bate, assisted by Clayton, broke the Union division. Bate followed Brown into the battle and when Brown retired he assumed the offensive. With five regiments he formed a single line of battle. Advancing without skirmishers, he soon became hotly engaged with the Union line in the Brotherton field. Here both sides engaged in an open field. The center of Bate's brigade, the 37th Georgia

successfully charged a battery in front only to find a second battery behind the first. The second opened with cannister so destructive that the regiment divided, a portion moving left and others to the right.⁷² The right side of the brigade engaged the 75th Indiana, who earlier had repulsed Brown, and, flanking the Union regiment, drove them back. The 1st Kentucky of Cruft's brigade moved up to assist the 75th Indiana until forced to retreat. Hazen's brigade then arrived and engaged Bate's brigade until it was flanked. The Union brigade then retreated. The right portion of Bate's brigade continued to advance until, faced with the possibility of being flanked by Brannan arriving from the right, it retired. Bate's left was initially held in check by the remnants of Van Cleve's division for approximately thirty minutes. Clayton's brigade, now resupplied with ammunition, marched up and through the left regiments of Bate's brigade. The Confederate line charged, routed the Union lines and continued advancing for almost a half mile past the La Fayette Road. The growing darkness, Brannan's arrival from the north, and fears of Union cavalry to their left caused the brigades to retire east of the road.

Fulton and Gregg versus E. King. Colonel Edward King's brigade, after a series of marches and countermarches, advance his three remaining regiments, formed in line of battle, into position to support Dick's

right. Although battlefield markers put the two brigades close together, King does not appear to have engaged any of Stewart's brigades. Around 3:30 King's skirmishers encountered a heavy line of enemy skirmishers and drove them back. King, positioned on a rise and hidden by dense underbrush, shifted position to meet the Confederate line. The approaching Confederate line consisted of four regiments of Johnson's brigade under Colonel John Fulton and two regiments, the 3rd and 41st Tennessee Regiments, from Gregg's brigade. When the Confederate line was 200 yards away, King's brigade fired a volley, but withheld further firing until the Confederate troops were within 50 yards. A heavy firefight commenced.⁷³ The engagement area was full of thickets, reducing visibility and making communication between the flanks of regiments difficult.⁷⁴ The Confederate lines advanced and overlapped King's right, forcing the Union brigade to retreat westward across the La Fayette Road. Fulton's brigade, following closely, crossed the road to a point where the 17th Tennessee, in the center, was 200 yards from the road and the left of the brigade even further.⁷⁵ Here, Harker's brigade, advancing in the Confederate flank and rear, forced the Confederate line to retreat.

Harker versus Fulton and Gregg. Harker's brigade was originally positioned in the vicinity of Viniard field in two lines with two regiments in each line. The brigade was

parallel to the La Fayette Road facing east. The ground in front was covered with a dense thicket and undergrowth. Moving forward, Gregg's brigade engaged Harker's front line. A firefight ensued and Harker's front line began pushing the Confederate line back. About the time he was attacked in front, Harker received word that enemy troops were advancing down the La Fayette Road. Since this movement exposed his left and rear, Harker moved his second line to a position roughly perpendicular to the road facing north.⁷⁶ Advancing to within 30 yards of Fulton's rear, Harker engaged and surprised Fulton's brigade.⁷⁷ Faced with Union fire on their left flank and in their rear, the Confederates stampeded to the rear.⁷⁸ Some of Fulton's troops escaped by moving by the right flank north 200 yards and then moving to the rear.⁷⁹ Fearing that he might be put in the same predicament as Fulton, Harker retired to the west.

VINIARD'S FARM

Brigadier General Jefferson C. Davis later wrote of the fight around Viniard's Farm, "I have always thought this the bloodiest field I ever saw."⁸⁰ In this vicinity seven Union brigades from five Union divisions and five Confederate brigades from three Confederate divisions fought to a bloody draw. This part of the battle began after Davis received orders to move his division "as speedily as possible in the direction of the heaviest firing and to make

an attack if possible to turn the enemy's left flank."⁸¹ Just after noon he reached the Viniard farm, where he formed Colonel Hans Heg's brigade into line of battle and ordered it to advance and form on the right of Union lines then engaged. Advancing, Heg engaged Gregg's and Fulton's brigades, and later Brigadier General Evander McNair's brigade. Brigadier General William Carlin's brigade, on Heg's right, moved forward to support his right. After heavy fighting both Union brigades were forced to retreat, fleeing over and breaking up Colonel George Buell's brigade of Brigadier General Thomas Wood's division which had been sent to relieve them. Meanwhile, Colonel Sidney Barnes's brigade of Van Cleve's division, advancing on Carlin's right, was attacked by Colonel Robert Trigg's brigade of Brigadier General William Preston's division, and forced back across the road also. During its retreat, Davis's division received support from Colonel John Wilder's brigade of Reynolds's division. Davis and Wood rallied their men and made several counter charges against Confederate positions now held by the brigades of Brigadier General Jerome Robertson and Brigadier General Henry Benning. Fighting in this part of the battlefield ended after Colonel Luther Bradley's brigade of Major General Philip Sheridan's division engaged the Confederate troops and pushed them back. The opposing forces retired to their own sides of the La Fayette Road for the evening.

Command and Control. The series of actions around Viniard's farm demonstrated how disjointed and uncoordinated the Union response to the battle became. Seven brigades from five divisions fought in this area. Every division engaged here was missing at least one of its brigades. Two brigades, Barnes's and Wilder's, were operating independently. Davis brought up two brigades in line, but piecemealed regiments from General Carlin's brigade. Wood split his division with Harker moving north and Buell closing behind Carlin. Thus most Union activity was controlled at the brigade and regimental level.

Confederate command and control effectiveness was also less than satisfactory during this part of the battle. Johnson's division formed in two lines of battle with Fulton's and Gregg's brigades in front and McNair's in support. When the division moved forward under Hood's orders, the division began stretching to the north, thinning its lines, and causing a hole through which McNair passed. Hood's division also formed in two lines on Johnson's immediate right. It entered the fight when the left forward and rear brigades, Robertson's and Benning's, moved to the southwest behind Johnson's division. The right forward brigade, Law's, moved north on its own and fought Turchin and Cruft in an engagement mentioned earlier. Preston sent only one brigade, Trigg's, into the battle, the rest he held

as a reserve. The actions of the divisions indicated little coordination or cooperation with each other.

Heg versus Gregg, Fulton and McNair. Around 2:00 in the afternoon Heg's brigade marched into the woods just to the north of Viniard field. His brigade formed with three regiments in the first line and one in the second. Moving forward in woods with a thick undergrowth, Heg's skirmishers drove in Johnson's skirmishers and engaged Johnson's line in a heavy firefight. Union accounts indicated that Johnson's men were difficult to see, some hiding behind rocks and others behind fallen logs.⁸² Heg advanced to the top of a small rise, then brought up his reserve, the 25th Illinois, on his right. After approximately one half to three quarters of an hour Heg ordered his brigade to retire.⁸³ The brigade advanced again after being reenforced on the right by the 21st Illinois of Carlin's brigade. Another firefight followed with Heg's brigade being forced back, rallying, and advancing several times. This engagement lasted between fifteen and 20 minutes before Heg retreated with Johnson's division in pursuit.⁸⁴ The brigade fell back across the La Fayette road and a field, eventually regrouping in the woods on the western side.⁸⁵ McNair's brigade followed along with portions of Gregg's brigade.

Barnes versus Trigg. Under orders to engage the Confederate line and attempt to take them in flank, Barnes turned his brigade off the La Fayette Road on the south side

of the Viniard field. His four regiments formed in two lines of two regiments each. A strong line of skirmishers preceded the brigade. Advancing into the woods on Carlin's right, Barnes's skirmishers and his main line engaged and began driving Confederate skirmishers. Advancing behind them, Barnes's first line soon engaged Trigg's line of battle. Composed of four regiments, the Confederate line first engaged Barnes's front line, then flanked it on the right. The right of Barnes's front line gave way and it retired over the second line which was lying down in their rear.⁸⁶ Some of these men fell back through and broke up Carlin's brigade. The second line rose, advanced, and engaged the Confederate line. They were also flanked and retreated to the Lafayette Road.⁸⁷ Trigg's brigade moved to the northwest into the Viniard Field.

Robertson versus Carlin. Although Carlin's brigade lined up on Heg's right, it did not advance with him into the woods. Instead, on Davis' orders the men lay down and held their fire. Carlin's brigade formed with three regiments in the first line and one in the second also. The 38th Illinois was in the woods on the left. The 101st Ohio and the 81st Indiana completing the first line on the right were in the Viniard field. Shortly after entering the field Davis detached the 81st Indiana to support the division artillery. The brigade remained in this position until Barnes's brigade entered the field on Carlin's right.

Wheeling slightly left, Barnes's brigade partially masked Carlin's troops. Carlin attempted to maneuver his brigade to unmask his troops when a Confederate volley forced part of Barnes's line to break into Carlin's line, disrupting and forcing it back.⁸⁸ At the same time a member of the 38th Illinois reported seeing Heg's brigade being driven back on the left, followed closely by the Confederate lines. He reported the Confederates moving within 60 or 70 yards of and firing into the 38th Illinois' lines. This Confederate line was probably Robertson's brigade advancing in a single line of battle. After perhaps 20 minutes the Union regiment retreated.⁸⁹ Although the commander of the 38th Illinois did not mention such an engagement he reported his regiment's right and left became entangled with other regiments and then the left gave way.⁹⁰ Thus, Carlin was forced back by Confederates flanking it on the left and elements of Barnes's brigade retreating over it on the right. Carlin's retreating forces ran over and disrupted another brigade arriving on the field, Buell's. Robertson's brigade followed and took shelter in a ditch on the west side of the La Fayette Road.

Robertson versus Buell. About 3:30 Buell's brigade entered the Viniard field to support Carlin. Buell's brigade formed in two lines of battle with two regiments each. Separated by the Viniard Road, the left regiments were in woods and the right regiments in open fields.

Between the two lines was the La Fayette Road and a space of 75 yards. Buell reported that at this point he was unsure of what was going on in the battle. He did not know the position of other troops. Staff officers told him that Union troops had driven the enemy and his brigade was only needed to complete the rout. As he positioned his brigade, troops in his front broke and came through his brigade's ranks. Buell, planning to countercharge the enemy, ordered his men to lie down and hold fire. The flight of Carlin's men continued over his troops as the Confederates followed and came in heavy force on his front and left flank. Buell made an attempt to "charge bayonet" with his rear ranks, but the attempt failed to keep the enemy in check.⁹¹

Overpowered on both front and left flank the brigade fell back across a field. Robertson's brigade followed closely and stopped in the ditch on the west side of the La Fayette road.

Wood, Carlin et al versus Robertson, Benning and Trigg. The Union forces rallied in the woods behind Wilder's brigade. Federal commanders including Wood, Carlin, Heg, and Buell restored order and formed a new line of battle for a counterattack. Advancing across the cornfield they immediately engaged Robertson's brigade and elements of Benning's brigade. Both of these brigades were in single lines of battle, their lines mingling in a ditch just on the west side of the La Fayette Road.⁹² Because the

field between the two positions is 200 yards across, the Union troops were probably under Confederate fire as they started their counterattack. There were conflicting accounts on the outcome of the counterattacks. Wood indicated that his men reached the spot on the La Fayette Road on which they had originally been formed.⁹³ Robertson and Benning, however, both reported maintaining their positions on the west side of the La Fayette Road.⁹⁴ Most likely the counterattack was only partially successful, some elements making it across the road. The commander of the 26th Ohio reported getting as far as 200 yards into the woods when he had to change front to counter Confederate fire on his left.⁹⁵ Both he and Wood reported Trigg's brigade arriving on the battlefield from the woods to the east of the Viniard Field. Trigg was in a single line of battle. He reported firing one volley which caused the Union line to break. He then ordered a charge of the brigade. Due to communication difficulties and subsequent counterorders from Robertson only one regiment, the 7th Florida, charged. It advanced 150 to 200 yards to a mound at the west end of the Viniard field by the La Fayette Road.⁹⁶ Unsupported on either side Trigg was forced to retire by one brigade of Sheridan's division.

Sheridan versus Trigg Sheridan reached the Viniard field with two brigades as Trigg repelled the Union counterattack. The leading brigade, Bradley's 3rd Brigade,

deployed into two lines of battle with two regiments in the front line and two regiments in the supporting line. Each line had a designated commander. Entering at the southwest corner of the Viniard field west of the La Fayette Road Bradley's brigade charged without skirmishers across the field and road to a slight rise, encountering heavy fire from Trigg's 6th Florida in front and Robertson's brigade in the woods to the north. The first line lay flat on the high ground and engaged the Confederates for about a half hour.⁹⁷ Union casualties were heavy. The 22nd Illinois, less than 20 paces away from Robertson's brigade, lost 97 out of less than 300 men. The 27th Illinois lost 50 men.⁹⁸ The first line retired and the second line took its place. The second line forced Trigg's and Robertson's brigades to retire, recapturing the artillery which had been the object of Trigg's charge. Bradley's troops, weakened by the heavy fighting, did not pursue the retreating Confederates. Other than minor skirmishing, no other fighting occurred on the Viniard field for the remainder of the day.

NIGHT ATTACK.

After the brigades of Baldwin and Willich repulsed those of Govan and Walthall, they enjoyed about an hour and a half of relative quiet. Dodge's brigade, returning from its advance, formed on Willich's right. Turchin's brigade, on Dodge's right, withdrew to the rear before sundown as

General Thomas began reorganizing his lines. Palmer's division also withdrew, leaving Johnson's division, well in advance of the rest of the army, unsupported on either flank. Willich reported receiving written orders from Johnson to fall back at 6:30, slightly after dark. Before Johnson's men had the opportunity to withdraw, Major General Patrick Cleburne's division, supported by Smith's and Jackson's brigades of Cheatham's division attacked close to sundown. Arrayed in a single line of battle about a mile long, Cleburne's three brigades, commanded by Brigadier General Lucius Polk, Brigadier General S. A. M. Wood, and Brigadier General James Deshler, overlapped both flanks of the Union line. In the growing darkness, the fighting was fierce and confusion reigned on both sides. Two of Baird's brigades, arriving to assist Johnson on the left, maneuvered poorly and fired into each other. Polk began maneuvering around the Union left. When elements of Deshler's and Smith's brigades flanked the Union right and captured most of two of Dodge's regiments, the Union line began falling back. The Confederates followed, but in the increasing darkness and disorganization, they stopped and fighting ceased for the night.

