# Operational Art Within a Large-Scale Combat Operation: Operation Cobra

A Monograph

by

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In July 1944, after the murderous beach landings at Normandy, General Omar Bradley and First Army received the daunting task of opening up a gap in the east to west running German Army defense near St. Lo, France. The plan to penetrate the Seventh German Army forward line of troops would come to be known as Operation Cobra. History would later characterize Cobra as a high tempo and phased operation that brought air power, armor, infantry, and land-based fires to bear upon Hitler's initial European defense. Operation Cobra holistically was a complete success and lends todays US military practitioner valuable lessons in operational art during large scale combat operations. This monograph focuses on specific elements of operational art that were most critical to First Army's success at the operational and tactical levels.

This study analyzes specific elements of operational art most advantageous to Cobras success in 1944. The monograph focuses on the elements of phasing and transitions, lines of effort and lines of operations, and tempo. The overall success of General Bradley and First Army were not without failure and the structured analysis of the chosen elements will highlight both the positives and negatives of decisions made and actions taken at echelon.

The qualitative and quantitative analysis of actions taken by different commanders at echelon within the US First Army will render valuable lessons of operational art learned during large-scale combat operations. The analysis of operational art in Cobra is a unique observation because at the time the operational level of war was not institutionalized in the US Army. This monograph seeks to pullout the inherent operational art conducted by commanders within First Army and draw conclusions on how the lessons learned can aid todays military practitioners.

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# Abstract

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In July 1944, after the murderous beach landings at Normandy, General Omar Bradley and First Army received the daunting task of opening up a gap in the German Army defense near St. Lo, France. The plan to penetrate the Seventh German Army forward line of troops would come to be known as Operation Cobra. History would later characterize Cobra as a high tempo and phased operation that brought air power, armor, infantry, and land-based fires to bear upon Hitler's initial European defense. Operation Cobra holistically was a complete success and lends today's US military practitioner valuable lessons in operational art during large scale combat operations. This monograph focuses on specific elements of operational art that were most critical to First Army's success at the operational and tactical levels.

This study analyzes specific elements of operational art most advantageous to Cobra's success in 1944. The monograph focuses on the elements of phasing and transitions, lines of effort and lines of operations, and tempo. The overall success of General Bradley and First Army were not without failure and the structured analysis of the chosen elements will highlight both the positives and negatives of decisions made and actions taken at echelon.

At the time of Operation Cobra, the US Army had not institutionalized the operational level of war. This fact gives relevance to this work and the effort it makes to find the inherent operational art in Allied commander's decisions. Ultimately, this monograph draws conclusions and identifies lessons learned that can aid today's military leaders in future large-scale combat operations.

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# Acknowledgements

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# Acronyms

| | |
|---|---|
| AGI | Air to Ground Integration |
| AO | Area of Operation |
| FLOT | Forward Line of Own Troops |
| FM | Field Manual |
| JP | Joint Publication |
| LOE | Line(s) of Effort |
| LOO | Line(s) of Operation |
| LSCO | Large Scale Combat Operation(s) |
| RAF | Royal Air Force |

# Illustrations

# Introduction

> Some goddamn fool once said that flanks have got to be secure. Since then sonsofbitches all over the globe have been guarding their flanks. I don't agree with that. My flanks are something for the enemy to worry about, not me. Before he finds out where my flanks are, I'll be cutting the bastard's throat.
>
> — General George S. Patton, 1 August 1944

The United States has been fighting a counterinsurgency war since September 2001. The fight against unconventional forces in the US Central Command theater has led to the training and equipping of US conventional forces that allows for the defeat of the enemy in a counterinsurgency environment. During this time period, doctrine that focused on large scale combat operations (LSCO) waned. Therefore, senior level leaders facilitated the reintroduction of LSCO doctrine into the Army by way of Field Manual 3-0 (FM 3-0). To better understand the direction the US Army is going, this monograph highlights the actions taken by Allied forces during Operation Cobra in World War II. Specifically, this work answers: What lessons can today's operational leaders learn from the operational successes and failures in Operation Cobra? As near peer adversaries seek to exploit US operational vulnerabilities, focusing on LSCO through the analysis of past campaigns and operations is critical and lends valuable lessons learned through blood and lives.

## Hypothesis

Operation Cobra holds valuable lessons about operational art, predominantly about phasing, transitions, lines of effort (LOE), lines of operation (LOO), and tempo. Allied commanders successfully linked the specified elements of operational art in time and space at all levels, enabling the breakout from the Normandy beaches. On a broader scale, US commanders provided adequate autonomy to their subordinates encouraging disciplined initiative and thus aiding in the application of operational art at echelon. The detailed analysis of successful and some unsuccessful efforts during Operation Cobra shows the need for well understood and

comprehensive tactical and operational level planning. The analysis also shows the potential pitfalls and opportunities that are associated with implementing operational art during LSCO.

## Methodology

This monograph begins by giving the reader an understanding of what doctrine Allied commanders used in 1944. The description of historical US doctrine aids the reader in understanding the levels of war understood by US commanders during World War II. The brief synopsis of 1944 doctrine helps transition the monograph into an in-depth explanation of current doctrine, precisely focusing on operational art and the cognitive domain that enables the operational level of war. Additionally, the clarification of operational art enables the reader to better understand the specific elements used to analyze the case study. The author uses phasing, transitions, LOE, LOO, and tempo because they are the most relevant elements that highlight the salient LSCO lessons in Cobra. The lessons focus on the importance of planning and common understanding within an organization which allows for smooth and executable missions at the operational and tactical levels.

The in-depth clarification of the criteria segues into a brief overview of actions taken by Allied and German forces prior to the beginning of Operation Cobra. The overview begins with US actions from D-Day on 6 June until 24 July 1944. Next the monograph lays out the British/Canadian actions to the east of US forces in relation to their opposing enemy and the objectives these Allied forces secure in order to support US actions on 24 July. The historical lead-up sets the stage for the analytical overview of Cobra that focuses on the decisions made by Allied commanders. The analysis helps the reader understand how commanders' decisions affect their organizations and the outcomes of missions specifically through the lens of the chosen elements of operational art. At the completion of the analysis, this work concludes with the prominent LSCO lessons learned within the operation that can directly aid modern day operational leaders as they propose ways to solve difficult problems that may arise during LSCO.

# Past and Present Doctrine

## US Doctrine: 1944

It is necessary to acknowledge the doctrine available to US Allied commanders in 1944 because of the differences that reside in the classifications of the levels of war during World War II and today. This monograph focuses on the operational level of war and the tactical actions that made significant impacts within the operational level. The specific analysis of the operational level is significant because in 1944, this level of war did not exist. During Cobra, US Allied commanders and their planners followed FM 100-5, which lays out the tactical level of war in fine detail. Chapter one explains organization all the way to a strategic echelon and the remaining fifteen chapters explain the tactical level. The minimal strategic considerations that are in FM 100-5 focus on airpower and the defense of terrain.[1] Though US doctrine did not address the operational level of war, this monograph finds evidence of inherent operational decisions, actions, and thought processes of the US Allied commanders and their subordinates. Therefore, if in 1944, US commanders could intrinsically tie together tactical actions to strategic objectives in time and space and thus unknowingly establish an operational level of war, then analyzing Operation Cobra is key to finding lessons learned for today's operational leaders.

## Operational Art Today

Joint Publication (JP) 3-0 describes operational art as: "the cognitive approach by commanders and staffs–supported by their skill, knowledge, experience, creativity, and judgment–to develop strategies, campaigns, and operations to organize and employ military forces by integrating ends, ways, and means."[2] The JP 3-0 description of operational art describes in detail the cognitive domain of a commander that allows him or her to link strategic objectives

[1] US War Department, *FM 100-5 Field Service Regulation, Operations* (Washington, DC: Government Printing Office, 1944), 22.

[2] US Department of the Defense, Joint Staff, *Joint Publication (JP) 3-0, Joint Operations* (Washington, DC: Government Printing Office, 2017), II-3.

and tactical actions in pursuit of final military victory. The cognitive domain allows the commander to accomplish their responsibility of ensuring that military actions are synchronized in order to support one another in time and space all with regard to risk.[3]

Milan N. Vego, author of *Operational Warfare*, further expands operational art's characterization as the relation between three operational factors: space, time, and forces.[4] Vego, states that the operational factors are what the commander uses to plan, prepare, and execute a single campaign within a regional conflict or general war.[5] The way that commanders ensure success operationally is to link the elements of operational art within the space given. Commanders do this for a specific amount of time with a finite amount of resources and personnel in order to achieve their operational objectives.

