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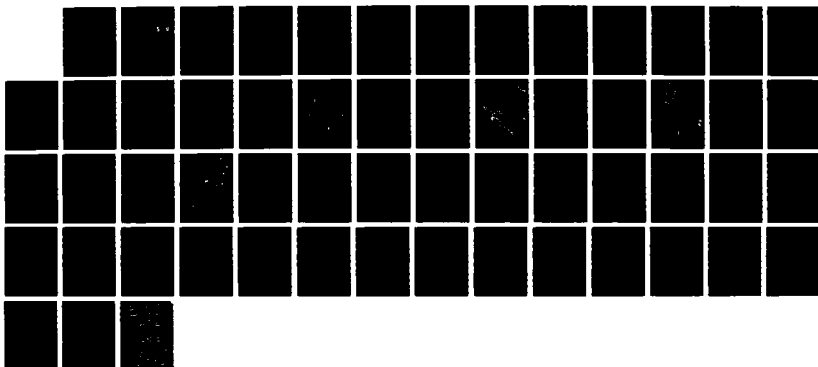
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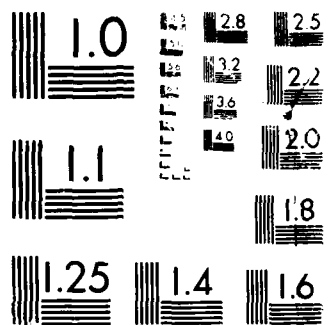
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Marching with General Lee: An Analysis of
The Maryland Campaign of 1862

by

Major Benjamin C. Freakley
Infantry

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

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ABSTRACT

MARCHING WITH GENERAL LEE: AN ANALYSIS OF THE MARYLAND CAMPAIGN OF 1862
by MAJ Benjamin C. Freakley, USA, 46 pages.

This monograph analyzes the Confederate Maryland campaign of 1862 in regard to several key concepts of military theory. As an operation involving extended effort and multiple battles, the campaign serves as a case study reinforcing the utility of classical military theory in operational planning.

The monograph begins by developing a theoretical paradigm for use as a model to analyze the Confederate operations. Next, an historical overview of the strategic situation, campaign plan, and execution reveal the harsh realities of combat. The historical realities are then analyzed from a theoretical perspective. Conclusions are drawn on the utility of theory as a start point in campaigning. The paper finishes with a discussion of the implications of theory in future conflicts.

The monograph concludes that Lee's campaign in Maryland was unsuccessful due to failure at the operational level of war. The Confederate strategy to acquire foreign recognition, liberate Maryland, and influence the upcoming northern Congressional elections was sound. Additionally, the tactics employed by the Army of Northern Virginia were exceptional. Prior to this campaign, the army won a stunning victory at Second Manassas with the aggressive leadership of Lee, Jackson, Longstreet, and Stuart. Yet, in the Maryland operation, Lee's army was almost destroyed at the battle of Antietam, a result of poor operational planning and the intervention of friction and chance. During this operation the South lost more soldiers to straggling than at any other time in the war. The army reached its culmination point due to arduous marching. Decisions to capture Harper's Ferry further eroded the combat power of the army. The campaign to end the war became a desperate fight for survival at Antietam. In that light, the campaign is a clear example of weak operations being saved by tactics. While the tactics saved the army from destruction, strategically the South was forced back to defensive operations in Virginia. The results of this campaign provided President Lincoln the opportunity to issue the Emancipation Proclamation changing the nature of the conflict from a fight over union to a war to free the slaves.

The implications from this campaign are that clear strategy and sound tactics, while important, are not enough to win wars. It is imperative that we learn and practice fighting at the operational level of war. Success at this level is dependent upon a thorough understanding of the key concepts of operational art: the levels of war, centers of gravity, decisive and culminating points, and the impact of friction and chance on operations. Proper use of these ideas coupled with aggressive fighting will give us an advantage over our opponents even if they possess greater material strength.

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INTRODUCTION

In the latter half of the Twentieth Century, the United States assumed the role of a global power. The enlargement of America's interests created new strategies and policies that impacted on its army. Reacting to this external stimuli, the army modified its doctrine and organization. Yet, the major U.S. adversary bases its strength on massive armed forces. The overwhelming mass of Soviet armies presents a situation where American forces, structured to meet a variety of global contingencies, must fight outnumbered and win. Interestingly, until recent times, U.S. forces have been characterized by their mass and enormous resources, and U.S. strategy has been one of attrition.

However, since World War II, the United States has relied on a mixture of its nuclear arsenal and conventional forces to deter the Soviet threat. With our defense posture heavily weighted towards nuclear weapons and high technology, standing forces have been kept small. Yet, technology alone has never been enough to win wars. Moreover, the Soviets have closed the technology gap and delimited our nuclear options through treaties. We no longer have the luxury of nuclear dominance or large, costly, standing forces to defeat the Soviets. Therefore, we must seek out other methods to fight and win in future conflicts.

The search for new approaches is not futile, for others have succeeded through novel application of military force. Recent examples of this include the Germans in their defeat of the French in 1940, the Israelis in the 1973 War, and the British victory of 1982 in the Falklands. In each of these cases, well equipped and organized armies were defeated by similar or even inferior forces. The key to finding alternate ways for waging war is a thorough grasp of military history and theory. History records the facts of conflict and provides insights as to why events occur. Theory attempts to interpret how wars are fought and why men fight by separating war into its component parts so that the whole

nature of battle can be analyzed.

Military history and theory aid in the development of doctrine, a primary reference to guide an army in battle. The U.S. Army's capstone Field Manual 100-5, *Operations*, is an example of doctrine as a product of both history and theory. After a long hiatus, the 1982 version of the manual reintroduced several elements of classical theory which were expanded upon in the 1986 update. Throughout FM 100-5, history is used to clarify many of the concepts offered for use in warfighting.

The concepts advanced in *Operations* provide military commanders with a framework for the planning and execution of war. It is a tool for planners and leaders in thinking about how to fight. However, the concepts presented in FM 100-5 are not a recipe for success. War is much more complex than the simple application of a set of rules. The business of war cannot succeed simply by following a set of directions. The ideas in FM 100-5, like theory, merely establish a reference point for determining how to fight. Hopefully, it allows for a common language and understanding to develop from the concepts espoused in doctrine and theory.

The ideas in *Operations* offer methods to overcome Soviet mass with maneuver warfare conducted at the operational level of war. The field manual forwards concepts on how to plan and conduct engagements, battles and major operations so that campaigns achieve strategic results.(1) This structuring of conflict often is referred to as operational art and involves several key concepts. First, an understanding of the levels of war is important so that the linkage of activities in combat is understood, that tactics contribute to successful operations which attain strategic goals. Secondly, the practice of operational art involves fundamental ideas such as centers of gravity, decisive points, and culminating points. Understanding these concepts and the relationship between them is critical in the development of operational plans.

However, theory offers additional concepts that demand study to ensure that successful operations result from planning. Warfare is conducted in the realm of uncertainty, with opponents reacting dynamically to each other. Accordingly, the outcome in war rarely is predictable. Two of the major components of uncertainty are chance and friction. Chance permeates all of warfare and strikes at the most inopportune time. Friction makes the easy difficult and changes the expected to the unexpected.(2) Commanders must have a firm understanding of the central concepts of operational art, to include an awareness of the impact of friction and chance on planning, if they are to develop a framework for operations. The framework itself may not be the solution to the military problem, but it is a start. It serves as a compass to guide the leader through the many mazes involved in warfighting. Its attainment, however, is not easy. After all, how are pertinent insights gained? History merely provides the facts; theory the abstract ideas. History analyzed from a theoretical perspective, however, adds to one's knowledge of the complexities of human conflict.

This study examines a single campaign in light of the levels of war, the concepts of center of gravity, decisive and culminating points, and the relationship of chance and friction to these concepts. All of these theoretical concepts give us the framework for analysis of Robert E. Lee's operations in Maryland in September 1862. His operations provide the basis of study to develop the paper's theme that theory should be the start point for the development of a campaign.

As an operation that involved extended effort, centers of gravity, multiple decisive points, culminating points and the attendant friction and chance, the campaign is ideally suited for study. From a leadership perspective it is also an excellent choice. Led by Lee, the Army of Northern Virginia experienced both great victories and terrible defeat in 1862. Viewed by many as a genius in the Napoleonic mold, Lee was

instrumental in both its success and failure. The study of his actions illuminates the issues that are discussed in our framework of the key concepts of operational art.

The paper develops a theoretical paradigm to use as a model to analyze the Confederate operations. Next, an historical overview of the strategic situation, campaign plan, and execution reveal the harsh realities of combat. The historical realities are then analyzed from a theoretical perspective, from which conclusions on the utility of theory as a start point in campaigning are drawn. The paper finishes with a discussion of the implications of theory in future conflicts.

If we can develop a paradigm which is useful for historical analysis and offers insights as to why a campaign succeeded or failed, then perhaps the model can be applied to future conflict. Moreover, the constant search for new ideas and the correct application of our doctrine might offer us decisive results if we ever have to face the Soviet masses.

THEORETICAL PARADIGM

FM 100-5 poses three questions that reduce operational art to its essentials requiring the commander to determine: 1) what military conditions will achieve the strategic goal; 2) what sequence of actions will produce that condition; and 3) how will the actions be resourced?(3) We will use these three questions as the basis of our paradigm.

Clearly, the operational commander must understand the levels of war and their relationship to each other in order to link sound tactical fights with major operations that result in strategic success. Knowledge of the levels of war provides a structure to warfare and aids in the comprehension of this complex subject. *Operations* develops three levels in war--the strategic, the operational, and the tactical--and discusses the relationship between each level.(4) At the strategic level of war, military power is employed with other factors to obtain national goals or policies through the use or threat of armed force. National strategy exerts

diplomatic, economic, social, and military power to attain goals established by the state. Strategy defines the theater of war and further subdivides it into theaters of operations. Theater goals must satisfy national strategy. Military forces prosecute wars to ensure that the nation attains its ends. Any other military activity is superfluous.

Operational level of war links theater operations to strategic policy. Campaign plans are developed to set the conditions for the successful conduct of major operations. Sequencing major operations results in decisive campaigns that meet the strategic goal. At this level, commanders practice operational art by attempting to identify the enemy center of gravity and targeting its destruction to obtain decisive results. Operational level commanders further shape the campaign by declining or accepting battle with the enemy.

At the tactical level of war, commanders translate combat power into successful engagements and battles by destroying the enemy.(5) Superior tactics win engagements and battles. These tactics use sound maneuver to gain an advantageous position from which overwhelming firepower is brought to bear on the enemy.

Strategy sets the goals in the theater and outlines the desired results of conflict or the end state. At the operational level, the commander translates these goals into military objectives in a campaign plan which sequences the application of force producing decisive battles. Successful tactics win decisive battles which contribute to the campaign and attain strategic goals. The relationship between the levels of war clearly indicates that the operational level is critical. This layer of war ties strategy to tactics and focuses military combat power on those actions that produce significant results. In other words, operational commanders apply ways and means to achieve the ends. The method used to combine ways and means is operational art, and the starting point in the practice of this skill is the idea of centers of gravity.

Decisive results in campaigns come from the destruction of the enemy's armed forces. The requirement is to defeat the enemy in battle; the question is how to accomplish that task? Theory offers the concept of the center of gravity. Clausewitz defines this as "...the hub of all power and movement, on which everything else depends."(6) The center of gravity is found at the strategic and operational levels of war. Strategic centers might be the will of the people, a major or capital city or a member of an alliance. At the operational level the center of gravity is the mass of the enemy force, the basis of his combat power.