Command and Control. The Union brigades involved in the night battle were well in front of the rest of the Union lines and unsupported on the left or right. Johnson's division was in the same position and formation as it had

been at the conclusion of the fight with Cheatham, that is three brigades in a line along the western edge of Winfrey field. The order from left to right was Baldwin, Willich, and Dodge. When Baird's brigades joined on Johnson's left, they attempted to form in a single line with Scribner on the left and Starkweather on the right. The length of this five brigade formation was no more than 4000 feet. Unlike previous engagements during the day, no Union brigades were in a reserve role.

As mentioned earlier, Cleburne's division was deployed in a single long line of battle a mile long. Deshler's brigade was on the left, Wood's in the center, and Polk's on the right. Cleburne's long line of battle presented difficulties for him; the woods, darkness, and differences in the intensity of the individual brigade engagements made control of an orderly line of battle almost impossible. Cheatham's two brigades, Smith on the left, and Jackson on the right, were arranged as a supporting line behind Wood and Deshler. Smith's brigade, closely following Deshler's brigade helped capture Dodge's two regiments.

Polk versus Starkweather, Scribner, and Baldwin.

Polk advanced on the right of Cleburne's division in a single line of battle of five regiments fronted by a line of skirmishers. Opposite the left of his brigade was Baldwin's brigade. Baldwin positioned his brigade with three regiments in the first line and one regiment in the

supporting line. As the engagement began Starkweather's and Scribner's brigades arrived on Baldwin's left.

Starkweather's front line of two regiments and second line of two regiments were partially covered by the rear of Baldwin's lines. Scribner, on Starkweather's left, put three regiments in his front line and two regiments in his supporting line. Entering the Winfrey field about 200 yards from the Union lines, Polk's left slowed when it encountered heavy musketry and artillery fire from Baldwin's entrenched troops.⁹⁹ Polk's right, meeting less resistance in the woods, continued to move forward. Starkweather, attempting to get his brigade uncovered from behind Baldwin's brigade, moved his brigade by a left half wheel, and then forward into line with Baldwin's brigade. There, his brigade came under heavy Confederate fire. In the growing darkness, Starkweather did not see that Scribner had not matched his movements. Scribner, now partially in the rear of Starkweather, opened fire and enfiladed the left rear of Starkweather's brigade, causing it to retire in confusion.¹⁰⁰ Polk's center and right regiments, engaging Scribner, soon began flanking him. Major Rue Hutchins, of Scribner's 94th Ohio, reported that the Confederates got so close that one could see into the barrels of their muskets at each discharge.¹⁰¹ Flanked, Scribner's brigade retreated. Polk continued to press Scribner and Starkweather back until approximately 9 o'clock when he stopped on

account of darkness and the danger of firing into his own men.¹⁰²

Wood versus Baldwin and Willich. The heaviest fighting of the evening occurred in the center of Cleburne's line where Wood encountered the center of the Union line. Wood's brigade of four regiments and two battalions formed in a single line of battle. As mentioned earlier, Baldwin put three regiments in his front line and one in his second. Willich placed two regiments each in his front and rear lines. Wood's skirmishers began the engagement by forcing the Union skirmishers back to their lines. Initially Wood's brigade did not venture into the Winfrey field. Bassett Langdon, commander of the 1st Ohio, sent his skirmishers back into the field to tempt the Confederates out into the open, recalling them when Willich opened fire.¹⁰³ Wood's brigade returned fire and entered the field. The Union front lines were behind breastworks, the men lying down.¹⁰⁴ The Confederates charged across the field. Confederate reports indicated that the Union lines broke when Wood's men were within 40 to 50 yards.¹⁰⁵ Willich's front line was forced back on his second line, there making another stand. When Willich retreated, the Confederates flanked the right of Baldwin's front line, also forcing it back. Langdon reported the noise of the battle was so great that he had to hit his lying men with the side of his sword to get them up and moving back. Baldwin's front line also reformed with

the second line.¹⁰⁶ In these new positions the fighting was fierce, the opponents just a few yards apart. Colonel Baldwin was killed, Col William Berry taking his place. Berry reported that at this point some of the fighting was hand to hand.¹⁰⁷ Fighting began to slacken in the increasing darkness. Wood's brigade overlapped Polk on the right, the line of battle was not cohesive, and Jackson's brigade, closely following Wood, began to fire into the rear of Wood. The Union troops began a slow withdraw. The Confederates did not pursue.

Deshler and Smith versus Dodge. Cleburne's left brigade, Deshler's, advanced with Wood, his three consolidated regiments formed a single line of battle. Across from him Dodge's brigade waited in two lines with two regiments in each line. Dodge knew he was unsupported on the right and threw out skirmishers preparing to meet an attack from that direction.¹⁰⁸ Due to the length of Cleburne's line, Deshler's brigade extended well past the Union right. Deshler was initially unaware of this fact; unlike Wood his lines moved through thick woods in the growing darkness. As Deshler's brigade moved forward it began veering to the left. General Smith, advancing behind Deshler saw a line of troops stopped in front. Thinking it to be Deshler's he rode forward to investigate only to find it to be the Union line which killed him. Skirmishers from the 17th/18th/24th/25th Texas regiment, on Deshler's right,

stumbled upon Dodge's line and were captured. The rest of the regiment, advanced behind the skirmishers and passed the end of Dodge's brigade before sweeping around the Union right and rear.¹⁰⁹ Under pressure from Smith's brigade, Dodge's front line crumbled and Deshler's troops captured nearly all of the 77th Pennsylvania and about one-half of the 79th Illinois. The second line stubbornly held its position, the 29th Indiana on the right changed its front to the right to meet the threat on its flank.¹¹⁰ The remainder of the 79th Illinois joined with the 30th Indiana on the left of the second line. Being almost surrounded, the brigade withdrew with the rest of the division. The Confederates did not pursue.

With Johnson's withdrawal to safer lines, all organized fighting on the Chickamauga battlefield ceased for the day. Both sides maintained their relative positions on the battlefield. While the soldiers, without campfires, shivered in the cold night air, commanders on both sides prepared for the next day's battle.

ENDNOTES

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⁴ Ibid., 418, 422. Note: Very little information exists on the length of a line of battle. An approximate length can be determined by multiplying the number of enlisted men in the regiment by the average width of a man, two feet, and then dividing by two for the two lines. The length is, in feet, equal to the number of enlisted men in a regiment. Because file closers and skirmishers not in the line would shorten it, and maneuvering around obstacles would lengthen it, I have used 90 per cent of the regimental size to determine the length of a line of battle. The length of the line of battle also does not include the 22 paces recommended in the tactical manuals. Although these numbers won't be precise, applied equally to both sides they provide a starting point for comparison.

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CHAPTER 4

SEPTEMBER 20, 1863

While viewing defense as the less decisive form of war, Clausewitz also maintained that it is the stronger one....the advantages of cover and concealment, advance siting of weapons...and operations on familiar terrain...generally favor the defense. The only advantage enjoyed by the attacker is the initial choice of when and where to strike.¹

During the night, the two sides planned and prepared for the battle on the 20th. General Bragg divided his army into two wings, the right wing commanded by Lieutenant General Leonidas Polk and the left wing by Lieutenant General James Longstreet. Bragg's plan for the 20th was to attack the Union left at dawn; the left wing would wait for and then immediately follow the right wing's attack. The whole Confederate line would then vigorously push the Union back.² Union commanders intended to fight a defensive battle on the 20th, expecting General Bragg to once again attempt to get between the Union army and Chattanooga. The Union troops established their defensive positions and, depending on the division, began preparing breastworks during the night or between first light and the first attack.³

A DELIBERATE ATTACK AGAINST A PREPARED DEFENSE.

After several delays because of faulty communications and coordination, Major General John Breckinridge advanced his division westward at 9:30 A.M. and attacked the Union breastworks. Brigadier General Benjamin Helm's brigade encountered Scribner's and King's brigades of Baird's division and after intense fighting withdrew with heavy losses. Breckinridge's two right brigades under Brigadier General Marcellus Stovall and Brigadier General Daniel Adams respectively, continued west with little opposition until near the La Fayette Road when they engaged Brigadier General John Beatty's brigade of Major General James Negley's division, driving it across the road and scattering it. The two brigades then turned their fronts to the south and began advancing down the La Fayette Road past the Union left. Adams's brigade, on the right, engaged Colonel Timothy Stanley's brigade of Negley's division and two regiments of Beatty's brigade and was forced to retreat back to the north. Stovall, in the center, also advanced and drove back Grose's brigade of Palmer's division. Continuing, it engaged Van Derveer's brigade of Brannan's division, assisted by Willich's brigade of Johnson's division and remnants of Grose's brigade. Van Derveer pushed Stovall back to the north and out of the battle. Lieutenant General Daniel Hill next ordered Walker's Reserve Corps into the battle, although he diluted its combat power by detaching

brigades to different parts of the line. He directed Gist's division to support Helm and fill the gap between Breckinridge's division and Cleburne's division. Advancing where Helm had engaged the Union lines, the division also failed to carry the Union position and suffered heavy casualties. Govan's brigade of Liddell's division attacked the Union left flank, engaging and forcing back Van Derveer's brigade, until, flanked by elements of Grose's, Willich's, Stanley's and Barnes's brigades, it retreated back to the north. Liddell's other brigade, Walthall's, attacked the Union lines on Gist's left and was repulsed. The next two Confederate divisions, Cleburne's and Stewart's, both unsuccessfully attacked the fortified lines manned by the divisions of Johnson, Palmer, Reynolds, and Brannan.

Command and Control. The Union left on September 20 was a very cohesive, compact force. Protected by temporary breastworks, the Union divisions presented a solid line for about a mile. Baird's three brigades formed the Union left. Although all three were on the first defensive line, they did not extend to the La Fayette Road. Throughout the morning Thomas brought up brigades from other divisions in an attempt to lengthen the lines to Baird's left. Johnson positioned his division to Baird's right with Berry's brigade in the first line and Willich's brigade as the reserve. Dodge's brigade was sent to Baird's left just

prior to the Confederate attack. Palmer, on Johnson's right, placed Hazen's and Cruft's brigades on the front line and Grose's brigade as reserve. Reynolds formed his division with Turchin's brigade on the left and E. King's brigade echeloned on the right. Brannan's division continued Thomas's defensive line with two brigades on the line and one brigade in reserve.

On the 20th, Confederate division formations showed slightly more variation than they had on the 19th. Breckinridge placed Adam's, Stovall's, and Helm's brigades in a single line of battle. To Breckinridge's left, Cleburne also planned to arrange his three brigades in a single line of battle. Moving forward into line, Deshler, on the left, ended up in a second line of battle because Longstreet had moved Stewart to the left. Stewart initially planned to form his brigades with Brown on the left and Bate on the right. Clayton formed his brigade in a second line. When Stewart moved to the right, Brown's right ended up on Wood's left with Bate next to Deshler. When sent to support Helm and Polk, Gist formed his division in three lines, with his brigade in the front, Wilson's in the second line, and Ector's in the rear. Liddell's two brigades operated independently: Walthall supported Polk's brigade and Govan supported Adams and Stovall.

Helm versus King and Scribner. The first engagement on Sunday morning characterized the general pattern of

Confederate attempts to attack the Union breastworks on the battle's second day. Preceded by skirmishers, Helm advanced west in a single line of battle of five regiments with a front approximately 1700 feet long. The line encountered the corner in the Union positions where the breastworks bent to the west. The left of Helm's line, the 2nd Kentucky, 9th Kentucky and three companies of the 41st Alabama engaged the breastworks while the right of the brigade, the remainder of the 41st Alabama, 4th Kentucky, and 6th Kentucky, continued on towards the La Fayette Road.⁴ The main Union line was on the reverse side of a wooded slope. In front of them was a cleared area averaging about 75 yards in width.⁵ King's brigade, on the left, formed four lines of battalions. Earlier Baird ordered the 1st Battalion, 18th Infantry forward to the crest of the slope. The battalion complied, taking the logs forming their breastworks and advancing.⁶ Scribner, on Baird's right, positioned his brigade with three regiments in the first line and two regiments in the second line. Helm's brigade drove back the Union skirmishers, then attacked the 18th's breastworks. The 2nd Battalion, 18th Infantry went forward to support the 1st. King wheeled the 15th and the 19th Battalions to the left to protect the brigade left flank.⁷ A heavy firefight followed. Scribner brought his second line up behind his first line and then alternated fire between the lines. The Confederates were driven back. The left of Helm's brigade

made three charges, the closest coming within 40 yards of the Union lines. All three charges were repulsed. Union losses were relatively light, while Southern losses were heavy. Of the approximate 500 men in the two full Confederate regiments engaging the breastworks, 248 were casualties including General Helm. Following the Confederate withdrawal King withdrew the advance elements of his brigade to the original breastwork line.

Helm, Stovall, and Adams versus Beatty. As Helm's left engaged King and Scribner, his right and the two other brigades in Breckinridge's division continued marching directly west with little opposition. Helm's two regiments, Stovall's four regiments and Adams's four regiments formed a single line of battle. They encountered Beatty's brigade in the woods and in an open field east of the La Fayette Road. General Thomas placed this brigade on the Union left to extend the Union lines to the La Fayette Road and wanted Beatty to extend his line almost a quarter of a mile to the McDonald House. The Confederate line attacked Beatty while he was extending his four regiments in a single line of battle on what would normally be a division front.⁸ The Confederate brigades drove Beatty's skirmishers in and then charged the Union brigade, driving it back and breaking it in half. The left two regiments, the 88th Indiana and the 42nd Indiana retreated in disorder to the left and rear, eventually ending up on Snodgrass Hill with Negley. The

right two regiments retreated to the right and rear. The Confederate brigades halted at the La Fayette Road and changed front to the south.