Space is categorized as physical space either in the land, sea, or air domains. As progression is made from the base area toward an objective, space opens up a force's flanks and rear and elongates LOCs, making for more difficult maneuverability.[6] The expanding space requires a larger force that can protect its critical vulnerabilities and acquired terrain. A commander will always have to weigh whether his force is capable of influencing and protecting all of the space within their given area of operation (AO) in order not to present the enemy with opportunities.

Secondly, commanders must monitor *time* as an essential factor. Time is a resource that is finite and is essential with regards to planning and operations. According to Vego, time is one of the most precious commodities in the conduct of warfare and is most closely related to the factor

[3] US Joint Staff, *JP 3-0, Joint Operations* (2017), II-4.

[4] Milan Vego, *Operational Warfare* (Newport, RI: US Naval War College Press, 2000), 29.

[5] Ibid., 22.

[6] Ibid., 34.

of space.[7] Effective operational art must take time coupled with space into consideration because it allows for the sequential or simultaneous synching of the elements of operational art. Therefore, subordinate tactical commanders' decisions and opportunities will be affected either negatively or positively depending on the operational commander's planning, preparations, and decisions during an operation. The adequate allotment of time to subordinates allows for their forces to move effectively, synchronized, and with clear, understood purpose. Mismanagement of time at the operational level could spell disaster for tactical level units.

Lastly, the factor of *force* is the entire reason that a commander must understand the tenets above that make up the whole of operational art. A force is a military's sources of power made up by troops and equipment from all branches. [8] For the operational level commander, forces can be task-organized to some extent but, the higher the echelon, the more difficult it is to change a formation. As a commander analyzes the military problem, he must consider the size and capabilities of his force. Proper examination of the given force's composition is an essential part of identifying what is plausible with regard to time and space. Upon analyzing force capabilities, time needed for planning, orders distribution, movement, and space to conduct all necessary operations, a commander is then ready to combine all operational factors together. In a campaign plan, the commander will use experience, critical thinking, and their staff's efforts to link tactical actions to strategic objectives by way of seizing operational objectives. Operational objectives, found in the elements of operational art, enable tactical actions.

## Elements of Operational Art

The elements of operational art discussed in this monograph are tools that help a commander understand, visualize, describe, direct, lead and assess their environment and their

[7] Vego, *Operational Warfare*, 47.

[8] Ibid., 59.

force's actions.[9] For an operational commander the usage of elements of operational art allow the accomplishment of missions over a broad span of time known as a campaign. Commanders and staff refer back to elements of operational art during the campaign and adjust future operations as current operations unfold to ensure flexibility and sustainability of their force in time and space.[10] The complete list of the elements are as follows:

1. End state and conditions
2. Center of gravity
3. Decisive points
4. Lines of operations and lines of effort
5. Basing
6. Tempo
7. Phasing and transitions
8. Culmination
9. Operational reach
10. Risk

As previously stated, specific elements of operational art are best suited to assist in analyzing the ensuing case study. The particular elements complement each other well when a commander is trying to achieve mission accomplishment in a rather short period. Allied commanders chose lines of operations and lines of effort in order to better examine analysis of terrain within a given space and the sequential or simultaneous efforts pursued to obtain US Allied objectives. Tempo characterizes the fast-pace nature of the operation which allows for a short seven-day mission. Finally, phasing and transitions permit the scrutiny of successful or unsuccessful actions taken to secure intermediate objectives before overall mission accomplishment.

[9] US Department of the Army, *Army Doctrine Reference Publication (ADRP) 3-0, Operations* (Washington, DC: Government Printing Office, 2016), 2-4.

[10] Ibid.

ADRP 3-0 describes *LOO* and *LOE* as linking objectives to the end state.[11] Broken down into two different specific entities, a LOO is a line that defines the directional orientation of a force in time and space in relation to the enemy and links the force with its base of operations and objectives. There are two different types of lines within LOO, interior lines and exterior lines. When its operations diverge from a central point, a force operates on interior lines. Interior lines allow for a commander to move his force against the enemy faster than with exterior lines owing the shortened distances of a more direct approach towards the enemy. When its operations converge on the enemy, a force operates on exterior lines.[12] A longer distance to the enemy's location, exterior lines envelop an enemy force from its flanks.

Seeking to defeat the Soviet Union in 1941, Adolph Hitler's Operation Barbarossa characterizes large LOO. The three-army sized LOO that encompassed the attack on Moscow extended from the western Soviet border to the city of Leningrad in the far north to Crimea in the south and Smolensk in the central-west portion of the country.[13] The distance from Leningrad to Crimea is approximately 1,300 miles and required multiple lines of effort to support the forces within the three separated LOO. The northern and southern LOO are an example of exterior lines used when Hitler moved his army toward Moscow.

According to ADRP 3-0, a line of effort (LOE) is a line that links multiple tasks using the logic of purpose rather than a geographical reference to focus efforts toward establishing a desired end state.[14] LOE are vital to a commander's ability to visualize his or her operational environment and operational problem. LOE is the cognitive connecting of decision points linked to objectives over time allowing for the successful achievement of a desired end-state.

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[11] US Army, *ADRP 3-0, Operations* (2016), 2-5.

[12] Ibid., 2-5 - 2-6.

[13] David Stahel, *The Battle for Moscow* (Cambridge: Cambridge University Press, 2015), 1-2.

[14] US Army, *ADRP 3-0, Operations* (2016), 2-6.

The second evaluation criterion is tempo. *Tempo* is the relative speed and rhythm of military operations over time with respect to the enemy.[15] Commanders control tempo in three ways. First, a commander can speed up tempo by coordinating operations that are either sequential or simultaneous. This allows a force to present multiple dilemmas to an enemy in space and time which can aid in presenting the enemy with multiple dilemmas. Second, a commander can plan to bypass unnecessary engagements that reduce resources and that do not accomplish the securement of a critical objective on the battle field. Lastly, commanders control tempo by enabling disciplined initiative of subordinate commanders. The stifling of creative thought and independent decisions can prove detrimental to the success of a force operating on a battlefield that poses multiple threats.

An excellent example of a conflict characterized by fast tempo is the German Army's defeat of Polish forces in September 1939 during Operation Case White.[16] Throughout this campaign, the German Army began to use its new Panzer tank divisions. The mechanized forces allowed the Germans to increase tempo and quickly defeat five of the seven Polish armies within one week of the war.[17] New technology and doctrine that championed increased tempo became a new style of war replicated around the world.

The final criterion is phasing and transitions. A *phase* is a planning and execution tool used to divide an operation in duration or activity.[18] Commanders use phasing to control operations and to aid in their understanding of how an operation will be conducted in time and space. If multiple objectives cannot be seized simultaneously, phasing is an appropriate option for

[15] US Army, *ADRP 3-0, Operations* (2016), 2-7.

[16] Robert Citino, *The German Way of War* (Lawrence, KS: University Press of Kansas, 2005), 256.

[17] Ibid., 264.

[18] US Army, *ADRP 3-0, Operations* (2016), 2-8.

commanders. Commanders pursue objectives utilizing sequential phases to ensure forces are adequately supplied for all missions and subordinate units mutually support each other.

*Transitions* mark a change of focus between phases or between the ongoing operation and execution of a branch or sequel.[19] The decision to change over from an operational offense to an operational defense is an example of a transition. Commanders must plan these large shifts in priorities in advance; transitions should not be hastily conducted. A commander must visualize, describe, and direct the transition process while considering the time required to both plan and execute transitions. Poorly timed and executed transitions slow tempo and provide the enemy with opportunities to exploit weaknesses in a force. Well thought-out phasing and transitions are an essential part of ensuring a force has maximum operational reach and the highest probability of success.

The cognitive linking of elements of operational art in time, space, and with a given force in order to achieve an end-state is a very detailed endeavor of a commander and their staff. A commander assembles operational efforts on the battlefield to render either an accomplished end-state or a failed campaign that is wrought with tactical actions not tied to strategic objectives appropriately. The tenets of operational art helped make clear the successful or unsuccessful actions and decisions of Allied commanders during Operation Cobra and therefore allow today's operational leaders the opportunity to learn from Allied commanders' mistakes and successes.

# Background to Cobra

## US Lead-up to Cobra

Prior to Operation Cobra, the D-Day invasion named Operation Neptune was the bold attack onto Normandy beaches that established the frame work and beginnings of the penetration into the French interior. The Allies on D-Day, 6 June 1944, forwarded approximately one million

[19] US Army, *ADRP 3-0, Operations* (2016), 2-8.

Allied soldiers, 150,000 plus vehicles, and near half-million tons of supplies into France through the multiple French beachheads.[20] With so much combat power and supplies on the beach, commanders were forced to establish an expanded lodgment southward in order to support following operations. The US forces' first offensive operations toward the start point of Operation Cobra would be painstakingly slow and costly. The commander of the US First Army, Lieutenant General Omar Bradley, struggled with a couple of specific problems throughout most of the operations leading up to and throughout Operation Cobra.