In today's theaters of operations it can be ground, air, or naval forces. Seldom is the center of gravity the entire opposing force. Normally, it is those elements that give the enemy freedom of action, specific forces that project the essence of his power, such as Rommel's Afrika Korps. Usually, this hub of power poses the greatest threat to the friendly forces. It is the mass that the operational commander targets, the enemy source of strength with the power to inflict the greatest destruction on friendly armed forces. If this center can be identified, attacked, and destroyed, then the opponent loses his combat potential.

Proper identification of the enemy center of gravity is key. After doing that, the next task is getting at it. Rarely will a force have enough concentrated mass to attack directly the enemy strength. The skillful commander will approach the enemy's hub of power indirectly, through a weakness that unbalances the center of gravity. Theory postulates the approach to enemy centers of gravity with the concepts of the decisive point and objective points of maneuver.

Introduced by Baron Antoine-Henri Jomini in his *Summary of the Art of War*, the decisive point is defined as a position, which if possessed, gives one side a marked advantage over the other. Objective points of maneuver are subsets of decisive points and are defined as positions that

relate to the destruction or decomposition of the enemy forces. Early occupation of these objective points make them decisive in that they establish positions from which the critical blow should be struck.(7) The point is a geographical position that affects both opponents; the possession of that site has operational implications. For the theory to be useful, the decisive point must be a location that gives the operational commander access to the enemy center of gravity. Ideally, the friendly center of gravity will be applied at the decisive point where an enemy vulnerability exists. Over the course of a campaign, commanders must gain a series of objective points in a well conceived sequence. Possession of these points allows the commander to erode constantly the enemy strength. The destruction of the enemy at these points uncovers the enemy center of gravity and if completely successful unhinges the hub of all power and movement. If the enemy center of gravity is not destroyed in this attack, it at least forces an adjustment by the opposition. This idea of applying strength against weakness is central in operational art and maneuver warfare. This, however, is only the ideal, and may not be achievable.

Because of the relationship between terrain and force in this concept, the decisive point will shift, or at times may not exist. Due to the shifting nature of the decisive point commanders constantly must evaluate the decisive points during the course of a campaign. At some point commanders must concentrate the superior strength to strike the decisive blow. The blow, when it falls, must be fatal. As a 1936 Fort Leavenworth text states, "Be stronger at the decisive point."(8)

In order to have this strength, the army must be properly resourced. Related to the idea of adequate resourcing is the theoretical concept of the culminating point. Clausewitz explains it as a point where the attacker loses his quantitative advantage and only has sufficient strength to maintain a defense and wait for peace.(9) FM 100-5 expands

the idea stating,

...every offensive operation will sooner or later reach a point where the strength of the attacker no longer significantly exceeds that of the defender, and beyond which continued offensive operations therefore risk overextension, counterattack, and defeat. The art of attack at all levels is to achieve decisive objectives before the culminating point is reached.(10)

Operational commanders must ensure that campaigns are properly resourced. They must delay the eventual force culmination. Casualties, malnutrition, loss of will, and improper logistical planning will hasten its arrival. The operational artist must calculate accordingly. His role is to project when the culmination point will be reached, and then either achieve decisive results beforehand or find a way to prolong the approach to the culmination point. Such projections are achieved by monitoring the strength of the force, protecting the friendly center of gravity, and resourcing the plan adequately. Manipulation of the point gives commanders the flexibility they need to apply superior strength at the decisive moment in battle.

Although I have discussed each operational concept in isolation, a dynamic exists between each of these ideas. The operational level of war is the link between the upper and lower levels of war which focuses sound tactics to attain strategic ends. The converging of efforts is operational art, and the design skills in this art involve centers of gravity, decisive points, and culminating points. The enemy center of gravity, properly identified, becomes the operational commander's target. If he hits this target and destroys it, he imposes his will on the enemy. To hit the target, he must have an advantageous position. This is provided by the decisive point and its possession serves as a funnel through which the commander directs his concentrated strength at the enemy center of gravity. Under ideal conditions, the strength of the attacker is applied against an enemy vulnerability. But in any case, requisite strength comes from proper resourcing and prudent expenditure that delays arrival at the

culmination point. The trick is to destroy the target, the enemy center of gravity.

These concepts provide a start point for leaders planning and conducting operations. If employed correctly they contribute to success, but will not in themselves, produce victory. For this approach is almost scientific, filled with "if...then" propositions. But war is more than a scientific exposition, it is an arena in which human factors-always hard to calculate-predominate. Two of these factors are friction and chance.

In spite of all of our technological advances, war continues to be conducted by men, not machines. Because of this, human factors will always interfere with the best of theory. The most well planned operations are at risk; friction ensures that. As Clausewitz noted, friction is created by the countless incidents that are unplanned for and work together to hinder (and sometimes help) the plan.(11) It confounds military operations so that even the easy becomes difficult. Beyond friction, chance adds to problems in war and influences planning. Chance is everywhere in war and adds to the unknown dimensions. The dilemma caused by such uncertainty creates doubt and frustrates the attempts to wage operational art.

Leadership, however, provides a method of coping with friction and chance. The strong, determined leader deals with these distractions based upon a mature, sophisticated understanding of war will find ways to overcome doubt and develop solutions. A leader well-based in theory and history has an additional advantage in that he has past lessons to draw upon for reference which give him an anchor to help weather the storm of uncertainty.

This discussion of friction, chance, and leadership completes our paradigm. The model serves as a start point for planning and execution of operations and, for this study, a framework for analysis. With these theoretical concepts in mind, we now turn to the Maryland Campaign of

1862 to hold these abstract ideas up to the cruel reality of combat in one of America's bloodiest fights. To gain a better understanding of the campaign, the stage is set with a look at the Confederate strategy in August 1862.

STRATEGIC SETTING

The summer and fall of 1862 held many bright prospects and opportunities for the Confederate States of America. For the first and only time in the war the South attempted a coordinated offensive with simultaneous invasions into Kentucky and Maryland.(12) The Confederates hoped to liberate the border states from Union oppression, gain recognition from Britain, and promote further war-weariness in the North.

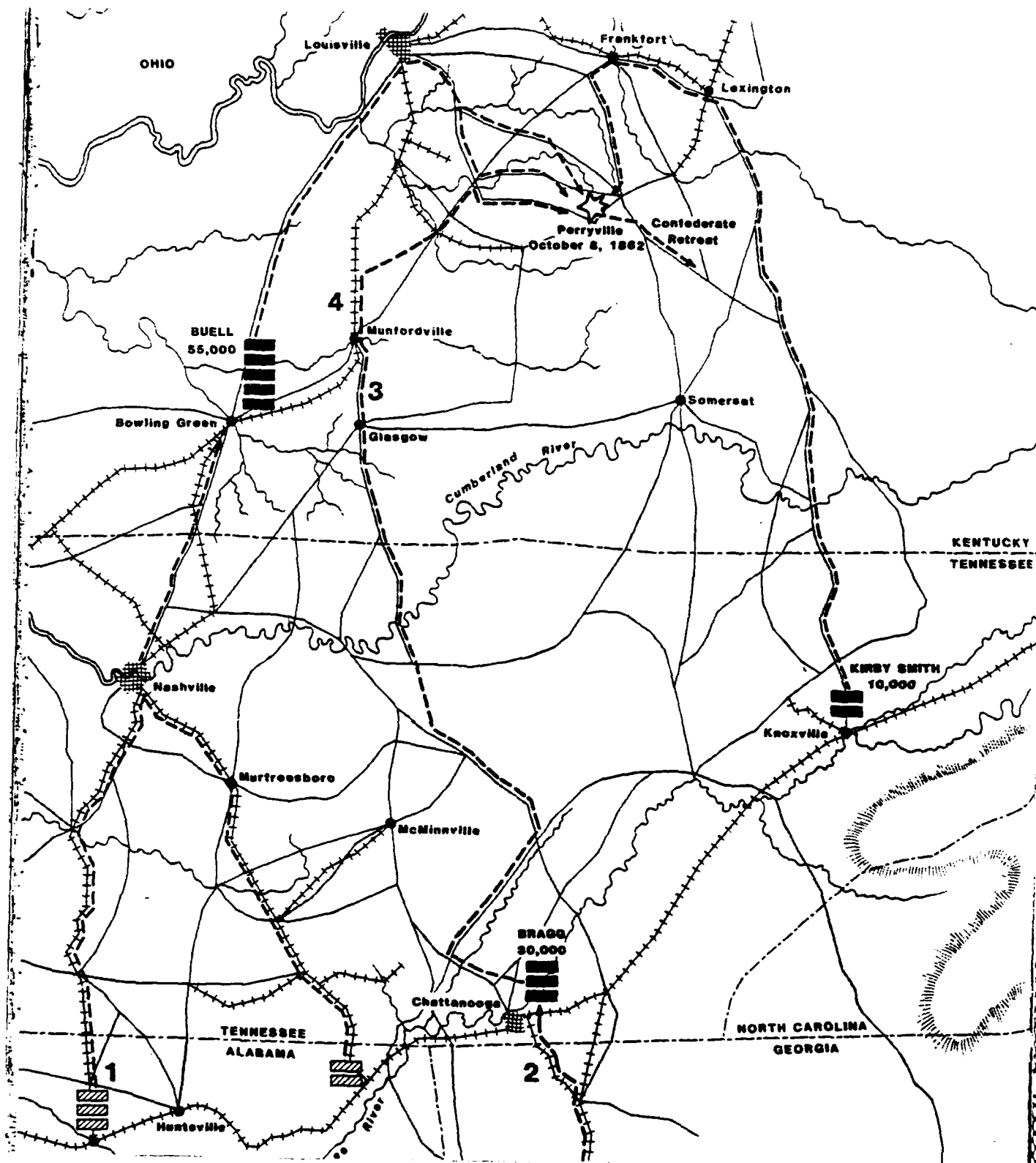
Believing that both Maryland and Kentucky were sympathetic to the Southern cause, Rebel leaders felt that the invasions would provide these states the opportunity to rid themselves from Union tyranny. Southern strength might increase in several ways if the offensives into the border states succeeded. The Confederate treasury would grow, Rebel armies in the east and west could live off the land in friendly territory and male Kentuckians and Marylanders could fill the thinning ranks of Confederate grey. Moreover, foreign recognition and concomitant legitimization of the Confederacy might follow. Britain was on the verge of recognizing the South. Over 500,000 people were out of work in the English textile mills due to the cotton shortage.(13) The Union blockade was not sitting well with London. Recent Confederate victories had demonstrated the power of the Rebels. Additional triumphs on northern soil might bring about the desired recognition from Britain. If England tipped, France might follow. Finally, a successful campaign by Lee might influence upcoming Congressional elections in the North. War-weariness in the North propelling the peace Democrats into power would give the South the hope that a peace proposal issued after a victorious Southern invasion of Northern soil might force the voters to chose between Republicans, who supported the

war, and Democrats who desired peace. The choice might be peace.

The Confederate leadership was not alone in its search for decisive victory. Since July, President Lincoln had been hoping for a victory over the Rebels so that he could issue his Emancipation Proclamation. Victory would recharge the Union cause. The President wanted the Proclamation to have a positive effect, not appear to be an act of desperation. The Proclamation would change the whole nature of the war from a conflict over union to a war to free the slaves in the rebellious states. While Lincoln waited for a victory, the Confederates moved.

In the Western Theater of Operations, President Davis ordered Braxton Bragg and Kirby Smith to attack Kentucky in an attempt to maneuver Don Carlos Buell out of Tennessee. The majority of Smith's forces bypassed the Yankees holding the Cumberland Gap, marched into central Kentucky, captured Richmond and on 30 August surrounded Lexington. Meanwhile, Bragg, on a parallel course west of Smith, moved his army on to Munfordville. The combined Rebel thrusts caused a rapid movement by Buell, marching from Chattanooga, in an attempt to stop the Confederates from seizing Louisville.⁽¹⁴⁾ [See map 1] The Confederates forced the Union army out of Tennessee in just over a fortnight. They were operating now in a border state with the hopes of obtaining some of their strategic aims with a possible uprising in Kentucky.