Adams versus Beatty and Stanley. After forcing Beatty to retreat, Adams's brigade continued 75 yards past the La Fayette Road before halting. Realizing that his two brigades were behind the end of the Union line, Breckinridge ordered Adams and Stovall to change their fronts to the south. Adams then advanced about 800 yards under artillery fire through cleared fields and some dense thickets. When within 100 yards of a Union line, the brigade fired a volley and charged.⁹ The Union line, Beatty's skirmishers, fell back. Pressing forward, the Confederate line encountered Stanley's brigade. Stanley formed his brigade with two regiments, the 11th Michigan and 18th Ohio, in the first line and one regiment, the 19th Illinois, in the second line. J. W. King, a member of the 11th Michigan, reported that the front ranks cut some brush to help screen the position and then lay behind the bushes.¹⁰ Beatty formed his two remaining regiments, the 104th Illinois and 15th Kentucky, to the rear and left of Stanley's lines as support. While pursuing Beatty's skirmishers, Adams's line became somewhat disorganized. When the Confederates were within "two or three rods" of the Union lines, Stanley's men commenced firing.¹¹ Stanley ordered the 19th Illinois forward and then ordered the whole line to charge. Pursued

north past the end of the Union lines, Adams brigade retreated to the McDonald House. Stanley's troops wounded and captured Adams.

Stovall versus Dodge and Van Derveer. During the charge which accompanied the engagement with Beatty, Stovall's brigade partially broke up in the woods. When Breckinridge changed his front to the south, Stovall's regiments reformed in new positions in the line of battle. Following Breckinridge's orders and with skirmishers forward, Stovall doublequickd his brigade forward down the east side of the La Fayette Road. The 1st/3rd Florida regiment, on his left, engaged the Union line first, attacking Dodge's brigade of Johnson's division. Dodge, on J. King's left, formed his brigade in a single line of battle. During the engagement the Florida regiment advanced to "not more than a dozen steps" from the Union lines before finally withdrawing because the regiments to the right were falling back.¹² Dodge did not pursue. The other three Confederate regiments continued south past the end of the Union left engaging Grose's brigade which was arriving to support the Union left. Under fire, Grose attempted to form his brigade to Dodge's left in a woodland with heavy underbrush, placing two regiments in the first line and two in the second line. Stovall hit Grose's left flank and drove the larger brigade back in some disorder. Although Major Trusler of the 36th Indiana reported being outnumbered

three to one, Stovall, with less than 600 men in his three regiments pushed back a brigade with over 1000 men.¹³ Exiting the woods at the north end of the Kelly field, Stovall's brigade encountered Van Derveer's brigade entering the field from the west. Van Derveer's brigade was in two lines with two regiments in each line. Responding to the enfilading fire on his left, Van Derveer wheeled his brigade to the left to face Stovall. Although Union accounts vary, there is some agreement that after completing the wheel the Union lines lay down and fired. When the Confederates were within 75 yards, the first line stood up and fired. The second line then charged, followed by the first line.¹⁴ Stovall's men fell back. Van Derveer pursued, supported on the right by regiments of Grose's and Willich's brigades, until, reaching a point near the left of the Union lines, they encountered Govan.

Gist, Wilson, and Ector versus King and Scribner.

Breckinridge's initial advance coincided with Cleburne's but the nature of the terrain and the Union defenses caused the two divisions gradually to move apart. Into this gap Hill sent Gist's brigade, under the command of Colonel P. H. Colquitt, to support Breckinridge. Wilson's and Ector's brigades followed in support of Colquitt. The division formed a column of three single lines of battle each directly behind the other. Gist's brigade of 980 men formed a line almost 900 feet long. Both Ector's and Wilson's

brigades, numbering approximately 500 men, were masked by Gist's line. Expecting to find friendly forces in front, Colquitt advanced his brigade without skirmishers through the woods, and approached the Union line where it bent back towards the west. King, on the left, was again positioned with four lines of battalions. Scribner, on the right, still had his brigade positioned in two lines with three regiments in the first and two in the second. As the Confederates approached the Union lines they received heavy Union enfilade fire. Although Colquitt's right did not have any forces in its immediate front, it, nevertheless suffered from a flanking fire,¹⁵ and changed front to become engaged. The Confederate lines lay down and a firefight began.¹⁶ Although no report stated the closest engagement distance, the Confederates probably ventured not much further than a point 75 yards in front of the Union position where the woods opened into a glade. Wilson's monuments on the battlefield indicate his brigade, the second Confederate line of battle, was approximately 300 feet from the Union lines. For twenty five minutes Gist's brigade lay behind a slight rise and fought until, losing almost a third of its numbers in killed and wounded, it retreated. Ector's and Wilson's brigades covered its withdrawal.¹⁷

Govan versus Van Derveer, Stanley et al. After Breckinridge's unsuccessful assault on the Union left, Hill ordered Iiddell "to take Colonel Govan's brigade and move on

the Chattanooga Road and engage the enemy in his rear."¹⁸ Moving in a single line of battle, Govan basically followed the route Adams and Stovall had taken earlier. No records exist on the length of Govan's formation, but, assuming he had half of Liddell's division's 2131 men, the line was approximately 900 feet long.¹⁹ Advancing south down the La Fayette Road he engaged Van Derveer's and Stanley's brigades and began forcing them back. Van Derveer's brigade formed in two lines with two regiments in each line. Although Van Derveer and his regimental commanders claimed they withdrew to make way for a supporting unit moving up on the right, they described the withdrawal as "passing lines to the rear, each line firing as it retired."²⁰ This action is very similar to the method of retiring suggested for skirmishers. Stanley's brigade, on Van Derveer's left, engaged with two regiments in the front line and one in the second. Govan forced Stanley and Van Derveer to retreat and continued south. As he advanced past the Union left, elements of Dodge's, Willich's, Berry's, and Barnes's brigades attacked him from the left. Barnes's brigade arrived on the Kelly field as Van Derveer and Stanley fell back under fire. Barnes formed his brigade in two lines with two regiments in the first line followed distantly by two in the second, charged Govan's left flank, and with the other brigades, forced Govan to retire. Although initially pursuing Govan into the field north of the breastworks, Barnes returned to

where Dodge first engaged Stovall and maintained this position until retiring that evening.

Polk versus Starkweather, Berry, and Cruft.

Breckinridge's division began its advance before Brigadier General Polk received his orders, so Polk quickly moved his brigade forward and obliqued to the left in an effort to close the gap between his right and Breckinridge's left. He encountered the Union lines before connecting with Breckinridge.²¹ Polk's brigade, formed in line of battle, was almost 1500 feet long and covered the length of three Union brigades. Starkweather on the left, Berry in the center, and Cruft on the right all formed their brigades with two regiments in the first line and two in the second. The Union soldiers were lying down, protected by breastworks of felled logs, timber and stones. Starkweather's men also built fortifications for their second line.²² Polk's line, moving to within 75 yards of the Union breastworks, was subjected to a very severe fire.²³ The Confederates lay down and returned fire for an hour and a half before running out of ammunition and retiring.²⁴ Union ammunition consumption was also very high. Starkweather reported that his two front lines ran out of ammunition and one of Cruft's regiments did also.²⁵ The 93rd Ohio, Berry's front left regiment, averaged 100 rounds per man in the engagement.²⁶ The casualty rates of the opposing sides contrasted sharply. Union losses were low. The 93rd Ohio, for example, had six

casualties and Cruft's brigade suffered only a few wounded.²⁷ Polk's brigade, on the other hand, lost over 350 killed and wounded.

Walthall versus Starkweather and Berry. About noon Lieutenant General Polk sent Walthall to support Brigadier General Polk. As Walthall's brigade advanced through the dense undergrowth the left flank came under heavy fire from the Union lines. According to Walthall, his brigade, in single line of battle, returned fire but the undergrowth was so thick he was unable to determine the exact position of any line.²⁸ At least one regiment lay down under this fire.²⁹ Informed that there were friendly troops in his right front, and with his left driven back by Union fire, Walthall retired his brigade. No information exists on how close to the Union lines he came and what effect his fire had on the Union positions.

Wood versus Hazen, Turchin, and E. King. Wood advanced his five regiments on Polk's left. Although Polk's brigade initially crowded him to the left, Wood was unable to shift right quickly when Polk moved right to join Breckinridge. Before Wood's men caught up they encountered the Union breastworks. With 1501 infantrymen formed in single line of battle, Wood's line was probably 1400 feet long, covering the space occupied by three Union brigades.³⁰ The Union brigades were all formed in two lines with two regiments in the first line and two regiments in the second.

Hazen, on the left faced east. Turchin, in the center, straddled the point where the Union line bent back towards the west on the north side of the Poe field. E. King's brigade faced east across the La Fayette Road. Both sides used skirmishers. As the Confederates advanced, they drove back the Union skirmishers. The 32nd/45th Mississippi regiment with the 15th Mississippi Battalion Sharpshooters on its right, advanced to within 150 yards of the Union lines, attacking where Turchin's line bent back. They were unable to advance further because of the heavy Union fire.³¹ When the right stopped, the rest of the brigade took shelter by lying down in a ravine.³² The brigade remained in this position engaging the Union lines for about an hour. When Brown's brigade of Stewart's division advanced, Wood's left regiments also advanced about 200 yards through open woods and into Poe's field. The first 100 yards of this field were covered with stumps and logs, the last 100 yards were covered with broom straw.³³ Entering this field, Wood's men became fully exposed to the heavy enfilade fire of Turchin's and King's brigades. Again the men lay down and fired for approximately a half hour before running out of ammunition and retiring.³⁴ The Union brigades did not pursue. Wood's casualties, like Polk's were extremely high. Of the approximately 1600 men he brought into the engagement he lost almost 400.³⁵ Union casualties were light; Hazen, for example lost only 13 men all day.

Deshler versus Cruft, Hazen and Turchin. When Wood's brigade retired, Cleburne ordered Deshler's brigade to the right and into action where Wood's brigade had engaged. Deshler formed his three consolidated regiments in a single line of battle and advanced over the crest of a small hill to within 200 yards of the Union breastworks. Like Wood before him, Deshler's men came under heavy fire and he ordered his command to lie down and return the fire.³⁶ Behind the breastworks Union troops crouched, knelt, and lay down to load and fire. The Union firing pattern was a little different in this engagement than the one with Wood. Hazen reported ordering his brigade to fire by volley to conserve ammunition and the commander of his 41st Ohio reported firing by battalion.³⁷ The firefight continued until Deshler's men began running out of ammunition. They withdrew 20 or 30 paces back behind the crest of the hill for cover, leaving skirmishers forward to engage the Union lines.³⁸ Confederate losses were heavy. Deshler was killed by an artillery shell. Of the 418 casualties the brigade suffered in the battle, practically all occurred during this engagement.

Brown versus E. King, Croxton, and Connell. Brown's brigade began its attack after Wood. Brown's four regiments formed in a single line of battle. When Wood's brigade halted under the heavy Union fire, Brown's brigade passed it on the left and, preceded by skirmishers, entered the Poe

Field. There it immediately came under heavy Union fire from skirmishers in the field and from a line of breastworks in the woods on the other side. In these woods Brannan's division formed on E. King's right. Croxton, Brannan's left brigade, positioned his five regiments with two in the first line and three in the second. Connell, on Croxton's right, positioned two of his three regiments in the first line and one in the second. Connell's right was unsupported because of Thomas Wood's division leaving the line and moving north under orders from Rosecrans. Brown entered the Poe field approximately 700 feet south of Turchin's line and consequently did not suffer much from the enfilade fire. Brown's brigade continued to advance with part of S. A. M. Wood's brigade on its right until Wood's line broke. Brown's two right regiments, now receiving enfilade fire from artillery and musketry, advanced to within 50 yards of the Union breastworks before breaking and retreating back across the field into the woods.³⁹ The center and the left of the brigade continued to advance, crossed the La Fayette Road and proceeded into the woods 200 or 300 yards, pushing back Connell's right. The 17th Ohio, the right regiment in Connell's front line, attempted to change front to meet the Confederate threat but was unable to do so. When the Confederate line approached within 75 yards of the 17th, the 17th broke and, followed by the 31st Ohio on its left, retired in confusion.⁴⁰ The 82nd Indiana, lying down in the

second line, waited until the two regiments passed over, then stood and charged. The charge succeeded in pushing the Confederate regiments back past the original Union breastworks.⁴¹ Unsupported on the right, Brown's men retired to their original line. Confederate casualty returns for this engagement are incomplete yet they do not indicate casualties equal to Wood. The heaviest Union loss was the 82nd Indiana's loss of 92 men killed and wounded in its charge to retake the Union breastworks.⁴²

Bate and Clayton versus Turchin, E. King, Croxton and Connell. Stewart originally formed his division on the 20th by placing Bate and Brown in line of battle with Clayton as a reserve. When Longstreet moved the division to the right, Bate's brigade, with Clayton's brigade on its left, ended up behind Wood. When Wood and Brown advanced into the Poe field, Bate and Clayton followed in supporting distance. Bate entered the field after Wood retreated. The Union lines differed from previous engagements. Turchin and King each were still formed in two lines. Croxton's front two regiments were still in line although Connell's retreating regiments stripped away most of the three second line regiments. The 82nd Indiana was Connell's sole remaining regiment. Although Bate's brigade received very heavy frontal and flanking fire, it was more successful than its predecessor. The right regiments advanced to within 50 yards of the Union breastworks before they were compelled to

retire.⁴³ The left regiments managed to cross the La Fayette road before retreating. The brigade lost a third of its number in killed and wounded.⁴⁴ Clayton's brigade entered the Poe field on Bate's left, and, like Bate, his three regiments were in a single line of battle. The brigade advanced to the Poe house on the west side of the La Fayette Road before receiving heavy artillery and musketry fire and retiring. The brigade suffered 156 casualties of the 973 engaged.⁴⁵

DISASTER FOR THE UNION CENTER.