General Oberst Dollman entrenched his well trained and equipped Seventh German Army and readied for an Allied attack. The Seventh Army consisted of seventeen divisions that included three panzer variants.[21] General Dollman ensured his men took advantage of the severely restrictive terrain in the northwestern part of France known as the bocage country. Dense hedgerows littered the terrain and canalized avenues of approach.[22] Using the interconnected and compartmentalized fields as cover as well as ambush points, the German defenses established in depth with a forward line.[23] The individual fields within the bocage were strong points where German direct and indirect fires could mass on US infantry and vehicles. The terrain within the US AO continuously presented problems to First Army until the they reached their line of departure for Operation Cobra located at St. Lo where the maneuver space began to clear.

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[20] James Carafano, *After D-Day: Operation Cobra and the Normandy Breakout* (Boulder, CO: Lynne Rienner Publishers, 2000), 1.

[21] Headquarters 12th Army Group, G2 Section, *European Theater of Operations After Action Review, 2 November 1948,* 12th Army Group After-Action Review October 1943–July 1945, Ike Skelton Combined Arms Research Library, Fort Leavenworth, KS, 6.

[22] Captain Michael Doubler, *Busting the Bocage: American Combined Arms Operations in France, 6 June–31 July 1944* (Fort Leavenworth, KS: Combat Studies Institute Press, 1994), 21.

[23] Ibid., 22-23.

Up to and during Cobra, First Army's AO was bordered to the east by the Seine River, the Loire River to the south, and the Brittany peninsula to the west.[24] If Operation Cobra was to occur, General Bradley was going to have to seize the city of St. Lo, an ideal area for basing south of the Normandy beach landings. Upon reaching the city, Allied forces temporarily defeated and forced the initial western echelons of the Seventh German Army to retrograde south. A significant portion of the First Army's operational problem of thick and arduous terrain coupled with a determined and well-trained Seventh German Army slowed operations for almost two months after the D-Day landings. At the end of July, the tempo would change and Operation Cobra would be the catalyst that the Allies used to increase the speed of operations and oust German forces from France.

Figure 1. US and British/Canadian force progression by 24 July 1944
*Source*: US Military Academy: West Point, Department of History, 2018, accessed December 28, 2018, US. https://www.westpoint.edu/history/sitepages/wwii%20european%20theater.aspx.

[24] Steven Zaloga, *Operation Cobra 1944: Breakout from Normandy* (Westport, CT: Praeger Publishers, 2001), 6.

## British Lead-up to Cobra

The overall Allied ground force commander was British Field Marshall Bernard Montgomery. Montgomery led the US and British armies until 1 September 1944, when Allied forces continued their advance toward the Rhine. During the lead up to Operation Cobra Montgomery divided his AO with the eastern portion given to the British 2nd Army led by LTG Miles Dempsey and the US First Army on the western side.[25] The diverse terrain being maneuvered upon by the whole of the Allied force posed different problems within the US and British respective AOs. The bocage persisted in the country side of the British area but the primary operational objective of Caen revealed different obstacles. LTG Dempsey concentrated his attack on the city and the surrounding area in order to protect the US eastern flank as Bradley prepared for Cobra. Unlike the countryside, well-established defensive positions, man-made obstacles and urban structures fiercely protected urban areas and surrounding towns while the immediate terrain surrounding Caen was favorable to vehicular movement.[26]

On 6 June 1944, British forces began their assault on Caen with the 2/ Oxfordshire and Buckinghamshire light Infantry.[27] The primary British objective was the bridgehead south of the Odon River which would allow for follow-on missions the first of which would be code-named Operation Goodwood. On 16 July the bridgehead and Caen fell to LTG Dempsey. The victory at Caen was slow and arduous and the US progress in the west was just as sluggish. with their European brothers. Upon the fall of Caen, the Supreme Allied Commander General Eisenhower wrote to both General Bradley and Field Marshal Montgomery. Eisenhower expressed the necessity to hurry preparations for a US breakout in the west and the need for a further expanded

[25] Ian Daglish, *Operation Goodwood: The Great Tank Charge July 1944* (South Yorkshire, England: Pen and Sword Military, 2004), 15-27.

[26] Zaloga, *Operation Cobra 1944*, 7.

[27] Daglish, *Operation Goodwood*, 12.

bridgehead in the east along with a delaying force to halt the German attempts to reinforce Seventh Army units near St. Lo.

Operation Goodwood launched on 18 July and the objective was to entice German armor toward the British front and delay them from deploying against General Bradley's army while they conducted Operation Cobra in the west.[28] Prior to Goodwood, General Eisenhower and Montgomery had differing opinions regarding the purpose of British forces. Holding terrain and delaying German forces was the task Montgomery accepted during Operation Goodwood, but Eisenhower believed the opportunity was present to secure a large swath of terrain south-east toward the Seine basin and Paris.[29] In direct disagreement with Eisenhower, Montgomery refused to attempt a breakout in his sector before US forces were positioned further south and able to pursue and envelope German forces along with the British 2nd Army.

[28] Daglish, *Operation Goodwood*, 29-30.

[29] Major L. F. Ellis, with Captain G. R. Allen, Lieut-Colonel A. E. Warhurst, and Air Chief Marshall Sir James Robb, *Victory in The West: Volumn 1, The Battle of Normandy* (London: Naval and Military Press, 1962), 358.

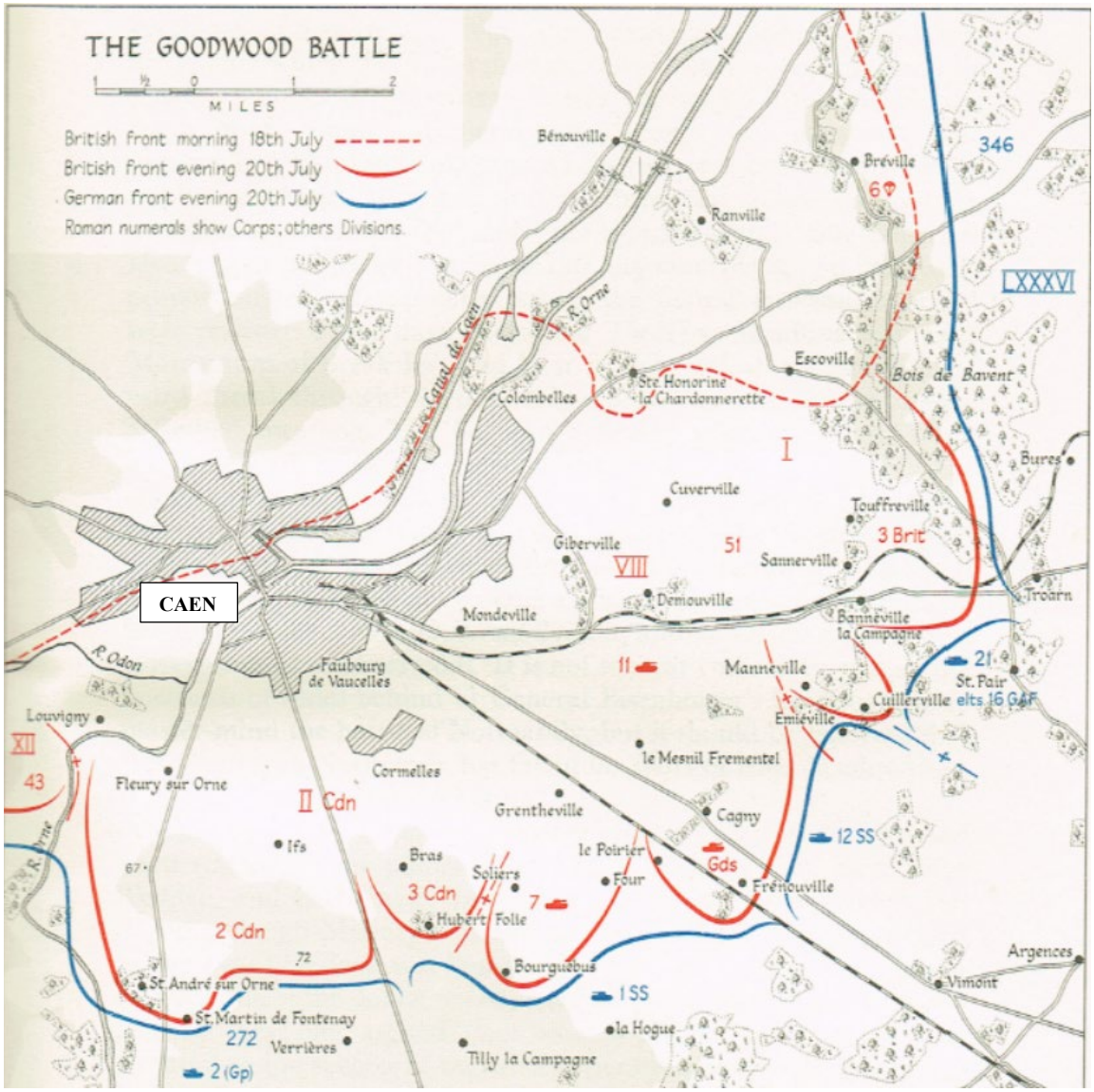


Figure 2. British force progression by 20 July 1944
*Source*: Major L. F. Ellis, with Captain G. R. Allen, Lieut-Colonel A. E. Warhurst, and Air Chief Marshall Sir James Robb, *Victory in The West: Volume 1, The Battle of Normandy* (London: Navel and Military Press, 1962), 352-353.