In the Eastern Theater of Operations, General Lee was having remarkable success as well. Having forced General McClellan's army from the Peninsula in what became the Seven Days Battles (June 25-July 1, 1862), Lee turned to fight the only remaining offensive force in Virginia, Pope's Army of Virginia. On the 29th and 30th of August, Lee, with his forces divided, conducted a masterful battle and almost destroyed Pope's army. Through these two major operations, Lee drove the Union armies from Virginia and returned conditions between the warring nations to where they had been at the outbreak of hostilities. The Union armies in the east



MAP 1

CONFEDERATE OPERATIONS IN THE WEST
JULY-OCTOBER 1862

FROM: CRAIG L. SYMONDS, *A BATTLEFIELD ATLAS OF THE CIVIL WAR*

were disorganized and dispirited, although the reasons were less from fear of the enemy as from lack of leadership. In both theaters of operations, the South held the strategic initiative for the first time in the war, and could take the strategic offensive. In the west, they did just that, while in the east, General Lee saw a chance to strike at the heart of the Union by operating in the area around Washington, D. C., and if successful there, turn into Pennsylvania.

THE CAMPAIGN PLAN

On 1 September 1862, Lee halted his pursuit of Pope's army which had been routed at the battle of Second Manassas. The Union army was disorganized, with over 30,000 soldiers falling back into Washington in a state of confusion.(15) Realizing that there was virtually no threat facing his army, Lee planned his next operation. He had four basic options open to him: 1) Pursue Pope into Washington; 2) Stay put; 3) Fall back into the Shenandoah Valley; or 4) Attack north. The only viable course of action achieving the strategic aims of the South was the last.

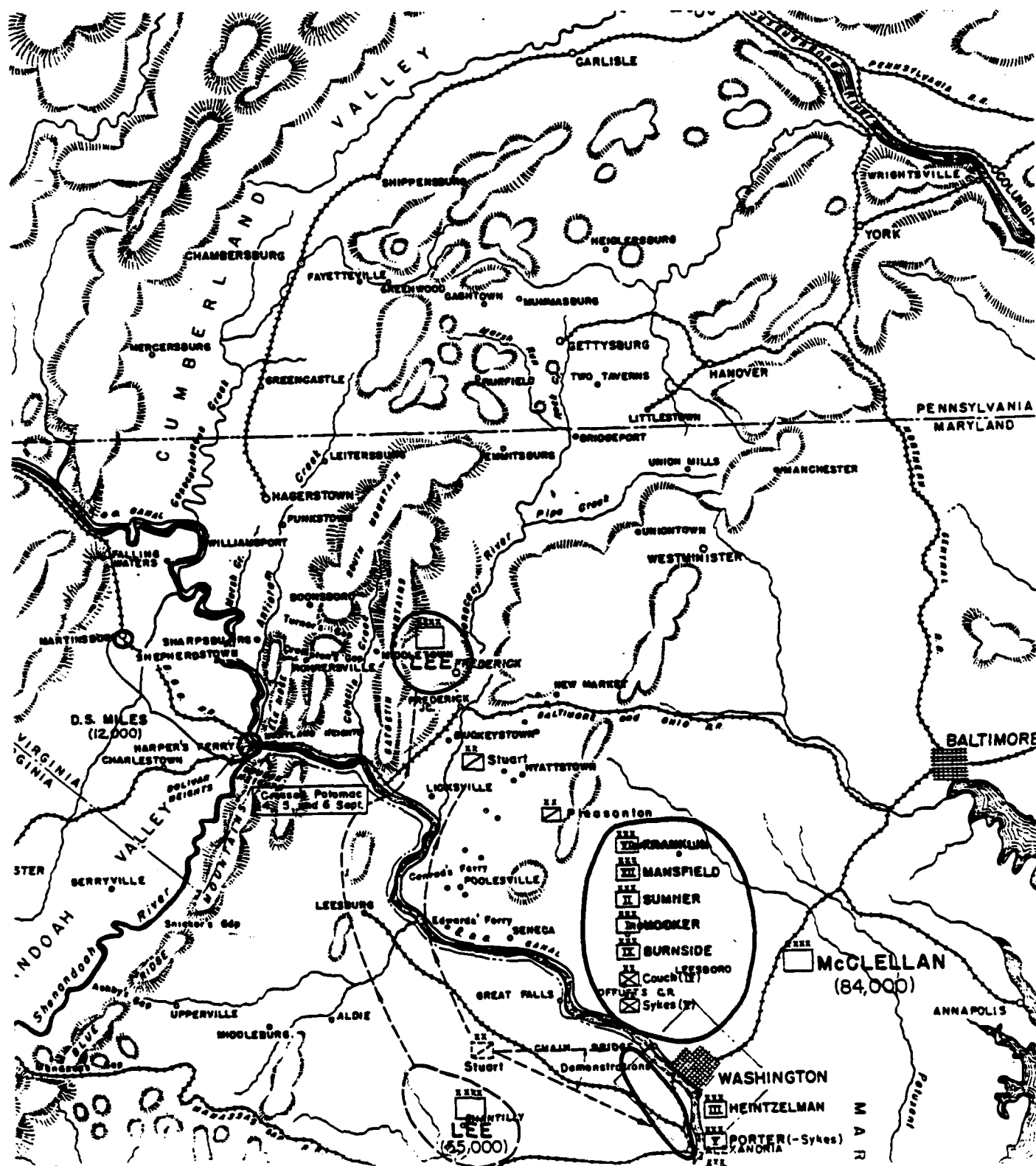
The Rebels could not chase Pope into Washington. Lee knew that the city was well defended by McClellan's army and had recently received 60,000 replacements, part of Lincoln's request for 300,000 more.(16) Aware that a direct attack on the city would throw his strength against a fortified position, Lee discarded this option. But the Army of Northern Virginia could not stay in place since the operations of the past weeks had stripped the countryside of all food and fodder. Retiring into the Shenandoah Valley would provide a base of support, but this was not feasible since it opened Richmond to attack and surrendered much that the Confederates had gained. By elimination, the only option was a move north.

Lee, the Napoleonic thinker, knew that the destruction of the Federal army in Maryland was the key to strategic success. He based his plan on the assumptions that the Union army would take at least three weeks to reorganize, that the Federal garrisons at Harper's Ferry and Martinsburg

would evacuate their positions once threatened, and that the Army of Northern Virginia had sufficient strength to conduct the campaign.(17) The plan was fairly simple. First, the army would march to Frederick, Maryland threatening Washington and Baltimore. [See map 2] This maneuver alone would cause the Union army to fall back to Washington and force the garrisons at Harper's Ferry and Martinsburg to retire. Secondly, the Rebel army would move into western Maryland, open lines of communication through the Shenandoah Valley, and move north to destroy the bridge on the Susquehanna River at Harrisburg, Pennsylvania. These actions would force a Yankee response pulling the Union army out of Washington, away from its base of supplies.

Lee planned to resource the campaign by obtaining provisions for his men in Maryland. Shoes, clothing and food were available in enemy territory, on land that had yet to be ravaged by conflict. As far as manpower, Lee's army had recently been joined by D.H. Hill's and Lafayette McLaws' divisions and by two brigades commanded by John Walker, adding 9,000 soldiers to his ranks. This brought the strength of the Army of Northern Virginia up to 50,000 men.(18) If Marylanders joined the ranks, Lee would have sufficient combat power to wage a strong offensive.

In addition to these logistical considerations, Lee had his army well organized to fight. His cavalry, commanded by J.E.B. Stuart, was structured as a corps and controlled at army level. With this organization, Lee had direct access to intelligence and great flexibility in the employment of the unit. His sound organization allowed Stuart to fight his cavalry and artillery force with confidence away from the main army. Furthermore, the army was organized into ad hoc corps under the able leadership of "Stonewall" Jackson and James Longstreet, allowing for the easy shifting of forces and the tailoring of units to accomplish specific tasks. The corps organization eased command and control difficulties while ensuring flexibility.



Finally, the morale in the Confederate army and the confidence in Southern leadership could not have been higher. Over the course of the summer campaigns, the successes against superior Union forces had given the men an air of invincibility and had demonstrated their prowess in the conduct of defensive and offensive tactics. The soldiers could outmarch the Federal army twenty miles a day to six, giving Lee an advantage of operational tempo which he would put to use in his planned campaign of maneuver. Having prepared his plans based upon strategic goals, Lee turned his army towards Maryland, hoping that his actions would end the war.

THE CAMPAIGN

As Lee prepared the Army of Northern Virginia for the move north, the Union forces began to reorganize. On 2 September, President Lincoln placed General George B. McClellan in command of the Washington defenses. Pope's Army of Virginia was disbanded and added to McClellan's command, raising the strength to 158,000 soldiers.(19) "Little Mac," a known organizer, rebuilt the army and improved the defenses around the Nation's capital.

Between the 4th and the 7th of September, Lee's forces splashed across the Potomac River and entered the state of Maryland. The movement, screened by Stuart's cavalry operating on the Lee's right flank, was extremely successful. [See map 2] By the evening of the 7th, the Confederates concentrated at Frederick. Because his cavalry was organized inefficiently, McClellan was blind to the enemy movements. Decentralized in order to support the Union divisions, the Federal cavalry was unable to penetrate Stuart's cordon.(20) Therefore, General Lee completed his turning movement to Frederick before his opponent could be sure of his intended actions.

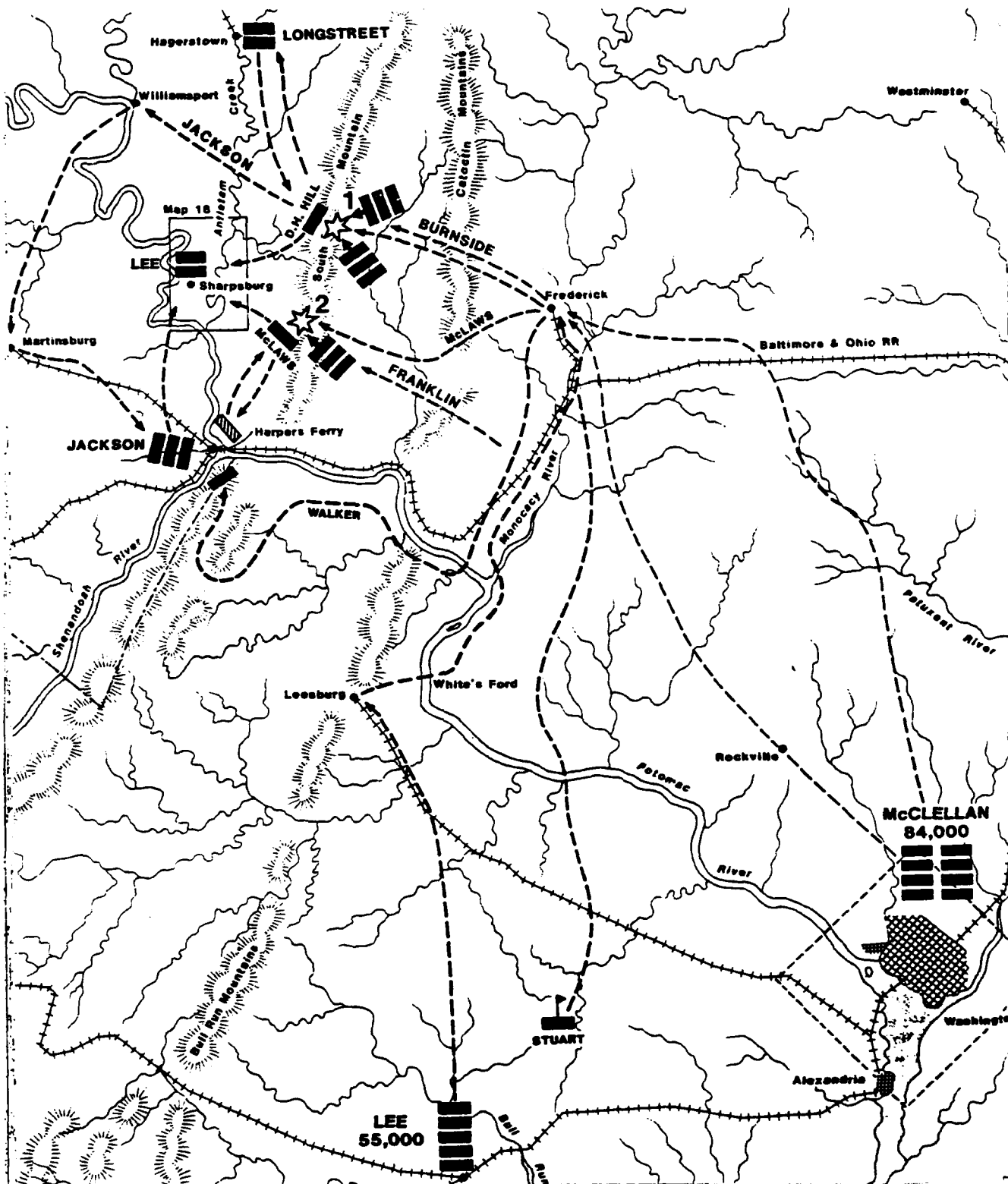
On 5 September, General McClellan's army departed Washington and moved towards Rockville, Maryland. Leaving about 70,000 men in the