Quite often the course of battles changes drastically because of one decision made by a commander in the heat of battle. Rosecrans' famous order to Brigadier General Thomas Wood to withdraw his division from the defensive line and move north to support Reynolds is one such decision. General Wood promptly obeyed Rosecrans's order, leaving a division-size gap in the Union lines. Although Davis's men were beginning to fill the hole, they did not have time. Longstreet's forces attacked through the hole. The lead Confederate division was Brigadier General Bushrod Johnson's. With Fulton's and McNair's brigades in the first line of battle, Johnson quickly pushed through the gap routing the rear of Buell's brigade and forcing the remainder of Connell's brigade to retire. On Johnson's left, Major General Thomas Hindman's division attacked on a

two brigade front. Brigadier General Zach Deas's and Brigadier General Arthur Manigault's brigades engaged, flanked, and drove Davis's two brigades commanded by Brigadier General William P. Carlin and Colonel John Martin. Pursuing, Hindman's two brigades, supported by his third brigade commanded by Brigadier General Patton Anderson, successfully engaged Colonel Bernard Laiboldt's, Brigadier William Lytle's and Colonel Nathan Walworth's brigades of Major General Philip Sheridan's division. Manigault's brigade was attacked from the left by Colonel John Wilder's brigade and temporarily forced to retire. Further to the north the brigades of Colonel Cyrus Sugg, Colonel William Perry and Brigadier General Jerome Robertson followed Johnson's first two brigades and turning slightly to the north, attacked and captured Union artillery on the west side of the north Dyer field. A counterattack by Colonel Charles Harker's brigade of Wood's division forced them temporarily back east across the field before Harker was in turn engaged and forced to retreat by Brigadier General Joseph Kershaw's brigade.

Command and Control. Although the initial Union dispositions maintained a strong defensive line, Union command and control quickly degenerated once Longstreet commenced his attack. Wood's and Davis's divisions formed the right flank of the Union defensive line on Sunday morning. Wood, placed all his brigades on the front line,

while Davis placed Carlin's brigade on the front line and kept Martin's brigade as a reserve. Wood's departure left Davis isolated and vulnerable to flanking by Longstreet's line. Davis attempted to fill the gap with Martin's brigade but it was not completely in place when the attack began. Sheridan's division deployed to support Davis once the Confederate attack began. Unfortunately, the brigades entered the battle separately and were defeated piecemeal. Laiboldt charged across the Dyer field in a column of regiments to support Davis's retreating men. Lytle's brigade formed on a hill on the west side of a field south of Dyer's and Walworth formed in the woods further to the south.

The Confederate division formations were deployed to form a deep column. Johnson's division formed with Fulton's and McNair's brigades in the front line and Sugg's in the second. Behind them was Hood's division. Perry's brigade formed the first line and Robertson's and Benning's the second. Following Hood, McLaws's two brigades, Kershaw's and Humphreys's, formed a single line. In front, on Johnson's left, Hindman formed his division in two lines, with Manigault and Deas's in the first line and Anderson in the second. Although Kershaw managed to keep his division together for this part of the battle, the other division commanders' appeared to lose control of their brigades once the attack began. In Hindman's division, Anderson,

advancing behind Deas, overtook Deas and formed with him in the latter's attacks. Likewise Sugg also caught up with the two brigades he was following and continued forward in line with them. Following the initial attack, Robertson, Perry and Benning all appeared to operate by themselves for the rest of the day.

Buell versus Fulton. Fulton's brigade formed the left front of Johnson's front line, its four regiments in a single line of battle. Fulton's left was extended by two regiments of Gregg's brigade, the 1st and 50th Tennessee. The brigade extended southward from the Brotherton Road for about 1000 feet. Skirmishers deployed in front of the brigade. Across the road and in the woods on the west side of Brotherton field, Buell formed his brigade with two regiments in the forward line of breastworks and two regiments 80 yards behind in closed column formation. Skirmishers deployed into the Brotherton field in front. Meeting with some opposition from Fulton's skirmishers, the commander of the 100th Illinois ordered his regiment to charge. The regiment charged over the field, across the La Fayette Road, and into the woods on the other side, pushing back Fulton's skirmishers to their main line. The 44th Tennessee, on Fulton's right, engaged the 100th, wounding its commander and forcing the regiment to retire back to its own lines. The Confederate skirmishers followed.⁴⁶

Fulton versus Buell. Isolated skirmishing between Fulton's and Buell's brigades continued until 11:00 A.M. when Wood began to move his division to support Reynolds. Buell's brigade was the last to leave the line, leaving the skirmishers in front. Buell described what happened next:

We had scarcely moved one brigade front when the shock came like an avalanche on my right flank. The attack seemed to have been simultaneous throughout the enemy's lines, for the entire right and part of the center gave way before the overpowering numbers of the foe.⁴⁷

Not encountering much resistance, Fulton's men crossed the La Fayette Road and the Brotherton field. Because Buell's brigade was moving in column formation, it was unable to provide any organized resistance and scattered. Fulton's left first encountered heavy fire from the left of Davis's division 100 yards away when it was about half way across the Brotherton field. Although part of the line fell back to the road, the rest advanced past Davis' lines and into the woods.⁴⁸ Continuing, Fulton's line passed over the second line of breastworks and through the woods to the Dyer field beyond, pursuing the remnants of Buell's brigade. Subsequently, Fulton's brigade advanced two-thirds of a mile to the hill over looking the Vittetoe house before halting.

McNair versus Connell. McNair's brigade formed on Fulton's right with five regiments in single line of battle extending almost a 1000 feet to the north side of the Brotherton Road. Before Longstreet's attack, McNair's left

regiments assisted Fulton in repulsing the 100th Illinois. Advancing with Fulton, McNair crossed the La Fayette Road about the same time as Brown's brigade was withdrawing under pressure from the 82nd Indiana's counterattack. The 82nd occupied the breastworks originally used by the 17th and 31st Ohio Regiments. With less than 200 men left, the 82nd presented a very small front to McNair's brigade and did not hold back his advance for long. Initially refusing his right Colonel Hunter retired the 82nd to Snodgrass Hill, turning around every 50 yards or so to fire.⁴⁹ McNair, pushing forward and angling slightly to the north, crossed westward through the woods and entered the eastern side of the north half of Dyer's field. Coming under fire from Union batteries positioned on the opposite side, the brigade momentarily halted; however, with the assistance of Perry's and Robertson's brigades which supported them and Gregg's brigade which flanked the battery from the south, McNair's men charged the batteries and captured fifteen guns.

Benning versus Croxton and E. King. Following McNair's and Perry's brigades, Benning's brigade advanced on Robertson's right. Like the other brigades, Benning's five regiments formed in a single line of battle. After Benning crossed the La Fayette Road, he lost sight of Perry's brigade in the woods in front of him. Seeing Union lines to the north of his position, he "changed the direction of march by bearing to the right and advancing my left, so as

to face this enemy."⁵⁰ He then attacked the 10th and 74th Indiana of Croxton's brigade, both nearly out of ammunition. The 10th Indiana, on the right, changed front perpendicularly to the rear. The 74th Indiana then moved to the right of the 10th. There they remained until, running out of ammunition, they retired to the Kelly Field.⁵¹ King's brigade also withdrew to avoid being flanked. Benning captured some artillery left by the 1st Michigan Light Artillery of Connell's brigade. A little later, the 105th Ohio of King's brigade charged back to the south, engaging Benning once more and attempting to turn his right. Although forcing Benning back a short distance, they were unable to retake the artillery and after engaging in some long range fire, retired.⁵² Benning did not pursue or engage Union forces for the remainder of the day.

Deas and Anderson versus Martin. Deas's brigade formed on the right in the front line of Hindman's division. Anderson's brigade formed in the second line behind Deas and Manigault. Deas and Anderson both arranged their brigades in single lines of battle. With six regiments and 1785 infantrymen, Deas's line was approximately 1600 feet long. Anderson commanded six regiments with 1709 enlisted men, forming a line approximately 1500 feet long. When Fulton advanced on Deas's right, Deas moved forward with him. Anderson, following in support, initially advanced his brigade about 200 yards behind Deas but by the time the

first line crossed the La Fayette Road, he was within 50 yards.⁵³ Across the road Martin's brigade manned the first line of Union breastworks. Although initially positioned as a reserve to Carlin's brigade, the brigade moved forward to occupy the position vacated by Wood's division. With a little over 600 men, Martin formed all of his regiments in a single extended line of battle.⁵⁴ Martin's left did not connect with any Union forces. Deas's brigade crossed a small rise in the center of the Brotherton field and received a volley of musketry from the Union lines in the woods 50 to 75 yards away which temporarily halted its advance.⁵⁵ Coming up from behind, Anderson's brigade began to mix with the left of Deas's brigade. Deas's right began flanking Martin's left, causing it to give. Outnumbered and outflanked on the left, Martin's men retreated through the woods and across Dyer's field pursued closely by Deas and Anderson. Direct pursuit ended as the Confederate troops engaged brigades from Sheridan's division.

Deas and Manigault versus Carlin Positioned on Deas' left, Manigault's four regiments of 1856 infantrymen formed a single line of battle almost 1600 feet long. The two brigades advanced together with skirmishers 100 to 150 yards in front across the La Fayette Road to engage the Union lines manned by Carlin's brigade. Carlin positioned his regiments in the woods with three in the first line lying down behind breastworks and one in reserve 100 yards to the

rear. Skirmishers deployed in front.⁵⁶ As the Confederate brigades forced back the Union skirmishers, they came into the view of the Union main line at a distance of approximately 150 yards.⁵⁷ Manigault's right was in woods and the left was in an open field. Deas's left was in the woods. The engagement began and a heavy firefight ensued. The 10th and 19th South Carolina Infantry, on Manigault's right, advanced to within 80 yards of the Union lines before being checked.⁵⁸ After a heavy firefight the Confederate line began to advance once more. The Union left and right broke. The left regiment, the 101st Ohio, was flanked as a result of Martin's retreat on its left. The right regiment, the 21st Illinois, flanked on the right by Manigault's troops, retreated. Its commander reported holding out until the Confederate line was within 20 paces.⁵⁹ Carlin, meanwhile, attempted unsuccessfully to bring up his reserve regiment, the 38th Illinois, to reinforce on the right. The Union regiments retired over the 38th Illinois, which only managed to get off one volley before it also retreated.⁶⁰ Deas and Anderson followed in pursuit.

Manigault versus Walworth. After successfully breaking through Carlin's lines, Manigault's brigade continued its advance west. Opposite them, on the Glenn Kelly Road, Walworth's brigade was marching north to support Thomas. Manigault immediately attacked. Responding to the musketry fire coming from his right, Walworth immediately

turned his lead regiment, the 22nd Illinois, to the right and began to form a line of battle with the 51st Illinois on its right. Although Walworth planned to place the other two regiments in a second line, Generals McCook and Sheridan placed them instead next to the other two in a single line of battle.⁶¹ The left and center regiments of the brigade were in thick woods and undergrowth while the right regiment faced out over an open field. The 24th Alabama and the 10/19th South Carolina advanced to within 60 or 70 yards. Colonel Raymond of the 51st Illinois reported his regiment fired only one volley before being forced to retreat.⁶² The Confederates followed and the 10/17th South Carolina momentarily captured a three gun artillery section on the right of the 51st Illinois. Although quickly pushed back, Walworth's left three regiments rallied momentarily, the fighting close enough that the 51st Illinois claimed it captured the 24th Alabama's battle flag.⁶³ The three Union regiments retired to the hill behind them. Meanwhile, the 27th Illinois, on Walworth's right, held its position. Relieved by Wilder's brigade who forced back Manigault, the 27th Illinois attached itself to Wilder for the rest of the battle.⁶⁴

Wilder versus Manigault. Colonel Wilder's brigade was on the hill by Widow Glenn's house advancing by regiments in line of battle when Manigault struck Walworth's brigade. Quickly changing the brigade front and forming a

single line of battle, Wilder ordered a charge into the center of Manigault's line. The combination of the flanking charge and Spencer rifles quickly broke the Confederate lines. Although Union casualties were light, Confederate casualties were heavy. Manigault later wrote of the experience:

The air seemed alive with bullets, and an officer afterwards remarked to me, 'General, all you had to do was to hold out your hand, and catch them.' Out of about 800 men that came into the full fury of this storm, nearly 300 were shot down in a space of time certainly not exceeding three minutes.⁶⁵

The center and right of Manigault's brigade retired east across the La Fayette Road. Although the 34th Alabama, Manigault's left regiment, effectively menaced Wilder's right during the previous engagement, it also fell back. Wilder did not follow; receiving word that a rebel line was moving on his left, he assumed a defensive posture on the hill west of the Widow Glenn's house.⁶⁶

Deas and Anderson versus Laiboldt. On Manigault's right, Deas's brigade, successfully pursuing Heg's and Carlin's brigades, exited the line of woods between the Brotherton field and entered the field south of the Dyer house. This field was approximately 300 yards wide, contained a shallow wash running through its center, and was bordered by a hill on the west side. Posted across the wash on the slope of the far hill, Laiboldt's brigade formed in a column of regiments. As Davis's men retired in confusion,

McCook ordered Laiboldt's brigade to make a bayonet charge. The brigade promptly obeyed, charging down the hill where they were met by a "murderous fire."⁶⁷ Although it attempted to wheel to the right, the brigade, closed in column, could not effectively return the Confederate fire and was quickly flanked on both sides by Deas' brigade.⁶⁸ General Carlin, observing the charge, noted that the loss of Union "men was very great."⁶⁹ Laiboldt's brigade, its organization broken, retreated back across the field and over the hill. Deas's brigade, with Anderson on the left followed.

Deas and Anderson versus Lytle. On the crest of the hill behind Laiboldt, Lytle's brigade formed in a defensive position. Lytle originally was moving north to support Thomas, but the Confederate penetration of the Union center forced Sheridan to commit the brigade to the fight. Lytle formed his brigade with two regiments in the front line and two regiments in a second line. He ordered the front lines to lie down so that the remnants of Martin's, Carlin's, and Laiboldt's brigades could pass to the rear.⁷⁰ As Anderson's brigade began threatening his right flank, Lytle ordered the 21st Michigan, his right rear regiment, into the first line on the right of the 88th Illinois. The left rear regiment, the 24th Wisconsin, next moved forward to relieve the 36th Illinois.⁷¹ After a heavy firefight and under pressure from Deas's brigade in front and Anderson's brigade on his flank,

Lytle's brigade retreated. Deas's and Anderson's brigades, exhausted and scattered by the fight, did not pursue Lytle's men. Casualties were heavy for both sides. Lytle was killed and his brigade suffered 460 casualties in less than thirty minutes. On the 20th Deas lost 745 men and Anderson 558. Although both engaged Davis's men and later fought on Snodgrass, a good portion were lost in this engagement.