Command deemed Operation Goodwood officially over on 21 July. After Goodwood, Allied forces initiated two other operations in order to continue applying pressure against German forces. General Bradley planned a bold maneuver south in order to capture the city of Avranches which was considered the gateway to Brittany.[30] Brittany held extremely important port cities and

[30] Zaloga, *Operation Cobra 1944*, 10.

remnants of the German Seventh Army. If US forces could gain access to Brittany and seize the peninsula, its capture would aid in starving the Seventh German Army of personnel and supplies. With Operation Goodwood complete, subsequent operations underway, and St. Lo taken, forces of Operation Cobra readied to strike and take Avranches.

# Case Study: Operation Cobra

## Phasing

Phasing, one of the critical elements of operational art found in Operation Cobra, allows a commander to divide an operation in duration or activity and either sequentially or simultaneously. A commander and his staff must adequately plan for the change in phases in order to mitigate risk. Planning should specifically allow adequate autonomy to subordinates thus enabling disciplined initiative. Commanders must thoughtfully plan the task organization of each subordinate unit allowing for maximum output of combat power during each phase. Multiple Operation Cobra commanders utilized both of these planning considerations in their decisions prior to and during Operation Cobra. Holistically, the ability to orchestrate the relationship between the elements of operational art with regards to time, space, and force is what allows phasing to be such an effective tool in a commander's repertoire of skills. If phasing is conducted effectually, an organization can focus on new priorities and objectives as it pursues the military end-state.

Generally successful phasing prior to and during Cobra brought about the overall victory of Operation Cobra. These phases were possible by way of successfully linking LOE, LOO, and tempo. Though this analysis focuses on Cobra, the author would be remiss to forgo mentioning the British and Canadian efforts allowing Cobra to occur.

The first phase enabling Operation Cobra at the theatre level began at Caen. Field Marshall Montgomery enabled General Bradley to prepare for his maneuver toward Avranches by attacking Caen with the British Second Army. Seizing Caen was the intermediate objective in

from which a delaying operation could launch from. Montgomery ordered LTG Dempsey to construct a force explicitly comprised of three armored divisions which would hold the German mechanized forces at the British forward line of own troops (FLOT).[31] The decision to create such a robust armored force is significant because it aided in the establishment of conditions conducive to moving into the next theater level phase, Operation Cobra. The British usage of the three armored division in the open terrain south of Caen arguably protected Montgomery's infantry formations against the German blitzkrieg tactics and lethal panzer formations. The use of armor was a relatively new phenomena yet the British used the new technology well and forced the enemy to contend with a highly mobile formation and delayed the German reinforcement efforts.[32]

Montgomery's decision to task organize a corps' worth of armor at Caen directly allowed for the next phase of the Allied campaign to begin. The second phase technically launched from St. Lo on 25 July 1944, beginning Operation Cobra. At the army echelon, General Bradley envisioned a breach of the enemy line allowing for a penetration and exploitation of German defenses near St. Lo leading to the interior of France. For a full breakout to be successful, Bradley planned the operation in three phases and emphasized that in order to be successful Cobra must exemplify the characteristic of boldness and audacity.[33]

General Bradley's three phased attack launched from the sky. First, a rare occurrence of strategic air power supporting tactical ground units through an air bombardment would blast a three-mile hole in the German defenses. Next, two infantry divisions would reinforce the success and establish a foothold on either side of the gap in the broken German FLOT. Finally, multiple mobile divisions would speedily maneuver through the gap and secure the intermediate objective

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[31] Daglish, *Operation Goodwood*, 30-31.

[32] Ibid., 32-33.

[33] Martin Blumenson, *The Battle of The Generals: The Untold Story of the Falaise Pocket- The Campaign That Should Have Won World War II* (New York: William Morrow and Company, 1993), 130.

of Coutances in pursuit of the strategic objective, Avranches.[34] The first phase of the operation would prove successful but would come at a high price for US forces.

## Lines of effort

The Eighth and Ninth US Air Forces along with British 2nd Royal Air Force (RAF) were to attack a small rectangular area, 7,000 yards long by 2,500 yards wide as seen in figure 3.[35] The bombing area, an old Roman road, ran approximately three miles across the southern portion of the Contentin Peninsula.

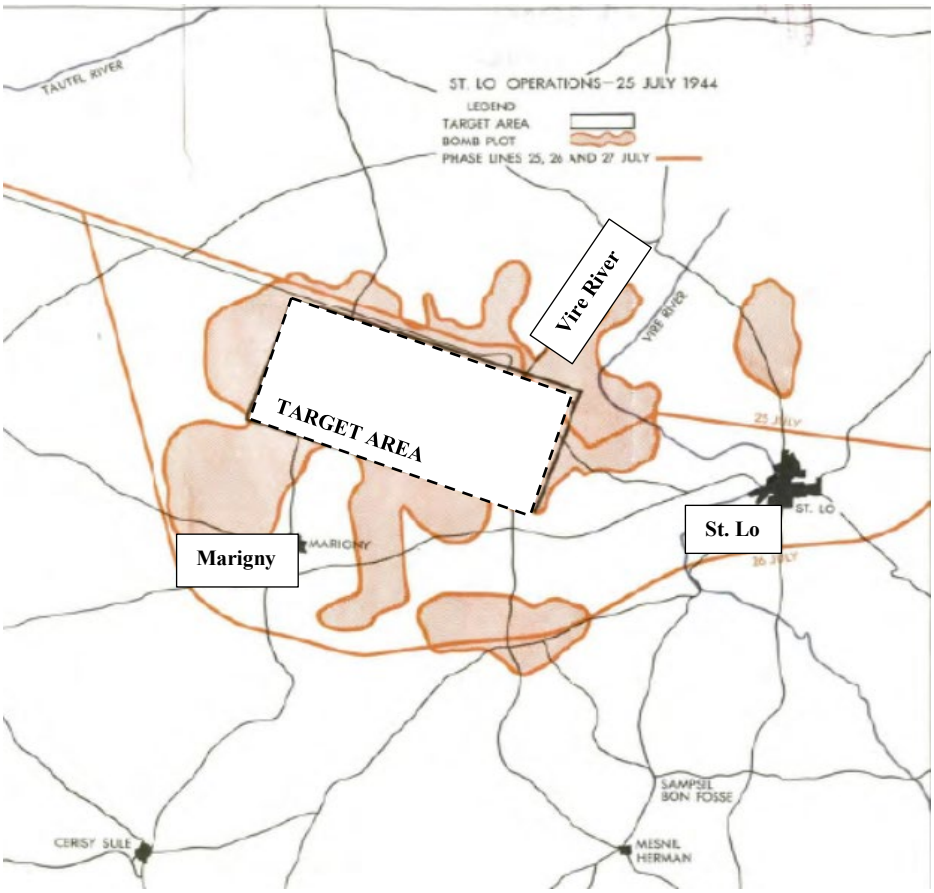


Figure 3. Allied bombing target area on 24-25 July
*Source*: VII Corps, US Army, *VII Corps Operations Order, Operation Cobra*, 1944, Ike Skelton Combined Arms Research Library, Fort Leavenworth, KS, 6.

[34] Blumenson, *The Battle of The Generals*, 129.

[35] Zaloga, *Operation Cobra 1944*, 40.

Bradley's coordination with British Allied Air Commander, Trafford Leigh-Mallory, planned for a controversial, hour-long bombing run. The generals request of 1500 aircraft carrying a total of 72,000 tons of bombs would prove problematic for planners who had to figure how to deliver the payloads in such a short timeframe.[36] The bombing was to be a strategic saturation mission that produced favorable operational and tactical affects for the US First Army as it maneuvered south of St. Lo.