Washington defenses, "Little Mac" took some 88,000 soldiers to counter the Rebel army.(21) Unsure of Lee's intentions, McClellan had the army move at a rate of only six miles a day, thereby avoiding fatigue and ensuring that the capital was covered.

Back in Frederick, Lee's men recovered from their march and collected provisions. In the town, shoes and foodstuffs were sold out while the soldiers found time to rest and cook food instead of gulping it down on the march.(22) However, all was not well. On the march to Frederick, the Confederate army lost from a third to one half of its strength to straggling alone.(23) The march was demanding. Thousands of men were shoeless, and the diet of green corn and apples caused diarrhea and dysentary to run rampant. The men, already in feeble condition from the summer campaigns, could not continue on. Morale began to flag. Many were truly sick while others had tired of fighting and could not understand why the conflict had moved into the north. They had joined the army to protect their states from Union invasion. Going north was not a part of the bargain.

Lee's expectations were not realized. The people of Maryland did not respond to the invasion and join the Southern cause. Fewer than 200 Marylanders enlisted in Lee's ranks. Most of the citizens adopted a wait and see attitude.(24) Furthermore, the expectation that the Union garrisons at Harper's Ferry and Martinsburg would retreat from the state was not met. Although McClellan wanted the garrisons withdrawn, General Halleck ordered the forces to remain in place. The positions threatened Lee's future lines of communication (LOC). He felt compelled to reduce the garrisons.

The plan, embodied in Special Orders 191, issued on 9 September, intended to reduce Harper's Ferry and Martinsburg, secure the LOCs, and occupy a forward base at Boonsboro preparatory to launching offensive operations further north. [See map 3] Simply stated, Lee's order sent



MAP 3
DISPOSITION OF FORCES RESULTING FROM
SPECIAL ORDERS 191

BATTLE FOR SOUTH MOUNTAIN

FROM: CRAIG L. SYMONDS, *A BATTLEFIELD ATLAS OF THE CIVIL WAR*

Jackson across the Potomac to take possession of the Baltimore and Ohio Railroad and capture the force at Martinsburg and any enemy that should escape from Harper's Ferry. Longstreet was to move to Boonsboro where he would halt with the reserve and supply and baggage trains. McLaws and Anderson were to move by Middletown, secure Maryland Heights and capture the ferry. Walker was to destroy the aqueduct on the Chesapeake and Ohio Canal and move to Loudon Heights to cooperate with McLaws and Jackson, while D.H. Hill formed the rear guard in Boonsboro. Stuart's cavalry was divided out to accompany each part of the army and to cover the rear.(25) Lee planned for the operation to take four days. With McClellan's forces east of the Catoctin Mountains maintaining the expected march rate, the Confederates thought that they could accomplish the missions assigned in Order 191 and concentrate in Boonsboro in time to respond to "Little Mac."

The Rebels moved on 10 September, but due to slow marching rates, lack of proper equipment, and unexpected enemy actions, the encirclement of Colonel Miles' garrison of 12,000 at Harper's Ferry was not complete until 14 September.(26) On the morning of the 15th, after an hour long artillery bombardment, the ferry fell, two days behind schedule. As it turned out, these were two very precious days

While events at Harper's Ferry were unfolding, Lee's other forces were engaged in actions that would change the nature of the campaign and, consequently, the war.

Longstreet's and Hill's forces reached Boonsboro on 10 September. Reacting to a rumor that Federal militia units were in Hagerstown, Longstreet was sent to the town in order to secure a forward base for operations towards Harrisburg. This thrust further split the army into five columns, with each unit separated by eight to ten miles.(27) The separation of forces did not concern Lee. In past campaigns he had divided his forces boldly with astounding results. However, the risk would not

work here; the enemy had Lee's plans!

The Army of the Potomac occupied Frederick on 13 September finding a copy of Special Orders 191 wrapped around cigars left in D.H. Hill's former campground.(28) Receiving the orders at noon, McClellan decided to cut the enemy forces in two by driving a wedge between Hill's division and the forces at Harper's Ferry. To achieve this, the Union army would have to move through the gaps in South Mountain. [See Map 3] Accordingly, McClellan sent Hooker's, Reno's and Burnside's Corps into Turner's Gap, and Franklin's Corps six miles to the south to Crampton's Gap. McClellan had a rare opportunity, but waited sixteen hours to take advantage of the situation.

At Lee's Headquarters, the Confederates began to realize the dangers threatening the campaign. The afternoon of the 13th brought news from Stuart that his screen on Catoclin Mountain was pushed back. Early evening brought reports that numerous Federal campfires could be seen at the base of South Mountain. Then, at 10 P.M. Lee received what must have been astounding news. Stuart sent him a dispatch revealing that McClellan had the Rebel plans!(29) Realizing that Harper's Ferry had not fallen and that McLaws' forces might be swept up in a vigorous Union assault from South Mountain, Lee ordered Hill into the passes to provide infantry support to Stuart's cavalry and artillery. Longstreet was ordered to march from Hagerstown to assist Hill. Stuart, who had been operating on the mountain, placed Hill's division in Turner's Gap and then moved his force to Crampton's Gap.

The battle for South Mountain began at 9 A.M. on 14 September with the opening clash taking place in the northern gap. McClellan threw his strength against Hill's division, but the Confederates held them off with a stubborn defense and tenacious resistance. Using superb tactics by fighting behind every fence and rock ledge, the Rebels slowed the Federal onslaught. At 3 P.M., Longstreet arrived and helped Hill with the delay

until evening when the action was broken off. Meanwhile, at the southern most gap, Franklin's Corps brushed Stuart's men aside and moved towards the ferry. However, the Union force stopped timidly when it encountered McLaws' brigades deployed across the valley floor. As it was getting late, forces in both gaps stopped fighting with little more than an exchange of rifle fire. The battle was over. The Confederates suffered 2,700 casualties to the Federals 1,800.(30) Although their losses were high, the Confederates had delayed McClellan's Army by one day and saved their army from being destroyed in detail. Yet, the loss of this decisive point put the Confederates on the operational defensive. From now on, Lee would have to react to McClellan's offensive maneuvers.

Lee quickly audited the loss of South Mountain and ordered Longstreet and Hill to concentrate their units at Sharpsburg. Using the ford west of the town, the Confederate forces could reunite with Jackson on the far side of the Potomac. At the same time, dispatch riders gave McLaws the orders to move from his position in front of Franklin to the west side of the river. However, as the tired Rebel forces reached Sharpsburg during the evening of 14 September, Jackson notified Lee that Harper's Ferry would fall the next day. This information renewed the offensive spirit in Lee. He knew that if he could concentrate and win a decisive battle against McClellan, then the initiative would be regained. He decided to hold his position at Sharpsburg, mass the forces as rapidly as possible and look for the opportunity to attack McClellan. Lee immediately reversed his orders to McLaws, directing him to join the army at Sharpsburg.

Initially occupying the site in order to concentrate and withdraw, Lee now prepared to strike McClellan from Sharpsburg, making the crossroads a flanking position. If McClellan tried to relieve the force at the ferry, Lee could attack from Sharpsburg and operate on the flank and rear of the Union army. While McClellan fought Jackson at the ferry, Lee, with

Longstreet, Hill, Stuart, and possibly McLaws, could hit the Yankee flank. The exciting possibilities faded quickly, however as McClellan marched straight for Sharpsburg on 15 September. While Harper's Ferry surrendered, Lee prepared for what was to become one of his most desperate fights of the war.

The Army of Northern Virginia occupied its defensive position on 15 September, while across Antietam Creek, the Army of the Potomac assembled on the field with 75,000 men. Another 19,000 soldiers in Franklin's Corps were only four hours marching time away.(31) The 16th brought Jackson and Walker onto the scene and raised the Rebel strength to around 26,500 soldiers.(32) Lee now had six of his nine divisions in a defensive posture stretching four miles long. The Confederates made their position stronger by anchoring the flanks on the Potomac River. Furthermore, McClellan's belief that Lee had an army of 100,000 men with a concealed counterstroke force gave the Rebels exaggerated strength.(33) As Lee awaited the remainder of his divisions, McClellan planned.