Harker versus McNair, Perry, and Robertson. The portions of the three brigades which captured the Union artillery on the hill on the east side of Dyer's field were, by this time, disorganized. Unit integrity was nonexistent. To their north Wood ordered Harker's brigade to form for an attack on the Confederate formation and ordered the 125th Ohio to seize the fence at the north end of the Dyer's field. The regiment quickly advanced to the fence and began firing on the Confederate brigades 350 yards away.⁷² Harker's three other brigades and the 58th Indiana of Buell's brigade came up and formed a single line of battle. Shortly thereafter Wood ordered the 64th and 125th Ohio to advance to a copse of timber nearer the center of the field. The regiments "advanced firing." By doubling up the files to make four ranks, they moved into the field, each rank moving forward, firing, and then lying down to reload.⁷³ The Confederate brigades abandoned their positions by the artillery and crossed back to the east across the field into the woods on the other side. Harker's men did not pursue.

Kershaw versus Harker. With Harker's men watching, Kershaw's brigade entered Dyer's field in front of them, formed in line of battle. Kershaw changed his brigade's front to the right to face Harker's brigade, and ordered his men to fix bayonets and advance at the double-quick.⁷⁴

Their appearance was quite impressive. In a letter to his wife, Colonel Emerson Opdycke described the scene:

Presently another line more formidable than the first one, appeared in the distance, advancing upon us. The terrible grandeur of this advance is beyond the reach of my pen; the whole vast mass seemed moved by a single mind; their step was proud, and in perfect order.⁷⁵

Initially the Union troops, confused by the color of the Confederate uniforms, thought that the line might be a Union one and refrained from firing until fired upon. Accounts of what happened next differed. Kershaw reported that when he reached a point within 100 yards of the Union line, it broke. He opened fire and pursued.⁷⁶ Harker reported being flanked on both sides by the Confederate line, forcing him to retire his brigade by battalions to Snodgrass Hill.⁷⁷ Kershaw pursued Harker's retreating regiments northwest out of the field until, under heavy artillery fire, he stopped and waited for Humphreys's brigade to move up and support his right.

SNODGRASS HILL.

A quarter of a mile to the east of Kelly field there is a ridge named Horseshoe Ridge but is more popularly known

as Snodgrass Hill. Rising above the rest of the battlefield, the ridge contains three distinct knobs on its southern face. For ease of reference they are numbered from east to west Hill 1, 2, and 3. Following the destruction of the Union center, Snodgrass Hill became the rallying point for many of the Union regiments and brigades. Portions of Connell's and Croxton's brigades reformed here along with parts of regiments from Van Cleve's and Wood's divisions, Also forming in the initial defensive line were parts of Sirwell's and Stanley's brigades of Negley's division. The Union forces quickly built breastworks just behind the crest on top of Snodgrass Hill.

Kershaw's division made the initial Confederate assault up Snodgrass Hill, but the hill's incline and heavy Union fire prevented him from reaching the crest or taking the Union position. Anderson's brigade of Hindman's division next arrived and also made an unsuccessful assault up the hill. Meanwhile, on the western side of the Dyer fields, Brigadier General Bushrod Johnson moved his three brigades to the north past the Vittetoe farm and up the far western side of Snodgrass Hill. On their first attempt to flank the west end of the Union line on the hill they were met by Brigadier General Walter Whitaker's brigade of Brigadier General James Steedman's division, just arriving on the battlefield, and forced down the hill. With Deas's and Manigault's brigades on his left and Anderson's on his

right, Johnson next attempted a coordinated attack with little success. On the east side of Snodgrass Hill, Van Derveer's brigade arrived and relieved some of the units manning the Union defensive line. Brigadier General Archibald Gracie's brigade of Brigadier William Preston's division relieved Kershaw and, in a heavy firefight, secured a foothold near the crest of Snodgrass before running out of ammunition and retiring. Colonel John Kelly's brigade also arrived, relieving Anderson's brigade, but was unsuccessful in its attack. By late afternoon the Union forces on Snodgrass were running low on ammunition. Complying with Rosecrans's orders, Thomas withdrew the Union forces from Snodgrass. Three regiments left behind were captured in an attack by Colonel Robert Trigg. In the growing darkness Confederate units secured the top of Snodgrass Hill.

Command and Control. With the exception of Steedman's division, and Sirwell's, Stanley's, Van Derveer's and Hazen's brigades, the Union forces formed on Snodgrass Hill after retreating from other areas of the battlefield. The line was not organized with divisional boundaries; position in the line depended on the order the unit arrived on Snodgrass Hill. Many decisions and movements, as a result, were made at the brigade or regimental level, although several division commanders were present on Snodgrass. The major exception was Steedman's division after its arrival. His two brigades, one following the

other, deployed next to each other into line of battle on the west end of the Union lines. The lack of effective centralized divisional control may be the major reason three regiments were left on Snodgrass when the Union forces withdrew in the early evening.

Confederate command and control was a mixture of division and brigade-level actions. Kershaw attempted to attack with his division in a two brigade line of battle. Humphreys, however, demurred in making a direct attack on Snodgrass Hill and Kershaw was unable to direct him to attack. Anderson's brigade initially attacked with Kershaw but then attacked as part of an action coordinated by his division commander, Hindman. Johnson initially attacked with Sugg and Fulton on a two brigade front and McNair in reserve. During the course of the engagements McNair's brigade advanced and mixed with the front lines and fought this way for the remainder of the battle. Separated from Anderson's brigade, Hindman's two other brigades, Manigault's and Deas's, were on Johnson's left, and their initial attacks were coordinated with Johnson's. Preston's division engaged piecemeal, consequently, the Confederates were unable to capitalize on Gracie's success in obtaining the crest of the hill. The lack of strong Confederate centralized control enabled the Union forces to withdraw safely from Snodgrass Hill.

Kershaw and Humphreys versus Harker, Stanley, Connell

et al. Kershaw's brigade followed Harker's retreating brigade to the base of Snodgrass Hill. Humphreys advanced on Kershaw's right in single line of battle. Kershaw, also in line of battle and, supplemented by the 15th Alabama of Perry's brigade, directed the two brigades to attack. Due to the nature of the rising terrain in front, Kershaw's brigade advanced and fought more as regiments than as a single line of battle. The 2nd South Carolina attacked Hill 3, the 3rd South Carolina battalion and 3rd South Carolina regiment attacked Hill 2 and the 7th South Carolina and 15th Alabama attacked Hill 1. The two regiments on the right, along with Humphreys's brigade, provided covering fire but did not climb the hills.

Kershaw made his attacks on Hills 2 and 3 against a mixture of Union regiments and brigades. From right to left the Union order was the 21st Ohio, the 82nd Indiana, parts of regiments from Connell's, Croxton's, Buell's, and S. Beatty's brigades, and the right of Stanley's brigade. Temporary breastworks protected most of the Union line. Kershaw began his attack around 1:00 P. M., his left regiments advancing to within 50 yards of the Union lines before being repulsed.⁷⁸ Kershaw's men retreated down the hill and reported being attacked and repulsing a Union counterattack.⁷⁹ Although no Union reports mentioned a charge down the hill, Colonel Stoughton, commanding

Stanley's brigade, reported charging and "driving them from the hill."⁸⁰ The Union lines approached to within 20 yards of the Confederate line before retiring.⁸¹ Kershaw's left units quickly followed the Union troops back up the hill but were repulsed once more.

Preceded by skirmishers, Kershaw's right, the 7th South Carolina and 15th Alabama, climbed Hill 1, and engaged Stanley's left and Harker's brigade. Humphreys, on Kershaw's right, also sent his skirmishers forward. Confronted with "a terrific fire of artillery and musketry" Humphreys elected not to send his men up the hill.⁸² Instead he provided supporting fire from the woods at the base of the hill. Kershaw's regiments were at a severe disadvantage during this engagement. Harker formed on Stanley's left two lines of battle with two of his four regiments behind the crest of the hill. In an unusual maneuver, his two lines alternately advanced to the crest of the hill, fired on the advancing Confederate line, then fell back, lay down, and loaded.⁸³ Although Kershaw's men tried three times to take this hill they were unable to do so.

Anderson and Kershaw versus 21st Ohio, Connell and Van Derveer. Around 3:00 P. M. Anderson's brigade arrived at the base of Snodgrass Hill on Kershaw's left and filled a gap between Kershaw and Johnson's division. Because the interval between Kershaw's left and Johnson's right was not wide enough for Anderson to place his entire line of battle

he formed his brigade in two lines.⁸⁴ Two regiments formed the first line and three, the second. Anderson's first attack began as Johnson's brigade, on his left, was beginning its second attack. At the top of Hill 3, the Union line remained essentially the same as it was during Kershaw's first attacks except that the 87th Indiana and 9th Ohio, Van Derveer's front line were now positioned between the 21st Ohio and the 82nd Indiana. Union skirmishers deployed in front of the Union breastworks. Following its own skirmishers, the Confederate line engaged the Union line, attaining the crest of the hill before being repulsed. The 9th Ohio counterattacked, charging down the hill, before it too was repulsed by Anderson's reserve line.⁸⁵

Anderson's next attack was part of a coordinated effort between Johnson's and Hindman's divisions. This attack also failed to break the Union lines. Low on ammunition the Confederate brigade was replaced by elements of Preston's division.

Sugg, Fulton, and McNair versus Whitaker. After capturing the Federal trains and moving north past the Vittetoe house, Johnson's division moved up the west slope of Snodgrass Hill. Both Fulton's and Sugg's brigades formed a single line of battle and advanced, preceded by skirmishers, up the hill. McNair's brigade followed in line of battle. Under fire from the 21st Ohio, Sugg's brigade reached the crest of the hill and approached to within 200

yards of the 21st Ohio when it and the rest of the Confederate line engaged Whitaker's brigade just arriving on the battlefield. The Union brigade, supplemented by two temporarily attached regiments, deployed into two lines of battle with three regiments in each line. One participant wrote that the two sides first came into contact at a distance of about 60 yards. The two sides exchanged a volley before the Confederate lines gave way and retreated down the hill with the Union lines charging in pursuit. Half way down the slope the Confederates regrouped and engaged Whitaker's brigade in a heavy musketry duel for twenty minutes.⁸⁶ The Union lines advanced to within eight to ten rods of the Confederate batteries before both sides disengaged.⁸⁷ The Union line withdrew over the crest of the hill and reformed, the second line passing to the front. When the Confederate lines fell back, McNair's brigade became mixed with the other brigades and part of Manigault's brigade forming on Johnson's left, and fought this way the rest of the day.

Advancing with Hindman's three brigades on both flanks, Johnson's men attempted a second assault. Although they nearly reached the crest, Whitaker's men once again drove them back. During the rest of the day Johnson's men made several more unsuccessful assaults up the hill. During these assaults most Union loading and firing was either done while lying down on the ground, or by stepping back a few

paces from the crest to reload and then moving forward to fire.⁸⁸ Union casualties were high; in action about three hours, Whitaker's brigade suffered 1225 casualties out of 2877 men engaged and by the end of the day there were only enough men for one line.⁸⁹ Late in the afternoon and low on ammunition, Whitaker's brigade, with the exception of two regiments, withdrew. Johnson's men did not follow.

Deas and Manigault versus Mitchell. During Johnson's initial engagement with Whitaker, Deas and Manigault formed their brigades in single line of battle on his left on the lower slope of Snodgrass Hill. Both brigades deployed skirmishers. On the top of the hill Mitchell's brigade, following Whitaker's brigade into the battle, deployed in a single line of battle on Whitaker's right. Deas's and Manigault's first attack up Snodgrass was part of a coordinated attack between Hindman's and Johnson's divisions to flank the Union position. Deas, on Manigault's left, began the movement, climbing the steep, wooded hill to engage the Union lines. Upon reaching the crest his men encountered heavy artillery and musketry fire from Union positions approximately 80 yards away. Deas's men advanced to within 40 to 50 yards of the Union artillery before being forced back.⁹⁰ Three times Deas's men unsuccessfully assaulted the Union lines before finally withdrawing down the hill, the right regiments disrupting Manigault's left as he advanced.

Manigault's brigade advanced up a ravine and was immediately at a disadvantage. Colonel John Reid of the 28th Alabama reported that the Union troops, situated behind and protected by the crest of the hill, could fire 150 yards into the Confederate line without being subject to Confederate fire in return.⁹¹ Manigault's regiments advanced to within twenty yards of Mitchell's lines before retreating.⁹² Throughout the afternoon Manigault's men made several unsuccessful charges against the Union line. Mitchell reported "hand to hand" fighting during some of these engagements."⁹³ At sundown Mitchell's brigade, nearly out of ammunition, withdrew 300 yards to the next ridge in the rear. The Confederate line did not pursue.

Gracie versus Connell, Stanley, Harker, et al.