The first bombs dropped on 24 July at 1200 hours. Due to unfavorable weather, rudimentary targeting technology, lack of air to ground integration (AGI) doctrine, and the close proximity of air formations due to the constrained timeline, the initial 300 aircraft dropped bombs within the strike zone but many missed their mark by as much as 2,000 yards.[37] The result of misplaced ordinance cost US forces 156 casualties on the ground.[38] After General Bradley's inquiry into the incident, it was found that the planners decided to make the flight path of the bombers perpendicular to the Allied FLOT, allowing for all ordinance to be dropped within the one-hour time frame.[39] Bradley, unaware of the flight path was understandably enraged. Having tipped off the Germans of an Allied attack, Bradley decided to initiate a second bombardment on 25 July, before sending in his ground forces.

The second bombing run would be tactically successful but just as deadly for US forces as the last. US formations had pulled back from their positions before the first bombing. Now tanks, men, and equipment moved even farther north in order to mitigate another AGI mistake. At 0938 on 25 July, the 366th Group staggered three waves of bombers.[40] The first two waves hit

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[36] Thomas Hughes, *Over Lord: General Pete Quesada and the Triumph of Tactical Air Power in World War II* (New York: The Free Press, 1995), 199.

[37] Hughes, *Over Lord*, 207.

[38] Ibid., 208.

[39] Ibid., 208.

[40] Ibid., 210.

their mark with devastating results on the dug-in German formations. As the third wave approached, the smoke and debris began to move over US forces due to a southern wind pushing the obscuration north. The third wave of bombers mistook the smoke line as the German positions, therefore, dropping their deadly loads atop US troops. Other mistakes came in the form of faulty bombsights and mistaken coordination between bombers as one echelon of pilots dropped their payloads after a false cue from their lead plane.[41] A total of forty-two Allied heavy bombers released their lethal effects amongst their comrades below. The bombing killed 111 and wounded 490 with LTG Leslie McNair as one of the casualties. General McNair would be the most senior US soldier killed in World War II.[42] On 25 July, a total of 1,495 heavy bombers attacked German targets with 4,406 tons of munitions. Confident the enemy's defensive belt was broken, General Bradley deployed First Army south, with VII Corps as the main effort.

The air LOE within the first tactical phase of Cobra can be viewed in two different ways. One argument expresses a positive outlook of the shock thrust upon the German enemy through the dropping of 72,000 tons of ordinance. Another view is that the loss of approximately 750 US soldiers and an untold amount of equipment due to AGI fratricide is never acceptable. This monograph's assessment sits somewhere in the middle.

The air attack chosen to help establish the gap in the German defenses was absolutely essential for the success of Operation Cobra. The necessity of the aerial attack was due to the need for a quick penetration of enemy defenses before eastern elements of the German Seventh Army broke free from the British delaying efforts. Additionally, US forces did not want to lose more men and equipment unnecessarily by using only ground forces to defeat a well-entrenched enemy within the bocage. The air LOE succeeded tactically by softening the German defenses but

[41] Hughes, *Over Lord*, 214.

[42] Ibid., 215.

was a failure at the operational level due to the loss of surprise and the slowing of operations when a second air-strike was needed and the ground attack was postponed.

Tactically, the US effects were apparent. According to German General Fritz Bayerlein, the planes just kept coming, "like a conveyor belt, seemingly without end." "The shock effect on the troops was indescribable. Several men went mad, and rushed dementedly around in the open until they were cut down by splinters."[43] The disruption in the German defenses allowed for the US ground forces to fight through the weakened area and hold open a gap. If blame is to be handed out for the operational failure during the conduct of the first phase of Cobra, it began at the top and ended with Bradley. This assumption is because of the prior knowledge Eisenhower, Montgomery, and Bradley had regarding the dangers due to the lack of AGI experience held by the RAF and US forces.

Prior to Operation Cobra, the Allies had used heavy strategic bombers three times in conjunction with ground forces.[44] These instances only occurred during extremely difficult situations, the last of which was to support British forces in Caen. As previously stated, the lack of AGI doctrine for air LOE rendered the ground forces incapable of understanding how to prepare for and position for the preemptive attack. The aircraft targeting equipment only sufficed for large area bombings, not precision strikes, and to make matters worse the weather complicated the strike on 24 July. These limitations should have prompted different decisions by commanders at all echelons involved.

Eisenhower allowed Montgomery and Bradley to combine the ground force LOE with the air attack LOE. Therefore, they both bear responsibilities knowing the limitations and urgings against strategic bombings as argued by planners during the decision to use bombers at Caen.[45]

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[43] Hughes, *Over Lord*, 213.

[44] Blumenson, *The Battle of The Generals*, 116.

[45] Ibid., 117.

Bradley's failure was in his lack of self-reflection regarding his minuscule understanding of AGI and the risks resulting from that lack of knowledge. Instead of allowing a detailed analysis of the bombing, driving recommendations from the air planners, he unilaterally dictated the timeline. This mistake created a scenario where planners sought to appease a commanding, army level general and therefore pressured them to plan an air-route overhead their own soldiers instead of parallel to them. Not only did the first bombing run fail at the operational level, but it cost US lives and gave away the element of surprise which allowed the Germans to adjust their plans.

General Collins, VII Corps commander, as well as other corps commanders, dealt with the demoralization of US ground troops after the bombings as they still had to open the gap in the German defenses which the air attack only softened. The overall assessment of the air LOE displeased the Supreme Allied Commander and Eisenhower told Bradley subsequent the 24th and 25th of July, "I do not believe in tactical use of heavies. I look upon heavies as an instrument for strategic attack on rear installations. I don't believe they can be used in support of ground troops. That's a job for artillery, I gave them a green light on this show but this is the last one."[46]

## Tempo

Well synchronized, well resourced, and disciplined forces empowered to take initiative in order to accomplish their given mission result in tempo. Holistically, the leaders, soldiers, and airmen of the US Army controlled their operational tempo well by way of ingenuity, good decision making, and setting conditions before shifting between phases. Though tempo was controlled and implemented relatively well during Cobra, commanders failed to establish a quick tempo against the Germans at the beginning of the operation due in part to the lack of cross coordination and transparency between the army level commander (Bradley) and the air planners at the strategic level located in Stanmore, England.[47] Another reason could be General Bradley's

[46] Hughes, *Over Lord*, 217-218.

[47] Ibid., 198.

willingness to take an exponential amount of risk on a new and underdeveloped concept of AGI during a tactical operation.

Planning for the saturation bombing was intensive and detailed but was a new process. With such tremendous risk being assumed during the bombardment, Bradley did not establish a different planning and confirmation approach by ensuring a direct line of communication to himself with the air-planning group in order to ensure transparency and common understanding. The knowledge of integrating tactical ground forces with the effects of strategic bombers virtually did not exist. The lack of attention given to the risk during the bombardment resulted in slowing the high tempo desired of the operation which would have given the Allies surprise and continuous pressure against the Germans. General Eisenhower, General Montgomery, and General Bradley are to blame for the slowing of operational tempo at the onset of Cobra. The initial slow tempo could have rendered the operation an overall failure had it not been for the VII Corps' brave fighting men who assaulted the gap and opened the path to victory at Avranches.

Upon the failure of the first wave of aircraft, the decision to send another on 25 July should have prompted the First Army general staff led by Bradley to assess the first bombing run and incorporate a hasty debriefing from the pilots and gather other possible options and risk mitigations. Yet, Bradley is quoted as saying, "I had to make a quick decision over the phone whether to accept" the air forces plan for a second bombing.[48] It seems plausible that in the twenty-two hours between the two bombardments, Bradley could have made more adjustments to the plan. One possible option could have been to attack with ground forces after the first bombing run and send the second bombardment into deeper enemy territory thus creating some depth within the attack. Instead, General Bradley decided to stall and await a second air attack on 25 July, allowing the enemy to reset defensive positions confronting the US First Army.

[48] Hughes, *Over Lord*, 208.

With a slowed tempo, the smooth conversion from phase one to phase two was severely degraded. General Bradley's dictated time limit for the air bombardment was the most significant decision that created friction between the first and second phase. The element of surprise faded upon the disastrous outcome on 24 July as the enemy then recognized more astutely the imminent US attack southward. The misplaced bombing also disrupted and destroyed elements of the most forward ground units thus degrading combat power needed to defeat the enemy within the thick hedgerow country. Lastly, the first bombing more than likely eroded the confidence of the units set to fight toward Coutances therefore initially countering Bradley's emphasis on boldness and aggressiveness. The second air bombardment on 25 July compounded the problem as fratricide once again struck the US First Army ground units. The first phase of Cobra was meant to ease the movement and give the advantage to the US infantry and armored forces. In execution it was almost a total failure and not representative of a well-planned or executed phase due to tactical failure brought about by faulty planning guidance and lack of common understanding between echelons.