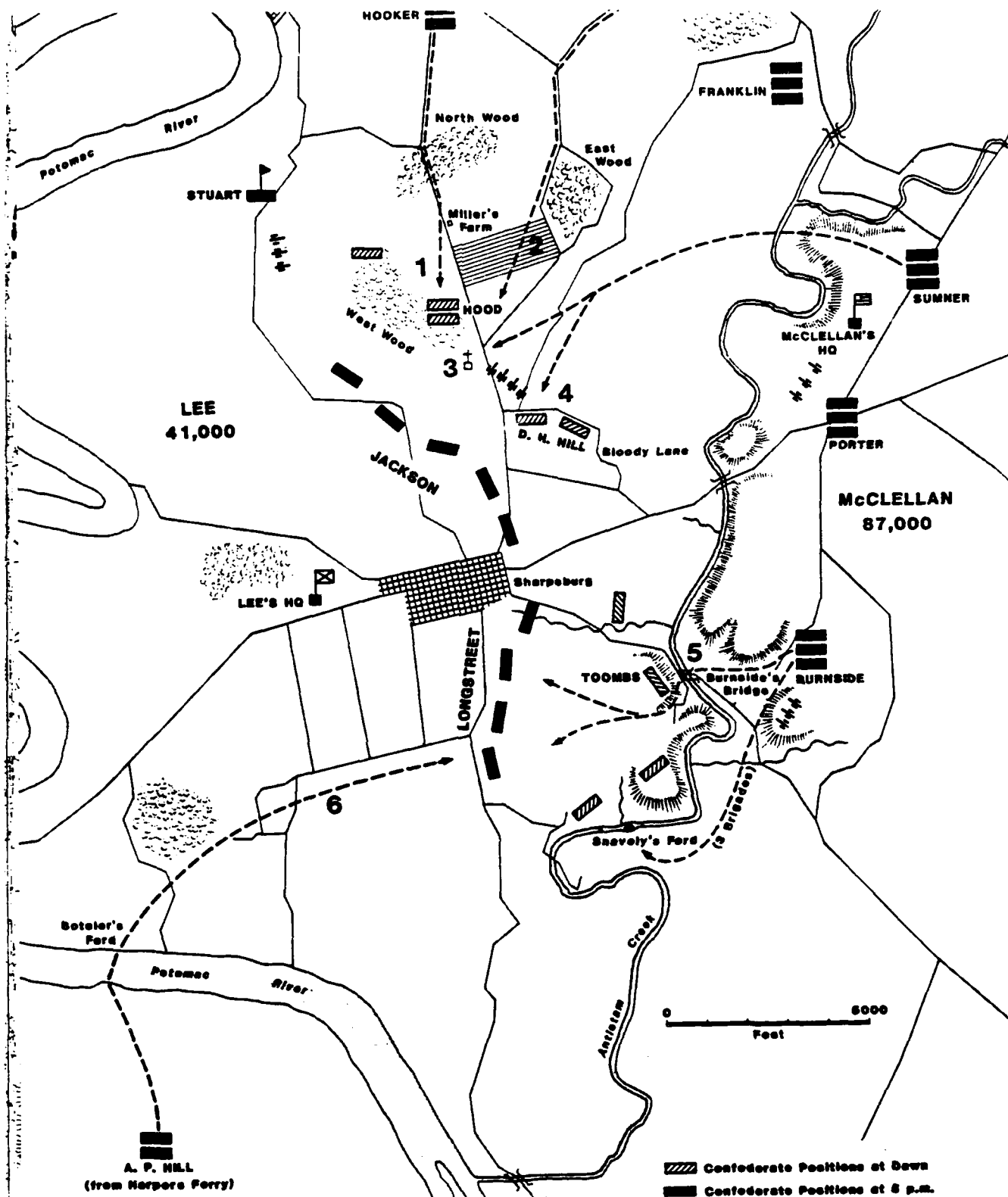
"Little Mac" decided to fight this decisive battle in Napoleonic fashion. He would open his offensive with a main attack on Lee's left with "Fighting Joe" Hooker's Corps. Mansfield's and Sumner's Corps would support the main attack, while Burnside attacked the lower bridge and Lee's right. Porter's Corps and the cavalry, in the center, would be used as a reserve to hold off Lee's counteroffensives or shatter the Rebel center if the Confederate commander chose to reinforce his flanks.(34) While the plan was sound, it was uncoordinated since McClellan failed to hold a corps commanders' meeting or publish an order. Indeed, McClellan's commanders were unaware of each others' missions. If that were not enough, "Little Mac" ordered Hooker to cross the Antietam during the evening of the 16th, thereby giving away the element of surprise.

The battle of Antietam showed Lee at his tactical best and capitalized on the lack of coordination in McClellan's plan. At dawn, Hooker

opened with a furious 9,000 man assault into the north and west woods. [See map 4] He was oriented on the Dunkard Church and Jackson's 5,500 soldiers.(35) "Stonewall" was in a good position with his left flank protected by Stuart's artillery. Hooker's troops attacked into a deadly hail of rifle and cannon fire. Yet, even though the losses were great, they pressed ahead. The Rebel ranks broke and ran, but the tenacious Jackson launched John Bell Hood's Texans in a point-blank counterattack. Hood drove Hooker back through the cornfield, shattering the Union attack. Hooker later wrote, "every stalk of corn in the northern and greater part of the field was cut as closely as with a knife, and the slain lay in rows precisely as they had stood in their ranks a few minutes before. It was never my fortune to witness a more bloody, dismal battlefield."(36)

Now, the death dance intensified. As Hooker fell back, Mansfield went in against Jackson. Mansfield fell dead but his corps pushed towards the church, only to be beaten back by yet another counterattack from Lee who pulled Walker from the extreme right and sent him to Jackson on the left. Anderson and McLaws arrived from their 17 mile march up from Harper's Ferry and went into action, the former behind Hill and the latter with Jackson. McLaws, approaching Jackson's lines, saw Sumner's Yankees attacking the church with an exposed flank, whereupon he launched the Rebel's third ferocious counterattack. This action stopped the fighting on Lee's left at around 10:30 A.M. As both sides reorganized from the swirling maelstrom, they realized that the losses were horrendous. The Union suffered nearly 7,000 casualties while the Confederate rate was proportionately higher with 5,000 soldiers lost.(37)

The fight now shifted to the center where Hill and Anderson with 7,000 men attempted to hold off part of Sumner's corps attacking with 12,000. The Rebel defense might have been successful. The men occupied a 1,000 yard stretch known as the Sunken Road or Bloody Lane, making their position strong. However a mistake, created by a misunderstood order to



MAP 4
BATTLE OF ANTIETAM

17 SEPTEMBER 1862

FROM: CRAIG L. SYMONDS, *A BATTLEFIELD ATLAS OF THE CIVIL WAR*

refuse the left caused Anderson to fall back, exposing Hill's men to enfilade fire which shattered the defense. The battle now required desperate measures. Longstreet held his staff's horses while they manned artillery pieces, and Hill led a 200 man counterattack in an attempt to hold the line. Yet, both attempts failed and the Union forces took Bloody Lane. Lee's center was wrecked and one more heavy blow would open the army to destruction.(38) But "Little Mac" would not commit more forces while he awaited Lee's "counterstroke." The fight in the middle of the field was finished, again with horrific casualties.(39)

While Hill fought Lee plotted, attempting to find a way to relieve the growing pressure in the center and take control of events.(40) He told Jackson to devise a counterstroke on the Union right, delighting "Stonewall" with the prospect. However, careful reconnaissance of the Federal position and an assessment of Rebel strength revealed that an offensive maneuver was not possible.

As Lee learned of the infeasibility of the proposed counterstroke, a new challenge opened on the Confederate right. Burnside with 10,000 men had been trying to take the lower bridge from Toombs' 550 Georgians since nine in the morning. Now, at 1 P.M., Burnside managed a two regimental assault carrying the bridge. Toombs joined Jones in Sharpsburg and waited for the follow on Union attack. Burnside, whose assault force was out of ammunition, passed a fresh division to the front and renewed the offensive at 3 P.M. Lee was out of local reserves and simply watched as the Federals pushed his army towards the Potomac. But miraculously, A.P. Hill's division, which had been marching from Harper's Ferry since 7:30 that morning, arrived on the field at 4 P.M. launching a furious counterattack. The combination of the famous Rebel Yell and Confederate wear of captured blue uniforms sent the Yankees reeling in confusion. This attack committed the last Confederate force in Maryland; Lee's army was spent just holding the line on the Hagerstown Turnpike.

McClellan, on the other hand, had over 20,000 men who had not yet been committed to the battle along the Antietam. But "Little Mac" would not send any more of his army into the fight even though he had the chance to destroy his adversary.(41) The battle was finished with enough casualties to make 17 September America's bloodiest day of combat. The Union suffered 12,401 killed and wounded and the Army of Northern Virginia had about 10,318 lost.(42)

At best, this purchase in blood bought a tactical stalemate. General McClellan's uncoordinated attacks did not produce decisive action even though he had the strength and position to destroy Lee's army. For all of Lee's tactical acumen, the best he could do was save his army; he lacked the strength to overcome McClellan's numbers. On the 18th, Lee held the field, reorganizing and evacuating the wounded. He considered reopening the fight by attacking the Union right, but counsel from Jackson and Longstreet's artillery chief, Stephen D. Lee, persuaded him that the Federal position was too strong. With the campaign finished, Lee withdrew his forces to Virginia during the evening of the 18th.

ANALYSIS OF THE CAMPAIGN

Earlier this paper developed a paradigm for use in developing campaign plans. Let us apply it to analyze Lee's campaign, and to explain the Confederate actions and demonstrate the utility of theory as a start point in campaign planning. The analysis will follow the outline of the paradigm, beginning with a discussion of the levels of war.

Lee's campaign clearly illustrates the strategic, operational, and tactical levels of war and their interrelationship. At the strategic level, the Confederate goals centered on: 1) gaining foreign recognition; 2) liberating the border states; and 3) influencing the fall elections in order to shift the balance of power in Congress to the peace Democrats. Attaining these strategic goals could bring an end to the war. Even if the determined Lincoln continued the struggle, the South, by achieving its aims,

would gain new strength with added manpower, economic growth, and international influence. Lee knew fully the strategic implications of the campaign since he had served as Jefferson Davis' military advisor just three months before this operation.(43) Indeed, it was Lee who urged for the invasion and had his forces moving north before the Confederate President was aware of the plan. While the strategic goals were clear, what were the military conditions at the operational level of war?

The Napoleonic Lee wanted to fight McClellan, realizing that strategic goals are only obtained by fighting. After the war, Lee told friends that, "I intended then to attack McClellan, hoping the best results from the state of my troops and those of the enemy."(44) His plan for fighting McClellan was to draw the Federals away from Washington through a campaign of maneuver. He believed that the Susquehanna Bridge was the "objective point" of the campaign and that once it was destroyed he could move against any of the northern cities.(45) Lee hoped to win a decisive battle on northern soil, achieving the Rebel's strategic ends. But as we have seen, it took more than hope.

As the historical overview illustrates, failure at the operational level devastated the campaign. This failure resulted from an infeasible campaign plan that was not sustainable given the physical state of the soldiers. It had long been Lee's leadership style to "...plan and work with all my might to bring the troops to the right place at the right time; with that I have done my duty."(46) Yet, at Antietam Lee fought the most desperate battle of his career, as a tactical leader.(47) Lee fought it at a great disadvantage because of operational errors: maldispersion of his force, poor security, and a bad estimate of his enemy. His operational planning and execution, flawed in concept, moved the campaign towards and eventual last-ditch stand to save the Confederate army at the battle of Antietam. With Confederate operational art plagued with friction, chance, and design flaws, tactics were the only hope. In that regard, they proved

remarkable.

Throughout the campaign, the tactical abilities of Lee's outnumbered army kept the hope for strategic success alive. The movements to Harper's Ferry and encirclement of the garrison enabled Jackson to capture some 11,000 men, 13,000 small arms, 73 artillery pieces, 200 wagons, and abundant supplies. The cost of the operation was about 200 southern casualties.(48) The delaying tactics used by Hill at South Mountain kept McClellan's main force from cutting Lee's army in half. At Antietam the aggressive Rebel counterattacks kept the Federal onslaught in check. Lee's force of around 35,000 held back McClellan's 88,000. Historian Russel Weigley says of the tactics:

The high losses of the army that fought on the tactical defensive can be explained by the desperation with which Lee's army had to struggle against heavy numerical odds, so that much of the time their last-minute reinforcements were counterattacking to retrieve crumbling positions or engaged in hand-to-hand combat.(49)

These counterattacks were directed, for the most part, by Lee as he moved individual brigades and artillery guns around the field. Thus, we see that the Maryland campaign is an example of a poor plan being saved by superior tactics. The aggressive Confederate fighting rescued the Army of Northern Virginia from destruction, but could not turn weak operational art into strategic success.

The criticality of the operational level of war is borne out in this study, in that the Rebels had clear strategic goals and exceptional tactical abilities. Yet, weak operational design doomed the campaign. Operations overlap both the higher and lower levels of war tying them together, like a bridge spanning a river. Even though abutments on each side of the river are sound, one cannot cross without the bridge being in place. Lee's bridge was shaky.

FM 100-5 states that an effective campaign plan orients on the enemy center of gravity.(50) So too, our paradigm stressed the

importance of the identification of enemy centers of gravity and planning for its subsequent attack. How do these ideas apply to the case study? At the outset of the campaign, Lee oriented on the Susquehanna River Bridge, calling it the "objective point." It appears that he virtually discounted the enemy believing that McClellan would take three weeks to reorganize the Federal army after the rout at Second Manassas. If this is true, then the center of gravity was not identified at the start and could help explain why the campaign failed.