Around 4:30 P.M. Gracie's brigade passed through Kershaw's brigade and began its attack on Snodgrass Hill. The brigade was in single line of battle extending from Hill 2 eastward past Hill 1. On the top of the hill behind breastworks, the 82nd Indiana, the collection of partial regiments, and Stanley's and Harker's brigades were still in the same positions as when they fought Kershaw. As Gracie's men crossed the road at the base of the hill they came under a very heavy fire. Returning the Union fire, they advanced steadily up the hill. The right half of Gracie's brigade engaged Stanley's brigade. Charging up to the Union breastworks, Gracie's men forced Stanley's brigade to

withdraw temporarily from the breastworks. The engagement continued, the two sides within 100 feet of each other. Harker's brigade, now supported on its left by Hazen's brigade, continued firing by rank as it had done earlier in the afternoon. As Gracie's men ran out of ammunition, Stanley's brigade charged and forced the Confederate brigade off the hill.⁹⁴ Gracie's left, not as successful as the right, advanced to within 40 paces of the Union breastworks where they fought until running out of ammunition. The engagement lasted for about an hour before Gracie's men withdrew. The brigade suffered severely during this engagement, losing 725 of 2003 men.⁹⁵

Kelly versus Van Derveer and Whitaker. Arriving behind Anderson's brigade, Kelly formed his three regiments (The 65th Georgia was at the south end of the battlefield supporting a battery.) into a single line of battle. Advancing through Anderson's brigade, Kelly's men climbed Snodgrass between the west side of Hill 2 and the west side of Hill 3. On the top of the hill the 35th Ohio and the 2nd Minnesota replaced the 21st Ohio and formed a single line of battle. To their right the 22nd Michigan and 89th Ohio continued the line of battle. The Confederate regiments advanced under heavy Union fire, finally returning the fire when the right was no more than 15 or 20 yards and the left no more than 60 yards from the Union lines.⁹⁶ The 58th North Carolina, on the brigade right, advanced to within 10 or

12 feet of the Union line before being forced back a short distance. Reforming, the regiment advanced, then lay down to continue the fight.⁹⁷ The 63rd Virginia, the center regiment, advanced to within 15 paces of the Union lines and engaged in a heavy firefight until dark.⁹⁸ Although Kelly claimed that his brigade pushed the Union lines back, the commander of the 89th Ohio wrote that to conserve ammunition he withdrew his men from the crest of the ridge. When the Confederate line approached, he advanced his men to the edge, fired, then moved them back to reload.⁹⁹ Kelly's left regiment seemed to be the most successful in its advance so Kelly moved the 58th North Carolina over to the brigade left in an attempt to assault and dislodge the Union line. The regiment began to advance, but the rest of the brigade was out of ammunition and provided no support. The brigade reformed and attempted a charge without success. Soon after, the Union guns stopped firing.¹⁰⁰ Advancing later the brigade discovered that Trigg had captured the remaining Union troops. Kelly's losses were heavy: of 852 men which started this engagement, 303 were casualties.¹⁰¹

Trigg versus 89th Ohio, 22nd Michigan, and 21st Ohio. While Kelly's brigade was engaging the Union lines, Trigg's brigade advanced behind it. Learning from Kelly the location of the Union lines, Trigg moved his three regiments to Kelly's left, then up a ravine to the top of the hill to within 20 paces of the Union lines.¹⁰² In the growing

darkness, he found the 89th Ohio, 22nd Michigan, and the 21st Ohio. The 89th Ohio and 22nd Michigan, out of ammunition after their engagement with Kelly, attempted to withdraw but an officer unknown to them stopped them and ordered them to hold their position, with "cold steel if necessary."¹⁰³ Colonel Van Derveer ordered the 21st Ohio to hold the Union right even though it was almost out of ammunition.¹⁰⁴ Trigg's sudden arrival caught the three regiments by surprise and most of their men were captured. One of Hazen's regiments, the 9th Indiana, returning to cover the Union withdrawal barely escaped capture and withdrew to the east. Trigg did not follow.

WITHDRAWAL.

Despite Longstreet's destruction of the Union center, the Union line around the Kelly field successfully repulsed all Confederate attacks throughout the afternoon. Reynolds's division anchored the Union right. With the exception of Willich's brigade near the Kelly barn, a quarter mile gap existed between Reynolds and the Union troops on Snodgrass Hill. Surprisingly, the Confederates never attempted to exploit this gap to flank and destroy the Union forces positioned in the Kelly field. Ordered by Rosecrans to retire to Rossville, Thomas commenced the Union withdrawal at 4:30 P.M. beginning with Reynolds's division. At this time Liddell's division and Jackson's and Polk's

brigades began an attack against the Union lines. Liddell's division advanced across the La Fayette Road to attack the Union left flank. Supported by E. King's brigade, Turchin's brigade charged up the road, routing the Confederate line and clearing a path for the retreating Union forces. To Liddell's left, Jackson's and Polk's brigades both attacked the Union breastworks. As Palmer, Johnson, and Baird withdrew northwestward from their line of breastworks the Confederates followed, causing confusion and disorganizing the Union retreat. They did not, however, pursue the Union troops very far and Thomas's men successfully completed their retreat to Rossville.

Command and Control. The Union battle line behind the breastworks was slightly different from the morning configuration. Baird was now supported on his left by Barnes's brigade. Johnson and Palmer no longer had reserve lines. Willich was positioned in the southwest corner of the Kelly field. Palmer sent Hazen's brigade to Snodgrass and replaced it with Grose's brigade and two regiments of Croxton's brigade. Reynolds's two brigades formed a two-brigade front.

Confederate division dispositions also changed slightly from the morning engagements. The major change was Jackson's brigade of Cheatham's division moving up on Liddell's left to fill most of the gap between Liddell's and Cleburne's divisions. When the evening engagement began

Walthall's, Govan's, Jackson's and Polk's brigades formed a single line of battle running north and south.

Turchin and Robinson (E. King) versus Govan and Walthall. Around 5:30 Govan and Walthall advanced in a single line of battle westward across the La Fayette Road preceded by a line of skirmishers 200 to 300 yards in front.¹⁰⁵ Their movement threatened to cut off the Union line of retreat. On the north side of Kelly field, Robinson and Turchin each formed in two lines with two regiments in each line. With Robinson supporting his left, Turchin charged north. Charging into the field south of the McDonald House, Turchin struck Govan's left flank, separating Govan from his skirmishers. Unable to resist Turchin's charge Govan's brigade broke and retreated back across the road. Walthall also retreated. One of his skirmishers recalled:

We could see the brigade being beaten back one regiment at a time. We held our position until our regiment broke to the colors, when began a race with us only equaled by horses on some famous race course we were so hotly pursued. When we crossed the road all pursuit seemed to stop, for the Yankees were fighting for a road to escape on.¹⁰⁶

Continuing the charge north past the McDonald House, Turchin's line began losing its cohesion and scattered. Later it reformed and marched to Rossville.

Jackson versus Scribner and Starkweather. Jackson advanced his brigade in single line of battle on Govan's left. Passing through some thick undergrowth up to the

crest of a rise Jackson's men came under heavy fire from Union breastworks 150 yards away.¹⁰⁷ Behind the breastworks, Scribner's and Starkweather's brigades each formed in two lines. A heavy firefight began and at least one Confederate regimental commander ordered his men to lie down.¹⁰⁸ When Starkweather and Scribner began their withdrawal Jackson's men followed them back to a second line of breastworks where the fight continued. Jackson's men, running out of ammunition, were replaced by Maney's brigade. Scribner and Starkweather continued their withdrawal from the battlefield.

Polk versus Berry and Dodge. Continuing the Confederate line to the south, Polk advanced his brigade in a single line of battle. Approaching the Union breastworks, his brigade received a tremendous volley of Union musketry and artillery. On the Union side, Dodge's brigade formed in a single line of battle. Berry's brigade, on Dodge's right, formed with two regiments each in two lines. Both sides used artillery in the heavy firefight which followed. The Confederates advanced to within 100 yards of the Union breastworks, using trees to protect themselves.¹⁰⁹ Just as Polk's men were beginning to run out of ammunition, the Union lines began to retire. Both Berry and Dodge reported that they were successfully repulsing the Confederate line when ordered to withdraw. Withdrawing under fire, first to their second line of breastworks, Berry and Dodge made a

brief stand before leaving the battlefield. After losing 200 men in this engagement Polk pursued them only to the La Fayette Road before stopping.¹¹⁰

Although the Confederates initially pursued the withdrawing Union forces, they soon halted. Although a vigorous Confederate pursuit may have resulted in the destruction of the Army of the Cumberland, Bragg elected not to continue the fight. The Union forces gradually reformed in Rossville and established defensive positions. The Battle of Chickamauga was now part of history. Chapter 5 examines the impact of infantry doctrine on the battle's outcome.

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CHAPTER 5

TWO DIFFERENT DOCTRINES

Doctrine....must be rooted in time-tested theories and principles, yet forward-looking and adaptable to changing technologies, threats, and missions.¹

The Battle of Chickamauga provides a unique and interesting insight into Civil War infantry tactical doctrine. It was a battle where each side followed, with few exceptions, its own tactical doctrine; however, each side used a different doctrinal source. Because the battle included both a meeting engagement and a deliberate attack against a prepared defense, the differences in the two sides' doctrines produced some interesting results. This chapter first describes how well each side's organization, formations, and use of skirmishers and bayonet charges followed published infantry doctrine, and then reviews an exception to standard doctrine, units fighting lying down. The chapter then reviews the effect of breastworks, the rifled musket, and terrain on the battle. It concludes by discussing how the infantry doctrine used at Chickamauga supports the theories presented in Attack and Die and Battle Tactics of the Civil War.

Chapter 2 discussed the foundation of infantry doctrine used during the Civil War. Both sides began the

war using Hardee's two volumes and Scott's third volume. Casey's manual, published in 1862, provided major changes in both organization and large unit formations. Because the thesis question focused on a narrow time window, I did not find any information which specifically linked the tactics used by each side to a specific doctrinal source. Each side's organization as well as the division and brigade formations each used during the battle strongly suggested that in the Battle of Chickamauga the Army of Tennessee used Hardee's and Scott's manuals and the Army of the Cumberland used Casey's manual.

Confederate unit organizations suggest that the original basis for the Army of Tennessee's organization was Scott's third volume. A corps organized according to Scott contained eight battalions formed in either two divisions or four brigades. The Army of the Tennessee appeared to follow this model for corps organization. On September 20th, the Army contained five corps: Longstreet's Polk's, Hill's Buckner's, and Walker's Reserve. Four out of five of these corps contained two divisions. Buckner's corps contained three although one of these, Johnson's provisional division, was a temporary formation. Below the division level the similarity to Scott was less evident. Of the eleven divisions participating in the battle, seven had three brigades, two had four, two had five, and one had two brigades. Confederate brigade structure also varied

considerably from Scott, containing various combinations of regular regiments, consolidated regiments, battalions, and legions. Although the number of individual units in a brigade varied from three to seven, five was the most common number.

The Army of Tennessee's formations indicate a close similarity to the line of battle formations depicted in Scott's third volume. Scott described ways to maneuver columns and lines of battle. The Confederates did not appear to use Scott's column formation during any of the engagements in the battle; every Confederate commander reported using line of battle. If a commander used a line of battle, Scott expected him to put every unit in a single line. On September 19th Forrest, Walker, Cleburne, and Liddell formed their divisions in a single line of battle. Cheatham, Johnson, and Hood used brigades in reserve lines, all formed in a second line of battle. Cheatham planned for his second line to relieve his first line. Johnson's and Hood's second lines followed and supported their first lines. Stewart, with a very narrow front between the two adjoining divisions, placed his brigades in three successive lines. On September 20th, only Breckinridge and Kershaw attacked in single line of battle. Cleburne, Stewart, Johnson, Hood, and Hindman all had a reserve brigade in line of battle. All of these commanders except for Cleburne intended to use the reserve line for depth during their

attack.² When these divisions attacked their reserve lines closely followed the front lines; intermingling of the two lines usually occurred when the front line slowed due to enemy resistance.

The Confederate brigade formations more closely followed Scott's single line of battle than did the division formations. In two days of battle there is only one documented situation, Anderson's brigade at Snodgrass Hill, where the brigade commander formed his brigade in two lines. Anderson used two lines because the space between the two adjacent brigades was too small to fit his whole brigade.

The organization of the Army of the Cumberland suggests they were using Casey's manual. This version of tactical doctrine drastically changed the organization and formation of brigade and division units. Casey suggested a corps composed of three divisions. Each of these divisions contained three brigades, each with four regiments. The Army of the Cumberland at Chickamauga contained three corps and part of a reserve corps. Two of the three complete corps, McCook's and Crittenden's, contained three divisions. Thomas's contained four. Grant's reserve corps contained three divisions. Every Union division contained three brigades. Of the 33 brigades fighting in the battle, 26 contained four permanently assigned regiments, six contained five, and one contained three.³ Although Union organization

closely matched Casey, Union tactical formations showed more variation.

Casey recommended that corps form with two divisions in line of battle and a third in reserve. If an individual division formed with Casey's suggested reserve it used two brigades in line of battle and a third in reserve. Brigades formed with four regiments in a single line of battle or divided to two lines. Casey suggested that both the division and brigade reserve lines form in closed column. On the 19th only four of ten Union divisions entered the battlefield with three brigades together; the others had brigades detached elsewhere on the battlefield or in the area. Of these four, Brannan, Baird, and Johnson engaged with a brigade in reserve. Palmer's third brigade echeloned to protect its exposed right flank. The divisions with two brigades showed some variation. Davis and Negley placed both brigades on line together, while Van Cleve and Sheridan planned to engage on a single brigade front with one in reserve. Wood split his division in two entering the battle and Reynolds's split into many separate parts. On the 20th, the Union formations were slightly different. Palmer and Brannan each formed with a brigade in reserve. Baird, trying to extend the Union line west, put all three of his brigades along Thomas's defensive line. Johnson, with a small division sector, put one brigade on the defensive line with two in reserve. Reynolds and Wood put all their

brigades on the defensive line while Davis initially put only one of his brigades forward and kept the other in reserve.

Union brigade commanders used many different formations prior to their engagements. Some brigades formed in two lines with three regiments in front of two others. Others formed in two lines with three in the first and one in the second. The overwhelming majority of Union brigades advanced in two lines of battle; a Union brigade advancing in a single line of battle was a rare exception. On the 19th, only three Union brigades, Cruft's, E. King's, and Wilder's, initially formed in a single line of battle. On the 20th, only Dodge's brigade formed in a single line of battle on the Union defensive line. The most common formation for four regiment brigades, however, consisted of two lines with two regiments each.

The different doctrinal formations used by the Army of Tennessee and the Army of the Cumberland provided both sides different opportunities and problems in the battle. The extended single line of battle enabled the Confederates to cover a larger front with fewer men than the Union formations. During the Battle of Chickamauga these long lines also created significant command and control problems and decreased the penetrating power of the Confederate formations. The Union front and reserve line formations provided compactness, easier command and control, better

mobility, and flexibility. These formations also had major weaknesses. With proportionally fewer men on the front line, more Union brigades and divisions were needed to cover the same amount of territory as a Confederate line. Although the multiple line formation reduced some command and control problems, it needed disciplined soldiers and competent commanders to effectively exploit its advantages.