Regarding tempo on the ground, friendly and enemy decisions and actions along with natural and manmade obstacles affect the tempo of all units. Terrain is an aspect that affects tempo in a significant way and many times influences or dictates a force's LOO. The synchronization of efforts and the speed at which those efforts are accomplished is determined by how a unit and its commander navigates the terrain and the enemy's disposition. Cobra commander decisions, soldier initiative, natural and artificial geography of the battlefield, and enemy actions dictated the periods of slow and fast tempo, as well as variations of tempo as previously discussed.

Figure 4 depicts the incredible tactical problem put forth by the German defenses and the thick bocage country which spanned the US sector just south of St. Lo. If the US First Army could not solve this issue in a timely and effective manner, the presented tactical problem would dictate operational tempo and pose a threat to US mission accomplishment.

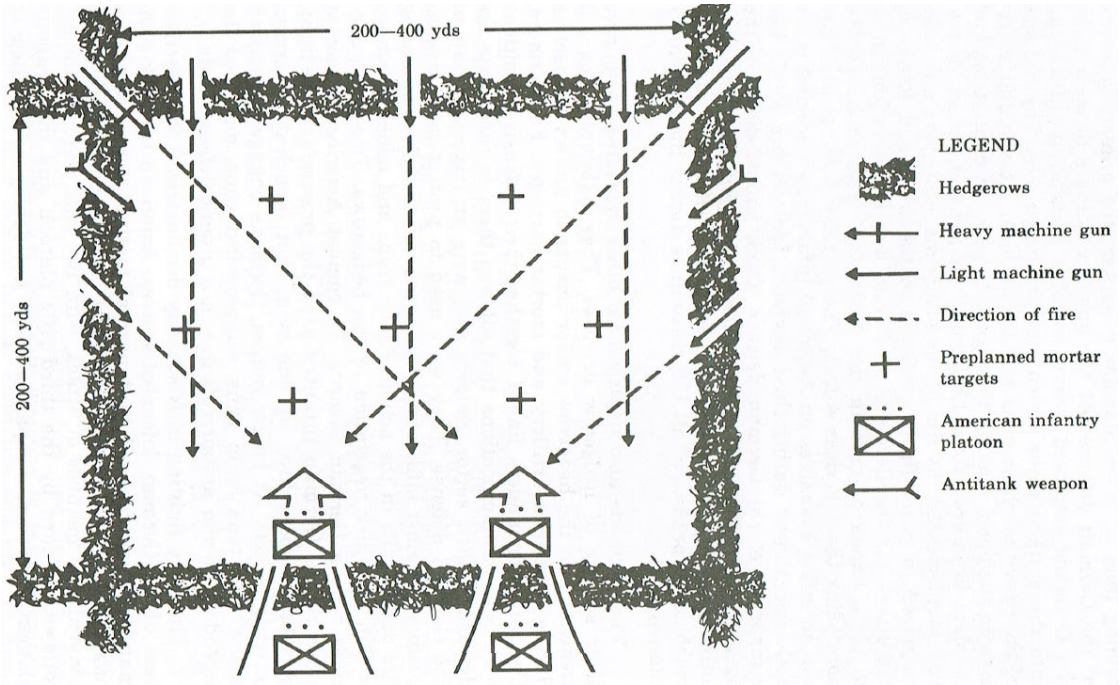


Figure 4. Example of a German hedgerow defense prior to and during 25-31 July 1944. *Source*: Michael Doubler, *Busting the Bocage: American Combined Army Operations in France, 6 June-31 July, 1944* (Fort Leavenworth, KS: Combat Studies Institute Press, 1994), 24.

At the commencement of Cobra, VII Corps' axis of attack toward Marigny and St. Gilles required US forces to fight through the thick bocage country laden with German anti-tank and personnel defensive positions. Owing the natural obstacles and enemy positions, General Collins' corps progressed only one mile the first day of operations instead of the planned three.[49] Even with the slow beginning, the adaptive US First Army would speed up the tempo with new tactics that were internally established.

The hedgerows and enemy integrated fires brought out the cognitive and physical best in US leaders and soldiers at each echelon, helping to enable a speedier tempo toward Marigny and St. Gilles. At echelon, US commanders allowed subordinate leaders to take initiative in order to address the problems before them. An impactful initiative taken by a young soldier came from the front lines were innovative thinking kept you alive. Sergeant Curtis G. Culin of the 2nd Armored

[49] Zaloga, *Operation Cobra 1944*, 41.

Division, constructed a hedgerow cutter of metal prongs and bolted on the front of a Sherman tank that allowed the vehicle to cut through the tough roots of the hedgerows.[50] Sergeant Culin's invention spurred brigade and divisional leaders to ensure infantry, armor, artillery, and engineers partnered and established new standard operating procedures that would complement the quicker tempo generated by the new invention.

General Bradley initially, and other higher-level leadership, fostered cognitive initiative by their subordinates to solve tactical problems and ensure adequate operational tempo. As discussed earlier in this monograph, Bradley decided on 25 July to start attaching armored divisions to infantry divisions prior to the beginning of Cobra. Bradley's decision spurred 2nd Armored Division Commander, Brigadier General Maurice A. Rose to action. After the creation of the hedgerow cutters, General Rose encouraged his men within the 22nd Infantry Regiment and the Combat Command Alpha to establish standing operating procedures to integrate tanks and infantry during hedgerow combat. These standard operating procedures developed into new tactics that resulted in assaults upon objectives conducted in three waves. The first wave would consist of tanks, the second would employ tanks with infantrymen on the back deck who provided local security, and the final wave would pass through the hedgerow opening with tanks and dismounted infantry destroying enemy remnants.[51]

The tactics allowed the unconventionally mounted infantry to view enemy positions from the tank decks while being protected from German grazing fire. Additionally, the varying speeds of the Sherman tanks posed a more difficult target for the German artillery and direct fire weapons teams. The new tactics protected manpower and added speed to the operation and allowed First Army to quickly penetrate approximately six miles into the enemy's defenses

[50] Doubler, *Busting the Bocage*, 62.

[51] Ibid., 54-55.

subsequent the development of the new tactics.[52] The flexible leadership of Bradley and Rose plus the adaptive actions of the soldiers within the 22nd Infantry Regiment is a clear example of adaptive thought turned into action. The new tactics allowed for a high operational tempo by presenting the Germans with multiple dilemmas on narrow fronts able to mass significant combat power in the small hedgerow squares.

Upon clearing the bocage country, First Army enjoyed extraordinary success and pushed German forces south towards Avranches. As German formations retreated south, they became disorganized and panicked resulting in severe casualties. Allied tempo bottled up German vehicles and men into a traffic jam between the village of Roncey which lay between Coutances and the Sienne River. Situation reports from ground units reached the Allied IX Tactical Air Command which in turn proceeded with a six-hour bombardment on the helpless enemy mass. VII Corps' artillery fired in unison with aviation and by the end of the joint attack, 400 vehicles, one third of them were tanks, lay destroyed amongst the road.[53] The destruction of German men and equipment on 29 July 1944 essentially ended the resistance to Operation Cobra. Avranches, the last operational objective, lay in wait as VII and VIII Corps converged on the city.

In efforts to continue the high tempo against the enemy, General Bradley specifically directed that all formations must "maintain unrelenting pressure," and continue the attack toward the door to Brittany.[54] The task of quickly attacking Avranches would reside with VIII Corps since the VII Corps LOO violation (*discussed later during the lines of operation analysis*) positioned LTG Collins' formation slightly behind. On 30 July, VIII Corps would spear head the attack into the city with one armored division supported by another who destroyed enemy resistance west of the city limits. VII and XIX Corps moved to the east of Avranches and

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[52] I Doubler, *Busting the Bocage*, 58.

[53] Bill Yenne, *Operation Cobra and the Great Offensive: Sixty Days That Changed the Course of World War II* (New York: Pocket Books, 2004), 59.

[54] Ibid., 62.

destroyed German defensive forces closing the gap that had been created in their lines. First Army's tempo rendered the German efforts futile, defeated all forces, and pushed southeast of Avranches. The door to Brittany was now open.

## Lines of Operation

Phase two of the operation sits in stark contrast to phase one. Focus on the ground line of effort in phase two created a holistic success and best described and analyzed through LOO. The analysis of LOO shows Generals Bradley and Collins' understanding of the need for adequate space on the battlefield for their very large formations, how to mass combat power, and foresee points of friction within space and time.

The V, VII, VIII, and XIX Corps formed the task organization under First Army. General Bradley initially tasked Major General Joseph L. Collins, Commander of VII Corps, the main effort of First Army to penetrate the enemy defenses and holding the gap open. Bradley's specific orders were to:

> Penetrate the enemy's defenses between Marigny and St. Gilles; seize and hold the line: Coutances – Marigny so as to cut off the enemy forces facing the VIII Corps; assist the VIII Corps in the destruction of these forces; and block, along the line: Cerences – Tessy-sur-Vire – St. Lo, any enemy reinforcements from the south or east from interfering with this operation.