Conversely, it might be argued that General Lee knew from the outset of his operations that he would have to fight the Federal army to achieve strategic ends. He, therefore, launched an invasion with the ultimate goal of meeting the enemy somewhere along the Susquehanna River. In those simpler times of Civil War combat, elements of the ground force made up the operational center of gravity. McClellan had 158,000 men in the fortified positions around Washington. Lee, with 55,000 men, could not attack this position and gain success. He planned to draw the Union army out, realizing that a portion would remain behind in the defenses. As the force moved, the Federal center of gravity would have been exposed, and plans made for its attack. But the plan, as envisioned, was never carried out and further discussion of possible eventualities becomes speculation. What, however, were the centers of gravity?

To begin with, one fact is clear--the garrison at Harper's Ferry was not a center of gravity. We will never be sure why Lee attacked it with six of his nine divisions. Perhaps he viewed it as a threat to future operations or as too ripe a plum to pass up. Nevertheless, it is hardly plausible that he felt threatened by a 12,000 man garrison force. Yet, his decision to capture the ferry was the undoing of his plan. From an operational perspective, the attack on the ferry took too much time, exhausted the men with additional marching, diffused the strength of the army, and had little effect on McClellan's combined forces. In fact, the

attack had a negative effect on Lee's operational potential, for when the enemy center of gravity was formed, Lee lacked the combat power (due to dispersion) to counter it. It is interesting to note Longstreet's assessment of the position. He refused to attack the ferry on the way to Frederick and he later wrote that, "It [Harper's Ferry] was left severely alone in the Gettysburg campaign..."(51)

The first Union center of gravity identified is Franklin's Corps at South Mountain. The 18,000 men of the Sixth Union Corps were seasoned veterans from the Peninsula campaign. They represented a fresh, potent force having been kept from the fighting at Second Manassas and not worn by forced marching. Fighting at Crampton Gap, they were less than eight miles from Harper's Ferry; a successful attack on the Rebel forces there would cut Lee's army in two. While Franklin's timidity failed to divide the Confederates, his action caused Lee to retire to Sharpsburg forcing the Rebels into an operational defense. Lee used Hill to delay the mass of the Union army at Turner's Gap. If the Confederate forces had concentrated against Franklin and subsequently crushed his corps, McClellan would have been unbalanced. Franklin's defeat at the southern gap would have opened the Federals to flank attack. Based upon McClellan's past actions, the threat of Confederate forces on a flank or in the rear of the Union army would have resulted in a rapid Federal withdrawal towards Washington. However, given the dispersion of the Rebels, the best Lee and his forces could manage against Franklin was a ruse.

As the battle of Antietam took shape, the Union center of gravity shifted to Porter's and Franklin's Corps. Positioned in the middle of the battlefield, this 20,000 man force was poised to hold off Lee's counterstrokes or crush his center, should the Confederate leader strengthen his flanks.(52) McClellan's uncoordinated attacks could go on all day for the "hub of power and movement" in the force was the

reserve. Lee realized the importance of the Union force and twice (noon of the 17th and all day on the 18th) considered ways to get at it. If he turned the Federal right as desired, he would have struck the decisive blow on the rear corps unbalancing McClellan's army with a flank attack.

Porter knew the significance of his force. At midday Union generals pleaded with McClellan to attack the Rebel center with the reserve. As "Little Mac" contemplated the action, Porter told him, "Remember General, I command the last reserve of the last army of the republic." (53) Porter's Corps did not see action on the 17th. If Lee assaulted Porter with a sizeable force destroying the "last reserve", the action would have unglued McClellan's offensive.

There is great utility in identifying enemy centers of gravity and attacking that force. Strength cannot be squandered against the destruction of terrain objectives such as the Susquehanna Bridge or on small forces like those at Harper's Ferry. The mass of one's forces must be applied against the enemy center of gravity in a decisive blow. The target for operational commanders is the enemy center of gravity. The decisive point guides the force to the target.

From the Confederate's perspective this campaign had four decisive points: 1) the bridge on the Susquehanna River; 2) Crampton's Gap at South Mountain; 3) Sharpsburg; and 4) the Union right at Antietam. Possession of the Susquehanna Bridge might have drawn the Federals away from Washington allowing Lee to get at the Union center of gravity. There was adequate maneuver space near the river setting the conditions for a decisive battle. However, as Clausewitz points out,

Relative superiority, that is, the skillful concentration of superior strength at the decisive point, is much more frequently based on the correct appraisal of this decisive point, on suitable planning from the start; which leads to appropriate disposition of the forces, and on the resolution needed to sacrifice nonessentials for the sake of essentials... (54)

The Susquehanna Bridge was a planned decisive point, but Lee's forces

lacked the strength to get there. The combat power of the Army of Northern Virginia eroded on the march to Frederick. What strength remained was squandered on the nonessential capture of Harper's Ferry. Even if he had not been sidetracked to Harper's Ferry, Lee's weakened force could not have marched all the way to the Susquehanna River. The decisive point was beyond Lee's reach.

On the other hand, selection of the lower gap at South Mountain as a decisive point would have had a major effect on operations. Lee, identifying South Mountain as a decisive point, could have used an economy of force at Turner's Gap (the role played by Hill in the actual battle). Concentrating against Franklin, the Union center of gravity, he might have defeated this force and outflanked McClellan's army. Attacking "Little Mac's" flank would force the Federals to untenable ground between the Catoclin and South Mountains. However, Lee initially disregarded the South Mountain in order to lure McClellan westward.(55) Failure to assess the potential of the gaps at South Mountain allowed McClellan to change the nature of the campaign. After the battle of South Mountain Lee's

...movements were controlled by the prime and imperious necessity of effecting a concentration of his troops, rather than by his original purpose of maneuvering the Union army away from its base. He was no longer offensive but defensive. Strategically, [operationally] he was already foiled.(56)

The third decisive point in the campaign was the Confederate position at Sharpsburg on 15 September. Lee concentrated Longstreet and Hill at this crossroads after the battle of South Mountain. He planned to use the site as a flanking position to strike McClellan as he tried to relieve Harper's Ferry. If the Federals moved to Harper's Ferry, Lee could attack south with his flanks protected by the South Mountain and the Potomac River. From this position, a Rebel assault on the flank and rear of the Union relief force would destroy the center of gravity and drive McClellan into the Potomac. However, the advantages accrued by holding

this ground quickly reversed as McClellan marched to Sharpsburg.(57) As the Army of the Potomac took the field, Lee faced overwhelming numbers with his own back to the Potomac River. Lee's occupation of Sharpsburg became a decisive point for McClellan.

The final decisive point in the campaign was the Union right during the battle of Antietam. After Hooker's and Mansfield's corps were smashed, the Federals used the ground only to reorganize their battered forces. By midday, Lee realized that the Federal right posed no threat. Therefore, he tried to get Jackson to mount a counterstroke through the west and north woods. If successful, the attack would turn the Federal right allowing Lee's troops to strike the center of gravity. With Rebel strength sapped by straggling, Lee could not overcome the potential Union resistance at the decisive point. Nonetheless, Lee held the field on the 18th, attempting to turn the Federal right. His lack of combat power denied him the opportunity to strike at Porter through the decisive point.

Accordingly, Lee planned for two decisive points, the Susquehanna Bridge and the flanking position at Sharpsburg. However, neither point was useful due to logistical problems in getting at them and enemy actions denying them to Lee. The other two decisive points, Crampton's Gap and the Union right, were unassailable since the Rebels lacked sufficient combat power. It is to the idea of maintaining sufficient strength at the decisive point that we now turn.

Our paradigm postulates that a dynamic exists between centers of gravity, decisive points, and culminating points. We have seen that centers of gravity exist and that decisive points open the way to strike at them. In this campaign, opportunities were lost because the Rebels were not strong at the decisive point. This illustrates the concept of the culminating point.

Lee's army reached its culminating point before firing the first shot of the campaign. James Longstreet contends that the army was,

"[H]ungry, sparsely clad, worn with continuous bivouac and battle since the 26th of June..."(58) Only seven days after Second Manassas the Army of Northern Virginia had marched to Frederick. The enormous straggling was costly to Lee. Historian Stephen Sears' assesses that, "The Army of Northern Virginia would not again be so diminished until it made its final march, toward Appomattox Court House."(59) Though aware of the losses, Lee pressed on. His subsequent operations against Harper's Ferry further exacerbated his manpower problems.

Instead of resting the weary force, Lee sent six of the divisions to the ferry just three days after arriving in Maryland. The hard marching to this position was arduous in the extreme. The men covered over sixty miles in three-and-a-half days, crossing the Potomac and two mountains. Soldiers who marched with Jackson in the Valley stated that the march to Harper's Ferry surpassed all former experiences.(60) If the army had not culminated upon reaching Frederick, Lee certainly accelerated the point dispersing the forces in the Harper's Ferry operation.

At the battle of Antietam the Rebel army was exhausted. The failure to have the required strength (due to dispersion) at South Mountain put Lee on the operational defensive. However, the lack of combat power at Antietam forced Lee back to Virginia and onto the strategic defensive.

What should Lee have done to overcome this problem and delay his culminating point? The question is answered by Longstreet who felt that the pace of operations was too fast and that an operational pause was needed. In writing about the Confederate army he states that, "Its record before [Antietam] and after shows that, held in hand and refreshed by easy marches and comfortable supplies, it would have been prepared to maintain its supremacy."(61) Taking a longer pause in Frederick to allow stragglers to catch up would have provided an estimated 20,000 additional soldiers to Lee. This added combat power could have struck the decisive blow at South Mountain, or turned McClellan's right at

Antietam. But this was not to be.

It is appropriate at this point in our analysis to assess the human factors of friction and chance and their role in Lee's campaign. James Schneider, theoretician at Fort Leavenworth's School of Advanced Military Studies, maintains that, "[t]he importance of friction in planning is that it imposes deviation from the intended aims thereby degrading combat power."⁽⁶²⁾ Indeed, friction degraded Lee's combat power, first raising its head on the move to Frederick in the guise of Confederate straggling. Lee could not have calculated the number of men that would fall out. The South had never lost so many men at any other time in the war. Moreover, Lee was unaware that the eastern portion of Maryland held strong pro-southern views while the western part championed antislavery. Additionally, Lee expected the Federal garrisons to retreat when he was astride their lines of communication.

All in all, the enemy did not react according to Lee's plans. Nor did his own forces. The normal march rate for Rebel forces was about 20 miles a day. Yet, on the move to Harper's Ferry all of the units moved much more slowly than expected. Instead of capturing the garrison on the 12th, it took three additional days. While Harper's Ferry was invested, rumors of Union militia in Hagerstown split the forces even further. Lee planned for the Federals to take at least three weeks to reorganize. McClellan was moving northwest just five days after the rout at Second Manassas.

Each of these unforeseen actions, results of friction, eroded Lee's strength and lowered the expected performance of the Rebel army. Worst of all, straggling cost the Confederates more than one-third of their potential combat power. The operations were exacerbated further by nonessential diversions of troops, such as the capture of Harper's Ferry. Instead of concentrating and moving to the Susquehanna as planned, Lee divided the army to capture Harper's Ferry, a decision induced by friction.

The further dissipation of Lee's strength prevented him from having sufficient power to strike the essential part of McClellan's army.

If friction was not enough to confound the Southern plans, chance plagued the Confederates as well. Lee's march to Frederick was an operational turning movement designed to cause the retreat of Federal garrisons in the valley. The plan might have worked if McClellan had his way, but newly appointed General-in-Chief Halleck ordered the garrison forces to remain in position.(63) The continued occupation of an outflanked, isolated position defied conventional military wisdom. But Halleck decided that Harper's Ferry was a good place for a fight, a decision which forced Lee to alter his original plan.