The extended line of battle gave the Confederates several advantages over their opponents at Chickamauga. By placing all of their brigades in a single line of battle, Confederate division commanders created some extremely long formations. Cheatham's three brigade front on the 19th extended nearly one mile. Govan's and Walthall's line that morning extended nearly a half mile. In a meeting engagement in the woods this gave the Confederates an advantage over the Union. The longer lines meant that the Confederates required fewer divisions or brigades along a battle line than the Union. On the 19th two Union divisions covered the same frontal area as Cheatham's division. On the morning of the 20th, five Confederate divisions overlapped the seven Union divisions positioned behind the original line of breastworks. Extended Confederate lines of battle were less vulnerable to flanking by overlapping formations, movement or enfilade fire. In the battle, Confederate formations were overlapped, flanked by movement

or driven by enfilade fire in only 13 different engagements compared to 23 times for Union formations.

The long lines of battle also created problems for Confederate commanders at Chickamauga. These formations were extremely vulnerable to disruption by different terrain features including woods, thick undergrowth and hills. The stretching and breakup of Bushrod Johnson's line on the 19th resulted from a change of direction in the thick woods and undergrowth. Law's brigade on the 19th broke up while passing through the woods prior to its engagement with Turchin. Enemy resistance also caused problems. Cheatham could not effectively use his reserve line on the 19th because Smith's brigade had to retire earlier than Jackson's and the two reserve brigades failed to maintain contact with each other. Unlike Union brigades, the single line of battle did not give commanders the opportunity to rapidly adjust to changing circumstances and penetrate or exploit a weakness in the opposing line. Although Kelly correctly located the weakness in the Union line on Snodgrass, by the time he maneuvered the 58th North Carolina from the right of the brigade to the left, his brigade ran out of ammunition and had to retire.

The Union practice of using a second or reserve line in its division formations gave it a much greater degree of flexibility than was possible with the Confederate formations. The Union brigades used as division reserves

provided both the division commander and, especially on the 20th, the corps commander, a ready force to respond to emergency situations. On the 19th Dodge filled a hole in the Union line and successfully exploited a weak spot in Cheatham's lines. On the 20th, Thomas committed Dodge, Willich, Grose, and Van Derveer away from their divisions to stop the Confederate advance around the Union left flank.

Union brigade commanders using the two-line formation also had greater flexibility. They used the second and occasional third line for a variety of reasons. One reason was to extend the line of battle to protect a flank. Croxton, Scribner, Van Derveer, Baldwin, and Harker all did this on the 19th in response to Confederate flanking attempts. Other commanders brought one or both regiments forward to extend a line of battle during frontal engagements. Some examples include Beatty, Martin, Walworth, and Mitchell on the 20th. Another use of the second line was to replace individual units in the front line. On the 19th, Van Derveer, Hazen, Turchin, and Heg all switched regiments running out of ammunition with fresh ones. The fourth method involved using the second line to increase the brigade's firepower on a smaller front. There were three ways Union forces did this, and each was a tactical innovation. Scribner compressed his two lines behind breastworks on the 20th and alternated firing each while the other reloaded. Willich and Harker rotated the

four ranks from the two lines in the "advance firing" technique. Finally, Harker kept up a fairly constant fire on Snodgrass Hill by alternately moving his lines forward to the crest of Snodgrass Hill, firing, and, retiring to reload.

Although the Union doctrine gave Union formations more flexibility, the Battle of Chickamauga demonstrated some of the doctrine's major flaws. First, Union army and corps commanders often used the brigades in division reserve for their own purposes. On the 19th Baird intended to keep Starkweather in reserve to protect the division's right flank. Advancing with his main line, he lost contact with that brigade when Thomas sent it north to support Croxton. When Baird needed the brigade he could not find it and, in a bit of irony, Liddell's division flanked and routed Baird's division from the right. On the 20th, Thomas used the reserve brigades of Van Derveer, Dodge, Willich, and Grose to protect the Union left from flank attacks. Willich and Van Derveer did not return to their divisions. In Van Derveer's case his absence left Brannan few options when Stewart's and later Johnson's men attacked his division. Detaching brigades was not limited solely to engagements. Negley, Reynolds, Van Cleve, and Sheridan entered the battle on the 19th with brigades previously detached to other parts of the battlefield and Wood and Davis had brigades assigned elsewhere. Since only four of ten divisions entered the

battle on the 19th as complete units command and control of the additional parts became a problem. Much of the Union's disorganization in Viniard Field on the 19th directly resulted from subdividing divisions.

The second problem with the Union doctrine of forming multiple lines was the corresponding shortening of the brigades' and divisions' lines of battle relative to a Confederate unit of equal size. Unless reinforced by addition units, Union formations were extremely vulnerable to being overlapped in a frontal engagement or flanked. Twelve of the thirteen times that Union formations withdrew or retreated from their positions on the 19th were the result of being flanked or overlapped by Confederate formations. Flanking or overlapping of the Union lines occurred to some degree in ten of fifteen engagements where Union troops withdrew or retreated under fire on the 20th. A number of these resulted from the different directions the two sides were facing when entering the engagement, but many others were simply the result of being in a smaller line. Although Union commanders were able to and did respond to flank attacks with their second lines, vulnerability to flank attack was still a weakness in Casey's system.

Union performance at Chickamauga demonstrated other problems with the two-line tactics suggested by Casey. These tactics demanded a tactically competent and quick reacting commander and extremely well trained and

disciplined soldiers. A commander needed to react quickly to new situations because it took some time to maneuver a reserve regiment formed in line of battle forward to the front line or to the side to protect the brigade's flank. The slower a commander reacted, the less likely he was to successfully employ his second line. Starkweather on the 19th and Carlin on the 20th were slow to recognize the Confederate attacks. While Carlin unsuccessfully tried to move up his reserve line, Starkweather almost immediately had to retreat. Quick maneuvering of the second line forward depended on rapid communications which were often degraded by the noise of battle. The noise was so loud on the evening of the 19th, that one of Baldwin's regimental commanders had to use the flat of his sword on the men in front of him to get their attention.

Employing Casey's two-line formation further required proper training and a high degree of unit discipline. Good training was essential because moving a regiment quickly required a fair degree of precision. Poor execution partly explains John King's failure on the 19th to completely reposition his brigade before Walthall's attack. Battlefield reports indicated that once King began changing the brigade front, it became a jumble of regiments moving in different directions. Finally, the second line of a Union brigade had to be disciplined enough to allow a routed or retiring front line to pass to the rear without losing

cohesion. On the 19th, Barnes's and Dick's second lines lost much of their cohesion when the Confederates drove back their first lines. Both brigades then had to retire.

Although the two sides used different sources of infantry doctrine, they both seemed to use skirmishers in the same way, to find and develop their opponent's position. Because battle reports rarely gave details on skirmisher activity, I was unable to determine how far skirmishers normally deployed in front of the main line. Although there were some engagements in which documentation was insufficient to determine whether or not skirmishers were used, the overwhelming evidence indicates that both sides used skirmishers nearly every time they moved to engage or expected an engagement. The only time skirmishers were not used in the offense was when an advancing line replaced an engaged line in attacking a known position. There were three times in the course of the battle when skirmishers were not used because the commander thought that friendly troops were in front of his lines: Starkweather and King on the 19th and Colquitt on the 20th. In all three cases the commander's failure to use skirmishers directly resulted in the enemy achieving surprise. In contrast, Wright on the 19th put skirmishers out to prevent his men from accidentally hurting friendly troops in front and instead found Union troops.

Although neither Hardee nor Casey provided instruction on when and how to conduct charges, both provided the mechanics on how to accomplish them. During the two day battle both sides made a total of thirty-two bayonet charges. Union troops charged nineteen times and the Confederates thirteen. The success rate for these charges was extremely high--only seven failed to achieve the commander's purpose and all of these occurred on the 20th. Both sides conducted charges against a variety of formations. These include twelve charges against attacking lines of battle, nine against stationary lines of battle, five against retreating lines, four against breastworks, and one each against a battery and a cavalry formation. Of the seven attacks which failed, two Confederate attacks failed to carry Union breastworks, two Union and two Confederate attacks failed to break a fixed line of battle, and one Union attack failed to stop an attacking line of battle. After successful charges ten Union and three Confederate units stopped unopposed, held the gained ground or elected to withdraw. The charge did not always end the engagement; after initially driving the opposing side, six Union and five Confederate brigades were immediately confronted with enemy flanking movements or counterattacks. Successful or not, charges seemed to generate greater casualties than maintaining position in a firefight. For example, the 9th Ohio's charge to recapture King's artillery on the 19th cost

it 63 of the 248 men it lost in the battle. The 82nd Indiana lost 92 of less than 300 men recapturing the Union breastworks on the 20th.

The two sides appeared to use bayonet charges differently. The Union, on the tactical defensive for most of the two days, made more charges than the Confederates with all but five starting from defensive positions. The Confederates, on the other hand, made all but one of their charges while on the offense. The most striking feature of the Union charges was that ten of the sixteen successful charges stopped after achieving a limited purpose such as capturing a battery or retaking breastworks. In contrast the Confederates only stopped in a similar manner after two of their nine successful charges. Another interesting feature of the Union attacks is that three of the other successful attacks were pursuits of retreating Confederate soldiers down Snodgrass Hill. The pattern of Union charges, then, seemed to be position related in either securing a specific piece of terrain or retrieving a lost position. The Union success rate also indicated that the Confederate single line of battle was vulnerable to a charge once the two sides were engaged. The pattern of Confederate charges seemed to focus on the opposing forces and their destruction, while gaining a new position was only a secondary goal. In summary, both sides used charges when they felt that the circumstances favored success. Although

the object and reason for charges varied, most charges successfully achieved the commander's goal.

Both Hardee and Casey envisioned engagements in which one or both sides advanced and fired at each other until one side retreated or charged. Although both authors provided instructions for loading a rifle while lying on the ground, neither went into detail about when soldiers would load this way. Instructions for skirmishers recommended using ground obstacles to protect themselves, but directed that they move between shots. Other reasons consistent with Hardee's and Casey's manuals for lying down included resting, protecting troops in the rear, and facilitating passage of lines. In over half of the engagements in the two days at Chickamauga one or both sides lay down while fighting. Union units lay down at Chickamauga most often when fighting behind breastworks. Available evidence indicates that at some time during the 20th every unit behind the Union breastworks around Kelly Field and on Snodgrass Hill lay down behind the breastworks while fighting. Six Confederate brigades which engaged Union troops behind breastworks advanced to a certain point before lying down to continue the fight. Yet the use of breastworks only accounted for about half the engagements where either side lay down. The second major reason engaging units lay down was for protection during firefights. Although lying down dramatically slowed the line's rate of fire, lying down seemed to minimize

casualties. By accident, the slower rate of fire conserved ammunition, resulting in longer engagements. During the battle four Confederate and five Union brigades began engagements on their feet, lying down as each of the firefights began taking its toll in casualties. In practically every one of these firefights, the unit was either on the defense or in an exposed or unfavorable position relative to the opposing force. Four other Union brigades lay down in anticipation of a firefight and then engaged the approaching Confederate lines from the prone position. Surprise, instead of protection, appears to be the primary motive during these engagements.

Lying down during engagements varied in its effect on the engagement and casualties. Lying behind breastworks gave the Union soldiers a great deal of protection. Union losses around Kelly field on the 20th were extremely light. Despite lying down, the five Confederate regiments attacking the Kelly field breastworks suffered heavy casualties. Lying down during firefights also had mixed results. In an engagement on the 19th where both sides fought lying down, Clayton's brigade suffered 400 casualties against Dick's and S. Beatty's brigades. Although the exact Union loss for this engagement is unknown, both Union brigades only suffered a combined 467 killed and wounded in two days of fighting. Most of the units which lay down in firefights eventually had to retreat. Lying down in preparation for an

engagement did not always help the unit. Because loading was slow and difficult while lying down, two of the four brigades that lay down before engaging were immediately routed because their resulting firepower was not enough to stop a Confederate charge. In summary, lying down during engagements appears to have been an attempt by both sides to reduce casualties. While extremely effective behind breastworks, terrain and position relative to the enemy determined the effectiveness of lying down during firefights.

Perhaps the greatest Union success in the Battle of Chickamauga was its effective use of breastworks in the defense. Situated on different parts of the battlefield on the 19th, Baldwin's and Wilder's brigades formed breastworks in front of their positions in the edge of woods facing a field. Baldwin, supported by Willich, effectively repelled a late afternoon attack by Govan's and Walthall's brigades. Cleburne's attack at sunset flanked their position, forcing the Union brigades to retreat. Wilder used his position to support the retreating brigades from Davis's and Wood's divisions. His position remained secure the entire afternoon.

Thomas's defensive line was the Union's best use of breastworks. The Union line of breastworks ran around the north and east sides of Kelly field and then back west along the north edge of Poe field before turning back to the south

along the west edge of the Poe and Brotherton fields. This line gave the Union forces a tremendous advantage against Confederate attacks. The breastworks, built just to the rear of the crest of a rise and in wooded terrain, forced the attacking Confederate lines to expose themselves to Union fire while giving them only a small target. Confederate casualties in attacks against these breastworks were high. Helm lost 248 of 500 men, Gist lost a third of his men, and Wood and Polk lost 750 more between them while attempting to break into the Union breastworks. In contrast, although Union reports did break down casualty figures for this part of the battle, Cruft reported losing only a few men and Hazen reported losing 13 all day. Until Thomas Wood pulled his division out of the defensive line, all Confederate attempts to assault over the breastworks failed. Even after Brown and Johnson rolled back Brannan's and part of Reynolds's divisions, the rest of the line held until Thomas ordered a retreat later in the afternoon. Davis, on the right of Wood's position and the far right division on Thomas's defensive line, had to abandon his breastworks after being flanked on both sides by Hindman's division.

Snodgrass Hill was the site of the last major concentration of Union breastworks. Formed by units rallying after Johnson's breakthrough in the Union center, the breastworks were just behind the crest of the hill. To

take these works the Confederate lines had to climb a steep, wooded slope. Only one Confederate brigade, Gracie's, successfully attacked the breastworks, but, without support and low on ammunition, it retired back down the hill. Gracie's temporary success came at a large cost, 725 men killed and wounded out of 2003.