VII Corps' mission in conjunction with VIII Corps to the west was to defeat remnants of the German defensive front, hold open the gap, and allow for a maneuver to seize the town of Coutances. XIX and V Corps would attack after D-day and suppress any enemy reserves east of the Vire River.[55] Upon reaching Coutances, US forces would speed to Avranches and open up Brittany.

Collins' initial plan for VII Corps was to hold Marigny and St. Gilles with two of three infantry divisions as a third moved due south toward Coutances. Late on 25 July, Collins decided

[55] VII Corps, US Army, *VII Corps Operations Order, Operation Cobra*, 1944, Ike Skelton Combined Arms Research Library, Fort Leavenworth, KS, 6.

to order one armored division to each objective along with the originally designated infantry divisions. The dismounted troops traveled off the roads in order to clear a way for the tanks that would support them in the severely restricted hedgerow terrain.[56] Collins' decision to reinforce his infantry divisions is significant because it gave flexibility and the freedom of movement to the dismounted forces. The tank formations provided breaching and anti-armor capabilities that could also act as a cordon for objects and protect the infantry as they cleared cities and towns.

First Army's seizure of objectives was no easy task. As discussed previously, one of the first steps of planning an operation is determining the terrain or LOO in which all given units will traverse. Analyzing terrain on a map in 1944, without the advantage of satellite imagery, was difficult to say the least. Adding to the complexity was General Bradley's decision to apportion Collins with six divisions totaling almost 100,000 men.[57] VII Corps' composition dwarfed the other formations adding to the difficulty of choosing a LOO and controlling the force in space and time. According to US 1944 doctrine, FM 100-5, battalions required between 500 and 1000 yards of frontage when executing an attack. The second echelon of attacks could be given up to 2,000 yards.[58] Within a US division, there were six battalions and within VII Corps there were six divisions and therefore thirty-six battalions in all.[59]

General Bradley placed the VII Corps in a four-mile corridor which condensed the doctrinal size of a corps LOO.[60] Bradley's decision seems to speak to his knowledge of FM 100-5 and understanding of increasing lethality at the FLOT by reducing its frontage. Bradley's decision similarly aligns with today's doctrine. FM 3-0 states, "reducing the frontage usually gives the unit

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[56] Blumenson, *The Battle of The Generals*, 144.

[57] Ibid., 130.

[58] US War Department, *FM 100-5,* (1944), 117.

[59] John Wilson, *Armies, Corps, Divisions, and Separate Brigades* (Washington, DC: Government Printing Office, 1999), 42.

[60] Blumenson, *The Battle of The Generals*, 130.

adequate combat power to develop the situation on contact while maintaining the required momentum."[61]

As LTG Collins pursued his initial objectives, he would plan to move three of his infantry divisions to hold the gap open. His formation would initially need a corridor that spanned up to 12,000 yards for the first two divisions as they moved towards Marigny and St. Gilles. Twelve thousand yards equals roughly 6.8 contiguous miles of frontage if the first two divisions decided to move side by side before heading in their separate directions. As per figure 5, 9th Infantry Division seized Marigny, 30th seized St. Gilles, and 4th Infantry Division split the gap with 1st Infantry Division to the west of 4th. Due to the massed combat power of the integrated formations, US armor easily held open the Marigny – St. Gilles gap protecting the farthest left and right limits from enemy counter attacks.[62] Collins' decisions to squeeze two divisions into a corridor between Marigny and St. Gilles that was approximately three miles apart was significant and cannot be understated. The close proximity of the divisions allowed for mutual support and like General Bradley, maximized combat power at the FLOT of each divisional LOO.

[61] US Department of the Army, *Field Manual (FM) 3-0, Operations* (Washington, DC: Government Printing Office, 2017), 7-38.

[62] Blumenson, *The Battle of The Generals*, 143-144.

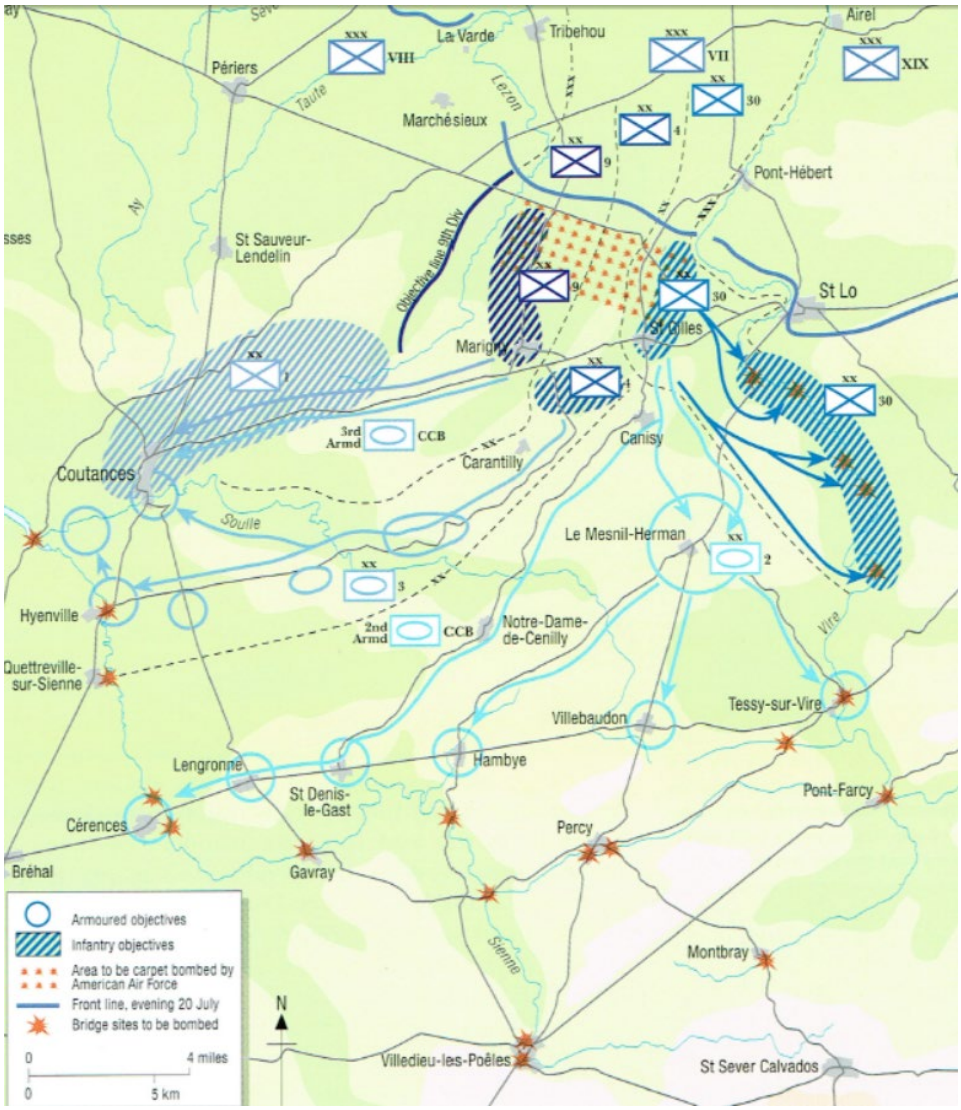

Figure 5. VII Corps plan of attack toward Coutances
*Source*: Steven Aaloga, *Operation Cobra 1944: Breakout from Normandy* (Westport, CT: Osprey Publishing, 2001), 34.

During the attack south, combined infantry and armor formations along with well-established LOO ultimately brought victory to the US First Army, but it did not come without struggle. Prior to the Allied launch of the ground attack from St. Lo, Collins expressed concern about Bradley's desire to have VII Corps' armored forces exploit the gap and speed toward Coutances. Collins reasoning was VIII Corps' westward disposition in relation to VII Corps' LOO. The concern was that once VII Corps' armored forces maneuvered westward after exploiting the gap, the fast-moving formation would maneuver into VIII Corps LOO if they

moved farther west than the east side of Coutances.[63] The breach of LOO would cause confusion, leading to days' worth of deconfliction and reorganizing. Collins' recommendation proposed VII Corps hold just east of Coutances and allow VIII Corps to come abreast on the western flank and together seize Coutances. The suggestion made sense to Bradley, so the change took place.