The decision to invest Harper's Ferry resulted in the publication of Special Orders 191, the subsequent compromise of which wrecked the campaign. Prior to the 13th of September McClellan was moving as expected with a rate of six miles a day. With Lee's orders in hand, he accelerated his tempo. This was enough to unbalance the Confederates and capitalize on risks Lee took in his Harper's Ferry operation. Given the intelligence provided him in Order 191, McClellan had several opportunities to destroy Lee. However, at South Mountain--and again on the 16th--"Little Mac" allowed these opportunities to slip away. As for Lee, once the orders were lost he was compelled to concentrate rapidly and wait for McClellan's next move.

Although the Confederate plan was flawed from the start, the chance loss of the order destroyed any hopes for successful campaigning. Lee's biographer, Douglas Southhall Freeman states that, "But for this accident, it is not improbable that Jackson would have joined Lee after the capture of Harper's Ferry and would have united with him in an offensive movement the results of which might have been highly advantageous."(64)

Even though Lee was engulfed by friction and chance, he relied

upon his leadership skills to continue the fight. There was no prospect of defeating the Federals with reduced forces. The compromised orders cleared the fog of war from McClellan's eyes. Yet, Lee did not give up the fight; he still meant to crush the Yankees. He might give up the campaign, but not the morale of his army. He would not run from the Federal challenge on the field. Instead, he sought opportunities to destroy the enemy. Yet, Lee lacked the combat power to vindicate his determination. Like Napoleon, Lee believed in the climactic decisive battle, Antietam was no more than a tactical melee, and one that almost destroyed his own beloved army.(65)

CONCLUSIONS

Having discussed the elements that our paradigm offers as key operational concepts, we will review their interrelationships and draw some conclusions as to the utility of using theory as a start point in campaigning. The idea of identifying the enemy center of gravity at the start of an operation is critical. It focuses the commander on the enemy and ensures that the campaign has a positive aim. Once identified, the center of gravity is attacked through the decisive point. Determination of this point enables the operational artist to sacrifice the nonessentials for the essentials. This identifies where risk or economy of force operations are conducted. Having properly identified the decisive point, we must be strongest at this position. This is best ensured when the commander estimates and projects his culminating point.

General Lee planned to invade Maryland to seek battle with the enemy and end the war. A successful, decisive battle would achieve the South's strategic aims. The campaign called for a move to the Susquehanna River, the campaign's decisive point. But Lee never had the strength to get there. While focused on that point, he disregarded McClellan's army until it was on top of him at South Mountain. Here we see the utility of theory and its interrelationships. Lee had to consider both the decisive

point and the center of gravity. Orientation must first be on the enemy, then on the approach to get to him. The selection of a feasible decisive point (e.g. Crampton's Gap) could have helped Lee to vouchsafe the nonessential capture of Harper's Ferry for the essential destruction of Franklin's corps. Additionally, battle at this point might have extended the culminating point. While McClellan marched to the fight, Lee could have rested his men and brought up the stragglers. As it was, Lee reached his culminating point before any fighting took place. The forced marching coupled with arduous moves to Harper's Ferry and Boonsboro depleted the strength of the invaders.

Moreover, friction and chance, pervasive in all wars, aided in the undoing of the campaign. Awareness of the debilitating effects of these human elements allows the commander to plan for branches to his operations. Lee's assumptions about the garrisons, Maryland's desire for liberation, and the strength of the army all proved false. Yet, his diversion to capture Harper's Ferry was the undoing of his campaign. If he had considered that the enemy might not retire, and planned that branch at the outset, he may have overcome some of the friction. Longstreet maintains that, "All that the Confederates had to do was to hold the army in hand and draw the enemy to a field wide enough for maneuver; then call him to his battle."(66)

The army was not held in hand and the campaign was lost. Although the Army of Northern Virginia survived to fight for an additional three years, it failed in one of the brightest prospects for gaining Southern independence. After Antietam Lincoln, claiming victory, issued the Emancipation Proclamation, the British reappraised their impending recognition of the South, and finally, the support for the peace Democrats in the northern elections waned as the Republicans claimed Antietam as a triumph.

It is true that the South had sound strategic vision prior to the

invasion and that Confederate tactics were unmatched. However, the failure to start the campaign with a solid operational design that considered the intervention of friction and chance gave the Federals operational and strategic success. Confederate operational failure made the Maryland invasion the first turning point in the war, a turn against the South.

IMPLICATIONS

Lee's Maryland campaign of 1862 reveals many aspects of operational art. The analysis of the operations emphasizes the importance of the operational level of war, and illustrates the significance of sound operational design. It also demonstrates the impact of friction and chance on planning. But what of future operations?

The paper began with the argument that our army needs to seek new methods to fight and win future conflicts in the face of overpowering mass. The approach we must take begins with a return to the study and application of classical military theory. There are many reasons for this. Future battle will be more complex and demanding than war in the 1860's. Battlefields shall encompass areas on land, sea, and air. Instead of fighting with thousands of men like Lee, U.S. Army leaders will fight with hundreds of thousands of men. Technology will attempt to counter mass and decrease friction and chance, but the problems will remain immense.

Our case study, as does current doctrine, emphasizes the importance of sound tactics. The Confederates clearly had the better tactics in this campaign. As the results at Harper's Ferry indicate, Jackson captured over 11,000 men with a loss of only 200. At South Mountain, Hill and Stuart held back the entire Army of the Potomac. At Antietam, Lee's exhausted force of 35,000 fought 88,000 Federals to a tactical stalemate.

Today the U.S. Army is focused on improving its tactical abilities. Drills and Field Manuals outline sound techniques stressing mission oriented training. Units are tested in realistic battle simulation at the National

Training Center. As we continue to improve with training, the army, like Lee's, will have a strong tactical base.

However, the army and the nation needs additional emphasis on the operational level of war. This case study clearly emphasizes the significance of operations and how they bridge tactics and strategy. Lee's campaign, resting on strong tactics and clear strategic aims failed from operational weakness. Lee was a genius and his army was honed to a fine fighting edge. The victories on the Peninsula and at Manassas gave Rebel forces great morale and more importantly practice in the skills of operational art. Nevertheless, the Confederate Maryland campaign failed.

The U.S Army of the 1980's has only limited experience with operational planning and execution. Our major exercises, like REFORGER, have long lead planning times and involve only selected forces. Every attempt is made to eliminate friction and chance and the "enemy" does not fire live ordnance. Moreover our army lacks combat experience at the tactical and operational level of war. Finally, the concepts of operational art, although long established in military theory, are relatively new to the U.S. Army. The 1986 FM 100-5 is yet to be mastered by the preponderance of the force.

Some steps have been taken to correct our inexperience at this level of war. Students at the U.S. Army's Command and General Staff College and the School of Advanced Military Studies concentrate on this component of war. Also, operational level seminars with the army's senior leadership are conducted regularly.

All of this helps since we lack the time and money to support large scale exercises with the sole purpose of practicing operational art. But to close the inexperience gap, army leaders need continually to study the operational level of war guided by history and theory. History is used to validate, clarify, and explain the abstract ideas contained in theory.

Paradigms, like the one offered in this study, must be developed to assist

us in our campaigning and help the army avoid the pitfalls of the past.

As explained in the paradigm, the strategic level of war establishes the goals for military operations. During Lee's time, the strategy was fairly clear and easy to formulate. Today, the complex political environment seldom provides us with such clear strategic guidance. Our strategic direction is clouded by rules of engagement, treaties and international agreements. Limits are placed on the application of force beforehand and, with modern communications, even in the process of fighting. Nevertheless, we are required to translate our strategy into successful military operations. If we fail to employ the operational concepts espoused in U.S. Army doctrine, our campaigns run the same risk as Lee's, and we may not achieve favorable results. On the high intensity, costly battlefield it is most probable that the conflict will be resolved rapidly. Therefore, we must ensure that the design of our operations are centered on positive results attaining our strategic aims.

The essence of this design is identifying the enemy center of gravity and attacking it through the decisive point with superior strength. The strength is concentrated and maintained by cognizance of, and planning for, the culminating point. We will never beat the Soviets in a battle of attrition. However, we can unbalance and even destroy their centers of gravity by well planned sequenced battles. If we are successful in that, our campaigns will attain strategic goals. But we must be aware that our planning and execution of operations will be affected by friction and chance.

Lee's campaign demonstrates how plans are altered by the human elements in war. Friction eroded his strength while chance opened his army to destruction. Parallels can be drawn from this campaign to operations today. Technology has given us machines that maneuver rapidly with awesome firepower. Satellites and electronic surveillance equipment monitor the enemy's every move. Communications provide commanders with

an ability to transmit instructions to subordinates instantly. These warfighting advances should reduce friction and chance--this is what the technologists would have us believe. Yet, our warfighting equipment and men, just like Lee's, require operational pauses. Rest and maintenance is essential to extend the culminating point.

However, we now conduct 24 hour a day operations while technology reduces the number of men on the battlefield. Fewer men are required to accomplish more tasks, increasing the opportunities for friction. Imagine the squad that is expected to put in a barrier and a defensive position after an all night patrol. If it fails to get the obstacle in place, the battle plan could unhinge, a clear case of friction.

Even our new, sophisticated equipment heightens the dangers of friction. The maneuverability and firepower of the Abrams tank and the Bradley infantry fighting vehicle are a case in point. The firepower of these weapons provides us with the opportunity to create gaps in the enemy forces. Their speed allows exploitation of the gaps before the commander realizes it. He could find himself propelled by the momentum of his own forces in directions he does not want to go. If the force moves against the wrong objective, as in the Harper's Ferry operation, his strength may be eroded needlessly.

While strategic surveillance systems are impressive, they could lead to an over-reliance on technologically produced intelligence that risks our deception. Additionally, enemy surveillance means makes OPSEC harder and our cavalry screens can be seen over to a degree. Communications technology that promises to lessen friction and chance, could, in actuality, increase it. The Confederates lost one extra copy of order 191. Today, our constant radio use allows for interception of our orders and deceptive interference. At Bloody Lane, Hill's force was almost destroyed by enfilade fire due to a misunderstood order. More orders more frequently transmitted just might confound future operations. We should

not be so quick to view technology as a cure for the unpleasant impact of the human elements of war. If anything, the use of technology has increased the need for better leadership.

Lee's Maryland Campaign of 1862 illustrates the need for sound operational planning and execution. It indicates that superb tactics alone will not achieve strategic success. Effective tactics form the foundation for the bridge of operational art which spans conflict and ties into strategy. Operational design depends upon an understanding of the levels of war, centers of gravity, decisive and culminating points, and the effect of friction and chance on planning. Failure to orient on the destruction of the enemy's force wastes the nation's most precious military resource, her soldiers. Perhaps this is the greatest implication of Lee's campaign.

America's bloodiest day occurred at Antietam. In twelve hours 22,719 men were killed or wounded.(67) For the Union soldiers, their deaths gave Lincoln the grounds to issue the Emancipation Proclamation and deter foreign recognition of the South. Antietam was the first turning point in the war. The Federal soldiers who died in that battle contributed to ultimate victory, reunification of the states, and, most importantly, freedom for the slaves. Confederate soldiers fought to save their army. Their hopes for Southern independence disappeared as the Federals moved through the gaps at South Mountain. But if the Confederate deaths in Maryland help us to understand the importance of using theory as a start point in operational planning, then perhaps they will not have died in vain.