Union breastworks at Chickamauga formed not only a psychological obstacle but also a physical barrier to Confederate assaults. Usually positioned in woods and overlooking a field or an open glade in front, the Union breastworks immediately put the attacking Confederate lines at a distinct disadvantage by forcing them into the open while the Union lines remained hidden. The breastwork's position also forced the Confederate lines to come well within the effective range of Union small arms before they could see the Union positions. The difference in casualty rates further reflects the protection the breastworks provided the Union defenders. Had Wood not pulled his division out of line, it is possible that the battle may have turned out much differently.

The standard infantry weapon used by both sides in the Battle of Chickamauga was the rifled musket using the Minie bullet. The most common models used by the Union troops were the Springfield and Enfield .58 rifled muskets. Significant for the Union side, a large portion of Wilder's brigade used the Spencer repeating rifle and the 21st Ohio

of Sirwell's brigade used the Colt revolving rifle. These rifles significantly increased the units' volume of fire, allowing them to successfully defend against and attack larger Confederate formations. Very few Confederate reports indicate the weapon they used. The few which mentioned weaponry cited using either the Enfield .58 rifled musket or smoothbore muskets.

During the battle several different Union brigades attempted to increase their rate and/or volume of fire through a variety of techniques. Two bear a remarkable resemblance to techniques found in the School of the Skirmisher in both Hardee's and Casey's manuals. "Advance firing" was a technique used by Willich's men. With the brigade's two lines formed in four ranks, the formation advanced with the rear rank passing through, firing, then stopping to reload as the next rank moved forward. Van Derveer's brigade used a similar idea for retreating. Each line passed in succession to the rear, stopped, turned around and fired, then reloaded while continuing to the rear. Two other brigades tried to increase the volume of firepower by alternating lines. Scribner, behind breastworks, brought his second line close up behind the first and alternated the two lines' fire. Harker, on Snodgrass Hill, alternated moving the lines forward to the crest of the hill to fire, then retired them where they could safely reload. Each of these brigades, with the

possible exception of Van Derveer, successfully used the technique to enhance its firepower. In contrast to the Union innovations, the Confederates varied little from the methods of fire prescribed by Hardee.

Increased rates of fire did not appear to directly relate to increased casualties although little information exists to provide any accurate analysis of the battle. The two following examples are extreme examples of poor rifle accuracy in the battle. The Union Chief of Ordnance reported that the Army of the Cumberland fired 2,529,952 rounds of ammunition during the battle.⁴ The Army of Tennessee suffered 18,947 men killed and wounded.⁵ Disregarding casualties due to artillery fire the Confederates suffered one casualty for every 134 rounds fired. On a smaller scale, Cheatham's division fired 135,973 rounds of ammunition in the battle, the large majority of it on the 19th.⁶ During the 19th, Cheatham's men fought Johnson's and Palmer's divisions. Those units lost 2458 men killed or wounded during the entire battle. Using both sides figures for both days the Confederates fired 55.3 bullets for every Union casualty. Admittedly these examples do not tell a complete story, but they do indicate that rifle accuracy in this battle was not significantly high. The major problem in trying to determine the effectiveness of the supposedly more accurate rifles is to find a way to determine the effect of trees,

the dense undergrowth in parts of the battlefield, and the problems of firing at someone lying on the ground, behind breastworks, or at extremely long engagement ranges.

A major factor affecting the accuracy and casualty rates for both sides were the ranges at which each side first engaged and the closest the two sides came before one side either charged, withdrew, or retreated. Not surprisingly the average maximum and closest engagement ranges depended on whether the engagement occurred in the woods or the fields. From information reported by the combatants, the average maximum engagement distance for units operating in the woods on the two days of the battle is 119 yards.⁷ The two sides approached to within an average of 57 yards before one side charged or withdrew. For engagements occurring in the fields, the average maximum distance at which the engagement began was 200 yards and the two sides average closest approach was 72 yards. As one might expect, the increased visibility afforded by the fields increased the temptation for units to begin firing early and made it difficult to get as close to the other side as one might in the woods. Although some of the maximum ranges are skewed slightly because units held their fire until the other side was within a certain range, most of the engagement distances seemed to be determined by when one side or the other saw its opponent and commenced firing.

To say that terrain affected both armies during the Battle of Chickamauga is understating the obvious. The thick woods and occasional dense undergrowth in the eastern part of the battlefield caused problems for both sides on the first day of the battle. Baird and Brannan on the Union side, and Johnson and Law on the Confederate side all had problems commanding and controlling their forces in the thick woods. The open fields and the hills to the west of the La Fayette Road affected both sides also on the second day of the battle. Earlier paragraphs highlighted terrain's specific effects on maneuver and engagement ranges. Perhaps the most important part terrain played in the battle was its use, especially by the Army of the Cumberland, to achieve tactical goals on the battlefield.

One of the more fascinating aspects of this battle was how the Union used Mahan's ideas on position during both days of the battle. Although the actions on the 19th fit the definition of a meeting engagement, the Union army behaved defensively most of the day. In the defense the Union army needed to use natural positions in such a way that the attacker could not approach in good order and gave the defender the advantage in any engagement. From the very beginning of the battle Union forces advanced either unopposed or while engaged with the Confederates only to a certain point, then stopped and waited for the Confederates to attack. Van Derveer, J. King, Starkweather, S. Beatty,

Dick, and E. King all positioned their brigades on the side or just behind the crests of small rises and waited there for the Confederate attack. Scribner, Baldwin, Willich, Hazen, and Cruft advanced under fire to the edge of fields before stopping. These brigades then enjoyed protection in the woods while forcing attacking Confederate brigades to move through the fields under fire. Most Union charges advanced only to a certain point, whether it was to retrieve artillery or to the crest of a rise, before stopping and withdrawing. These Union actions on the 19th forced the Confederates into positions where they had to suffer more casualties and take more risks to engage the Union forces.

Union use of position on the 20th was a masterful combination of natural position and temporary breastworks. Thomas's line of breastworks, winding in the shape of a question mark along the east side of the La Fayette Road, combined the advantages of terrain contour with natural ground cover to force the Confederates to expose themselves in any attack. The defensive lines were in the woods around the Kelly field. On the north side the Confederate line had to cross open glades. In the center and to the south, the line bent around the north and west sides of Poe Field and continued down the west side of the Brotherton field and forced the attacking lines to cross those fields to get to the breastworks. Even in a rapid retreat the Union forces found and used terrain to their advantage. Snodgrass Hill

became a fortified bastion in the afternoon which they successfully held until running out of ammunition and retiring. In summary, terrain exerted a tremendous influence on the actions taken by both sides in the battle, with the Union making the best use of it.

Briefly summarizing the chapter thus far, I determined that the two sides were using different versions of infantry tactical doctrine. Their organizations, formations, and employment of troops differed at the brigade and division levels. These differences affected both sides during engagements on both days of the battle. Furthermore, breastworks, the rifled musket, and terrain were all important factors in determining the outcomes of the individual engagements. The doctrine used by both sides and its effect on the battle's outcome challenges some of the theses presented in two books, Attack and Die and Battle Tactics of the Civil War.

The Battle of Chickamauga supports the central thesis of Attack and Die, that the Confederates bled themselves by making more costly attacks than did the Union. The Confederates made the majority of attacks on both days of the battle and they certainly suffered more casualties overall than did the Union troops. The average maximum and minimum ranges for the engagements support the idea that the rifle led to earlier and longer engagements. Also the Union breastworks did increase the advantage of the tactical

defense. Despite supporting many of the authors' theories concerning the effect of infantry doctrine on the Confederacy, the battle's results also point to some problems with the authors' contentions.

The problem with Attack and Die is that the authors first assume that the infantry formations for both sides were the same, and secondly that higher Confederate casualties necessarily resulted from the Confederates taking the tactical offense. The two line formation the authors claim as the basic formation for both sides during the Civil War and Mexican War first appears in Casey. Official reports, eye witness accounts, and battle field markings all support the idea that while Confederate divisions often formed in two lines, Confederate brigade movements at Chickamauga were in single lines of battle of two ranks. A line of more compact Union brigades with greater depth and capability to either reinforce or increase firepower was a formidable adversary for a single line of battle the same length. With very little penetrating power the Confederate formation was more likely to suffer more casualties and fail, whether it was in the offense or defense. The Confederate formation was very effective, however, when it overlapped or flanked a similarly sized Union formation.

The authors' conception of the Confederate tactical offense overlooks an important reason why the Confederates often suffered high casualties in their attacks. The

problem with the Confederate offensive attacks and high casualty rates at Chickamauga is that Confederate commanders often failed to take into account the tactical environment, instead focusing their attention on destroying the enemy. This meant they ceded to the Union forces the opportunity in most engagements to select the engagement areas. The Confederates had to attack across fields and up hills at Union forces well protected in underbrush and trees. High casualties resulted. When they were successful and broke a Union line, the Confederates always pursued, most of the time with their flanks unsupported. On the 19th, Wilson, Govan, Walthall, Bate, Brown, Fulton, McNair all pursued retreating Union troops to the point where they allowed themselves to be flanked and driven, again with high casualties. This focus on the enemy also cost the Confederates in terms of unit cohesion during their attacks. After Longstreet's extremely successful breakthrough, his divisions scattered in their pursuit of Union forces. Only two attempted to coordinate their attacks for the remainder of the day. The result was piecemeal attacks on Snodgrass Hill resulting in extremely high casualties. In summary, by focusing on the Union forces the Confederates placed themselves in positions where they suffered high casualties.

Paddy Griffith, author of Battle Tactics of the Civil War, disputed the idea that technology affected infantry doctrine in the Civil War. He contended that the rifle did

not revolutionize tactics. He also felt that breastworks played a more psychological than significant physical role in the outcome of the engagements. The events of the Battle of Chickamauga did not fully support these views.

Griffith claims that the rifle did not revolutionize tactics. He supports this with data showing poor rifle accuracy and fairly short ranges. He further contends that engagements were longer and less decisive. At Chickamauga, terrain, vegetation, and the width of fields determined the maximum ranges for engagements. The minimum ranges also depended on visibility, but the average minimum ranges in both the woods and the fields exceeded the average lethal range for smooth bore musketry and casualties at these ranges were extremely high. Although data indicates that overall rifle accuracy was poor there were situations where each side's accuracy was extremely good. Connell, charging Brown, lost 92 men in a very short time. Colquitt, attacking King and Scribner, lost over 300 men in less than 25 minutes. These casualties occurred despite both brigades being partially protected in the woods and Colquitt's men lying down. Long engagements normally occurred only when both sides engaged in a frontal attack with neither side able to flank or drive the other by means of a bayonet charge. The Battle of Chickamauga, however, does not provide enough data to prove or disprove Griffith's theory. It does suggest that circumstances existed where the rifle

may have had an effect far greater than Griffith gives it credit for.

The breastworks at Chickamauga appeared to be more a physical barrier than a psychological barrier to Confederate attacks. Although Griffith advances the idea that breastworks were the product of book learning rather than a reaction to the increased range and accuracy of the rifle,⁸ the huge disparity in casualties in the engagements indicates that they protected the defender well. In engagements on Thomas's lines of breastworks, Helm lost 248 men, Polk lost 550 in two assaults, and Wood lost 400. In contrast Union casualties were extremely light. Hazen's brigade suffered only thirteen casualties behind the breastworks and Cruft only reports a few wounded. Minimum engagement ranges increased slightly, from 57 yards to 75 yards. This meant the engagements were at longer distances than normal lethal smoothbore ranges. No evidence exists, however, that the Confederates were inhibited from attacking and attempting to take the breastworks. In fact, Helm's men made three charges attempting to take the breastworks, and Jackson reported his men's successful capture of two lines of breastworks in the late afternoon. In conclusion, although breastworks may have been the result of book learning and not a response to the rifled musket, they effectively protected Union forces. Furthermore, the evidence indicates that the Confederates, in aggressively

pursued attacks, suffered severe casualties at ranges exceeding lethal smoothbore ranges.

If the Battle of Chickamauga does not fully support the theories found in Attack and Die and Battle Tactics of the Civil War what does it mean to any theory of infantry doctrine? Quite simply, despite the perception of many Civil War historians that infantry doctrine was somewhat static throughout the war, it changed as the two sides gained experience. The engagements at Chickamauga revealed numerous departures from the doctrine used at the beginning of the war. Union formations were more compact, maneuverable and flexible. Several Union commanders were experimenting with ways of increasing their formations' firepower. More and more, both sides were beginning to find ways of increasing the protection of their soldiers by lying down during engagements and/or using breastworks or natural obstacles. Of the two armies, the Army of the Cumberland was the most innovative, particularly in its use of terrain to help shape the battle. Although the changes were perhaps not as significant as we, with 20/20 hindsight, would like them to be, they do represent the armies' attempts to adapt to changes in technology and to learn from their experiences. Thus the Chickamauga experience indicates that Civil War infantry doctrine was more fluid and dynamic than historians have given it credit for being and is worthy of further reassessment.

ENDNOTES

¹ FM 100-5, (Washington, DC: Department of the Army, 1986), 6.

² Cleburne originally formed his three brigades in a single line of battle. Deshler was covered by Stewart's division and moved north behind the other two.

³ Whitaker's brigade at Chickamauga had two regiments temporarily assigned and McCook's brigade, one. John King's regular brigade contained four battalions instead of regiments.

⁴ The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies, vol XXX, part 1, (Washington, DC: Government Printing Office, 1890), 233. Note: Further chapter annotations referring to volume XXX will be identified by "OR," followed by the part number and page.

⁵ Glenn Tucker, Chickamauga: Bloody Battle of the West, (Indianapolis: Bobbs-Merrill Co., 1961; reprint, Dayton. OH: Press of Morininside Bookshop, 1984), 388.

⁶ OR, part 2, 82.

⁷ The averages given were determined by averaging the engagement distances given in the descriptions of each of the engagements of the battle.

⁸ Paddy Griffith, Battle Tactics of the Civil War, (New Haven: Yale University Press, 1987), 127.

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