END NOTES

1. U. S. Department of the Army, Field Manual (FM) 100-5, *Operations*, (Washington, D. C.: U. S. Government Printing Office, May 1986), p. 10.
2. Carl von Clausewitz, *On War*, edited and translated by M. Howard and P. Paret (Princeton University Press, 1976), p. 121.
3. FM 100-5, *op. cit.*, p. 10.
4. *Ibid.*, pp. 9-11.
5. *Ibid.*, p. 11.
6. Clausewitz, *op. cit.*, p. 595-596.
7. Henri-Antoine Jomini, *The Art of War*, translated by G. H. Mendell and W. P. Craighill (Westport, Ct.: Greenwood Press reprint of 1862 edition), pp. 86-90.
8. The Command and General Staff School, *The Principles of Strategy for an Independent Corps or Army in a Theater of Operations*, (Fort Leavenworth, Kansas: The Command and General Staff School Press, 1936), p. 37.
9. Clausewitz, *op. cit.*, p. 528.
10. FM 100-5, *op. cit.*, p. 181.
11. Clausewitz, *op. cit.*, p. 119.
12. Allan R. Millett and Peter Maslowski, *For the Common Defense* (New York: The Free Press, 1984), p. 185.
13. James A. Rawley, *Turning Points of the Civil War* (Lincoln: University of Nebraska Press, 1966), p. 102. Rawley states that the South provided 80% of the raw cotton in Britain prior to the Union blockade.
14. James M. McPherson, *Ordeal By Fire* (New York: Alfred A. Knopf, 1982), p. 289. McPherson goes on to state that, "Despite their apparent success, the ragged, shoeless Confederates learned as in Maryland that it was one thing to invade Union territory but quite another to stay there. Confederate soldiers were outstanding at marching and fighting, but the South lacked the logistical capacity to convert a large-scale raid into a genuine invasion."
15. Robert U. Johnson and Clarence C. Buel, eds., *Rattles and Leaders of the Civil War* (4 vols., New York, 1887), II, p. 549. (Hereafter cited as B. & L.)
16. Shelby Foote, *The Civil War, A Narrative, Fort Sumter to Perryville* (New York: Random House, 1958), p. 662.
17. Clifford Dowdey and Louis H. Manarin, eds., *The Wartime Papers of R. E. Lee* (Boston: Little, Brown and Company, 1961), p. 293.

18. Stephen W. Sears, *Landscape Turned Red The Battle of Antietam* (New York: Warner Books, 1983), p. 76.
19. James U. Murfin, *The Glean of Bayonets* (Baton Rouge: Louisiana State University Press, 1965), p. 121.
20. George F. R. Henderson, *Stonewall Jackson and the American Civil War* (Gloucester, Mass.: Peter Smith, 1968), p. 411.
21. Murfin, *op. cit.*, p. 121.
22. Sears, *op. cit.*, p. 94.
23. This fact is established in a letter from Lee to Davis where he states, "one great embarrassment is the reduction of our ranks by straggling I fear from a third to a half of the original numbers." *The Wartime Papers of R. E. Lee, op. cit.*, p. 307. James U. Murfin goes further stating that Southern writer John E. Cooke, "estimated that the ranks were depleted by between 20,000 and 30,000 men who remained in Virginia" Murfin, *op. cit.*, p. 94.
24. Sears, *op. cit.*, p. 93.
25. Murfin, *op. cit.*, p. 328. This is summarized from the order, reprinted in Murfin's book.
26. *Ibid.*, p. 144.
27. McPherson, *op. cit.*, p. 281.
28. How Order 191 was lost has never really been determined. Historians can prove that two copies of the order were made, one by Lee's adjutant, R. H. Chilton, the other by Jackson's staff. The Jackson copy is in D. H. Hill's personal papers even today. Hill never received the Lee copy which was wrapped around three cigars. Sears has a good account of the event in Appendix 1, *Landscape Turned Red*.
29. Foote, *op. cit.*, p. 676.
30. McPherson, *op. cit.*, p. 281.
31. Sears, *op. cit.*, p. 191.
32. *Ibid.*, p. 192.
33. *Ibid.*, p. 192.
34. McPherson, *op. cit.*, p. 283.
35. Murfin, *op. cit.*, p. 212.
36. McPherson, *op. cit.*, p. 283.
37. Casualty figures are from Foote, *op. cit.*, p. 692.
38. Douglas Southall Freeman, *Lee's Lieutenants - A Study in Command* (3 vols., New York: Charles Scribner's Sons, 1943), p. 213.

39. Murfin, *op. cit.*, p. 262. Murfin writes that "[t]he battle for the little sunken road lasted for three and a half hours. It was the bloodiest period of the day. Federal casualties numbered nearly 3,000. There was no way of determining Confederate losses. One Federal soldier wrote that the gray dead lay so thick in the road that a man could have walked its length without touching ground.
40. Sears, *op. cit.*, p. 303.
41. Foote, *op. cit.*, p. 700.
42. Sears, *op. cit.*, p. 327.
43. Murfin, *op. cit.*, p. 63.
44. Bruce Catton, *Terrible Swift Sword* (Garden City, NY: Doubleday & Co., Inc., 1963), p. 447.
45. B & L, p. 605.
46. Douglas Southall Freeman, *R. E. Lee, A Biography* (4 vols. New York: Scribner's, 1934-35), IV, p. 347.
47. *The Wartime Papers of R. E. Lee, op. cit.*, p. 291. The editors state that, "Lee directing his first battle on the field (in contrast to planning the strategy and relinquishing the tactics to the subordinates), revealed himself to be as great a combat general as he had already shown himself a strategist. It was entirely his fight, as he moved brigade units and even gun batteries about with no regard to army organization."
48. Sears, *op. cit.*, p. 170.
49. Russel F. Weigley, *The American Way of War* (Bloomington: Indiana University Press, 1973), p. 495.
50. FM 100-5, *op. cit.*, p. 29.
51. James Longstreet, *From Manassas to Appomattox* (Philadelphia: Lippincott, 1896), p. 287.
52. Foote, *op. cit.*, p. 700.
53. *Ibid.*, p. 700.
54. Clausewitz, *op. cit.*, p. 197.
55. Freeman, *Lee's Lieutenants, op. cit.*, p. 171.
56. William Swinton, *The Twelve Decisive Battles of the War: A History of the Eastern and Western Campaigns, In Relation to the Actions that Decided Their Issue* (New York: Dick and Fitzgerald, 1867), p. 160.
57. Longstreet, *op. cit.*, p. 229. Longstreet assesses McClellan's direct move to Sharpsburg, instead of relieving Harper's Ferry, as follows. "Thus the altered circumstances changed all of the features of the position in favor of the Federals."

58. *Ibid.*, p. 200.
59. Sears, *op. cit.*, p. 194.
60. Henderson, *op. cit.*, p. 422.
61. Longstreet, *op. cit.*, p. 284.
62. James J. Schneider, *The Theory of Operational Art* (Unpublished, 1 March 1988), p. 21.
63. Sears, *op. cit.*, p. 97.
64. Douglas Southall Freeman and Grady McWhiney, eds., *Lee's Dispatches* (New York: G. P. Putnam's Sons, 1957), p. 64.
65. Weigley, *op. cit.*, p. 111.
66. Longstreet, *op. cit.*, p. 285.
67. Sears, *op. cit.*, p. 327.

BIBLIOGRAPHY

BOOKS

- Battles and Leaders of the Civil War. Eds. Robert U. Johnson and Clarence C. Buel. 4 Vols. New York: Century, 1887-88.
- Catton, Bruce. Mr. Lincoln's Army. Garden City, N.Y.: Doubleday, 1954.
- Terrible Swift Sword. Garden City, N.Y.: Doubleday, 1963.
- Cobb, Clarence F. The Maryland Campaign 1862. Washington, D. C.: Judd and Detweiler Printers, 1891.
- Commager, Henry Steele, ed. The Blue and the Gray. Indianapolis: Bubbs-Merrill, 1950.
- Freeman, Douglas Southall. Lee's Lieutenants. 3 Vols. New York: Scribner's, 1942-44.
- R. E. Lee, A Biography. 4 Vols. New York: Scribner's, 1934-35.
- Foote, Shelby. The Civil War, A Narrative. 3 Vols. New York: Random House, 1958.
- Fuller, J. F. C. Grant and Lee A Study in Personality and Generalship. Bloomington: Indiana University Press, 1957.
- Henderson, George F. R. Stonewall Jackson and the American Civil War. Modern Abridgment, with an Introduction by E. B. Long. Gloucester, Mass: Peter Smith, 1968.
- Howard, Michael, et al. Carl von Clausewitz On War. Translated by M. Howard and Peter Paret. Princeton, N. J.: Princeton University Press, 1976.
- Jomini, Antoine-Henri. The Art of War. Translated by H. H. Mendell and W. P. Craighill. 1862, Westport, CT: Greenwood Press, 3rd printing, 1977.
- Lee's Dispatches Unpublished Letters of General Robert E. Lee, C.S.A. to Jefferson Davis and the War Department of the Confederate States of America 1862-65. Eds. Douglas Southall Freeman and Grady McWhiney. New York: G. P. Putnam's Sons, 1957.
- Longstreet, James. From Manassas to Appomattox. Philadelphia: Lippincott, 1896.
- McPherson, James M. Ordeal By Fire. New York: Alfred A. Knopf, 1982.
- Millet, Alan R. and Peter Maslowski. For the Common Defense. New York: The Free Press, 1984.

- Murfin, James U. The Gleam of Bayonets: The Battle of Antietam and the Maryland Campaign of 1862. New York: Yoseloff, 1965.
- Rawley, James A. Turning Points of the Civil War. Lincoln: University of Nebraska Press, 1966.
- Sears, Stephen W. Landscape Turned Red: The Battle of Antietam. New York: Warner Books, 1985.
- Swinton, William. The Twelve Decisive Battles of the War: A History of the Eastern and Western Campaigns in Relation to the Actions that Decided their Issue. New York: Dick and Fitzgerald, 1867.
- Symonds, Craig L. A Battlefield Atlas of the Civil War. Baltimore: The Nautical and Aviation Publishing Company of America, 1983.
- The U.S. Army War College Guide to the Battle of Antietam, The Maryland Campaign of 1862. Eds. Jay Luvaas and Harold W. Nelson. Carlisle, Pa: South Mountain Press, Inc., 1987.
- The Wartime Papers of R. E. Lee. Eds. Clifford Dowdey and Louis H. Manarin. Boston: Little, Brown and Company, 1961.
- Vandiver, Frank E. Their Tattered Flags: The Epic of the Confederacy. New York: Harper and Row, 1970.
- Weigley, Russell F. The American Way of War. Bloomington: Indiana University Press, 1973.
- Wolseley, Garnet Joseph. The American Civil War An English View. Charlottesville: The University Press of Virginia, 1964.

GOVERNMENT DOCUMENTS

- Headquarters, Department of the Army. Field Manual 100-5, Operations. Washington, D. C.: Government Printing Office, 1986.
- The Principles of Strategy for an Independent Corps or Army in a Theater of Operations. Fort Leavenworth, Kansas: The Command and General Staff School Press, 1936.
- The War of the Rebellion: Official Records of the Union and the Confederate Armies. Washington, D. C.: Government Printing Office, 1888.
- The West Point Atlas of American Wars Vol I-1689-1900. Compiled by the Department of Military Art and Engineering, The United States Military Academy, West Point New York. Chief Editor, BG Vincent J. Esposito. New York: Frederick A Praeger, 1959.

ARTICLES AND PERIODICALS

Izzo, Lieutenant Colonel Lawrence L. "The CENTER of GRAVITY is NOT an ACHILLES HEEL." Military Review, January 1988, 72-77.

Schneider, James and Lawrence Izzo, "Clausewitz's Elusive Center of Gravity." Parameters, September 1987, 46-57.

THESES, STUDIES AND OTHER PAPERS

Runals, Major Stephen E. A Critical Analysis of Lee's Defense at Fredericksburg-1862: A Tactical Victory or an Opportunity for Operational Success Lost? Fort Leavenworth, KS: SAMS Monograph, May 1986.

UNPUBLISHED PAPERS

Schneider, James J. The Theory of Operational Art Unpublished Paper, 1 March 1988.

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