Unfortunately, on 27 July, General Bradley received word that in all Collins success at Marigny, St. Gilles, and the maneuver down to Coutances, portions of VII Corps had moved west of Coutances causing the issue Collins identified prior to the attack. On 28 July, the commander decided to halt VII Corps and allow VIII Corps to deliberately pass through the portions of Collins' formations that were in VIII Corps LOO.[64] Upon seizure of Coutances, VIII Corps found the German defensive line porous and not able to generate a strong defense. By 29 July, VIII and VII Corps made significant headway forcing German forces south of Coutances in a disorderly retreat.

Commanders characterized the two separate lines of operation maneuvering toward St. Gilles and Marigny by depth, speed, adequate space for the given forces, and simultaneous action. Collins' plan was a success in regards to planning LOO for five of his six divisions during the initial phases of Cobra. Unfortunately, VII Corps had the one division violate space between VII and VIII Corps LOOs during the maneuver towards VII Corps second objective, Coutances. It is not absolutely clear, but referencing figure 6, the VII Corps situational map from 28 July 1944, the error was more than likely committed by the 1st Infantry Division. 1st Division moved generally south until passing Marigny, at which point it maneuvered almost due west towards Coutances, moving into VIII Corps LOO.

[63] Blumenson, *The Battle of The Generals*, 130-131.

[64] Yenne, *Operation Cobra and the Great Offensive*, 54.

It seems plausible that the Lezon River, which ends short of Coutances as shown by the circle in figure 6, delineated VII Corps' boundary. Perhaps, 1st Division handrailed the river and became disoriented once past the end of the river.

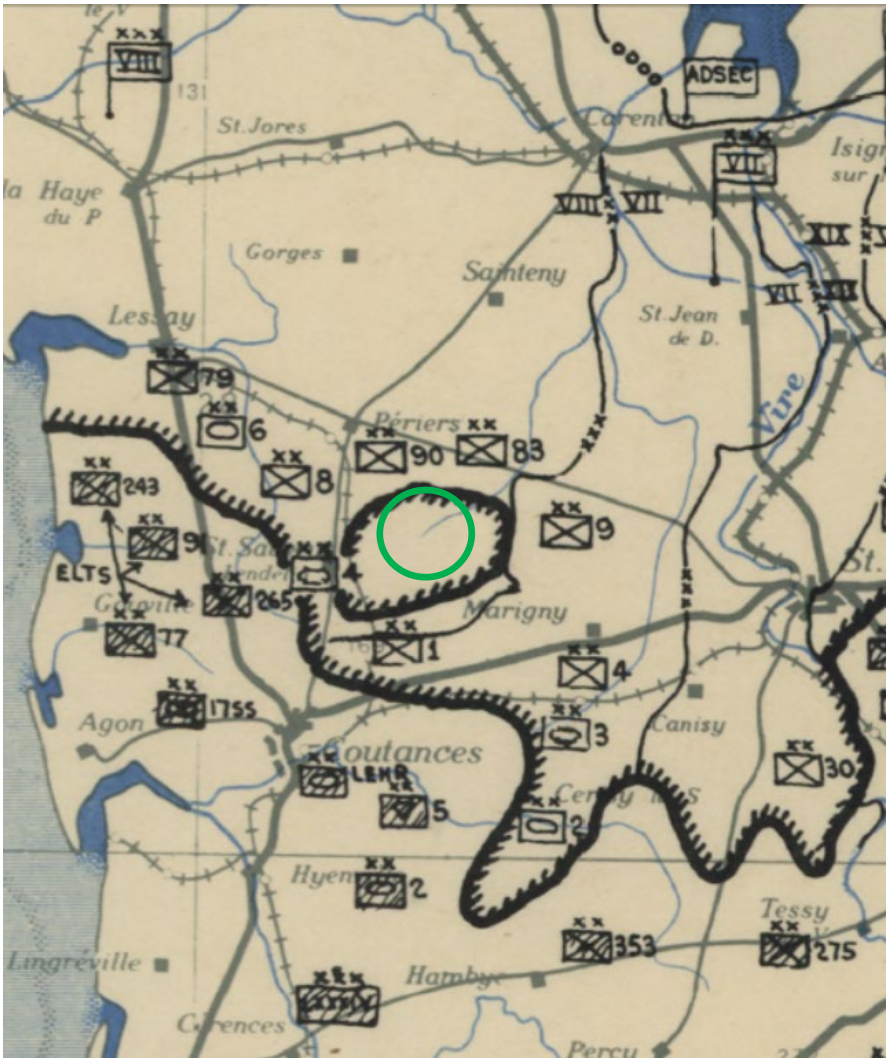


Figure 6. VII and VIII Corps disposition on 28 July, 1944 during attack on Coutances
*Source*: 12th Army Group Situational Maps: Combined Arms Research Library, 2018.

This mistake slowed the tempo of First Army by forcing the VII and VIII Corps commanders to halt movement, coordinate, and conduct a forward passage of lines, an extremely time-consuming effort. Thankfully, due to the Allies overwhelming firepower and numerous ground units, US forces were able to circumvent the repercussions of the violated LOO.

## Transitions

By 26 July resistance around Marigny persisted, but predominantly German forces were either destroyed or began retrograding south. On 27 July, Bradley halted most of the units participating in Cobra. In the mind of General Bradley, US blitzkrieg-type success made the pursuance of Coutances a non-factor for overall-mission accomplishment. Bradley's outlook on the successful attack south drove the decision to begin a transition.[65] Adhering to the campaign plans once Cobra ended and the creation of the Third Army, General George S. Patton led the breakout south of Avranches. As Third Army established itself, LTG Courtney Hodges took over First Army and commanded VII, XIX, and V Corps. Overall command would remain with Bradley as he assumed the newly created 12th US Army Group. Near simultaneously, Montgomery established the 21st Army Group, controlling the newly established First Canadian Army and the British 2nd Army.[66]

The significance of establishing Third US Army, 12th US Army Group, and 21st British Army Group was the transition from Cobra focused efforts on Patton's operations past Avranches. The transition in the Allied operations gave way to a new theater command structure that was better suited to attack farther into France. The transition in Cobra provides a valuable lesson in operational art. The operational artist must foresee when their echelon must transition to better achieve operational objectives holistically. Transitions usually come with task organization changes, reallocation of resources, new objectives, and repurposing of units to ultimately achieve the commanders end-state. Planners must anticipate the friction that time, forethought, and resources create for transitions.

Operation Cobra officially ended on 31 July 1944. Commanders' overwhelmingly correct usage of selected elements of operational art began with the attack in St. Lo and ended with the

[65] Blumenson, *The Battle of The Generals*, 145.

[66] Ibid., 146.

seizure of the operational objective, Avranches. The overarching success of linked LOOs, LOEs, and tempo allowed for generally successful phasing conducted at the theater and army levels. The phasing allowed for the tactical seizure of all Corps' intermediate objectives toward Avranches. Field Marshall Montgomery's and General Bradley's confidence and satisfaction with the first two phases of Cobra led them to allow the commencement of a transition for Allied forces. The transition unleashed General Patton's newly created Third Army which would aggressively attack through the door of Brittany deeper into the French interior. With Third Army on the move, the Allies were ready to defeat German forces within the entirety of France and begin their push into Germany.

## Conclusion

The US Army has begun to reestablish LSCO holistically as a core competency in order to better combat rising near peer threats. Over the past two decades, our adversaries have sought to exploit US neglected LSCO capabilities that at one time characterized US dominance. Our enemies now probe our abilities throughout the world and challenge our once well-established hegemonic military status. This monograph has highlighted operational successes and failures of commanders and their subordinates at multiple echelons during Operation Cobra. These events give us insight into what drawbacks and opportunities may lay before us when applying operational art in LSCO during the twenty-first century. The Cobra analysis provides salient lessons to be learned and are not elusive but are very apparent and easily describable.

General Bradley's decisions show the importance of what implications a high-level commander's actions can have at echelon. The enormity of Bradley's title, personality, and known competence created a climate that seemingly kept air planners from questioning or providing timely and candid feedback to the general and his staff. The one-hour stipulation imposed by the First Army commander caused desynchronization at the tactical and strategic levels of operations. Within the context of operational art, General Bradley slowed tempo and

impeded the smooth transitioning of phases. This hard-learned lesson makes plain that commanders must establish a healthy organizational climate in order to encourage subordinates to voice their concerns and identify risk. According to Harvard professor John Kotter, problems often exist in boss-subordinate relationships that weaken subordinate's ability to lead and conduct their job effectively.[67] In Bradley's case, the climate between him and the air planners was not conducive to pushing back against the general and as a result soldiers paid with their lives.

Commanders did not well execute the initial air line of effort during Cobra, but the ground line of effort sheds light on a successful endeavor. First Army's fast paced movement toward Avranches displays the power of correctly task-organizing a unit, utilizing combined arms, and fighting on well assessed LOO. The one caution extrapolated in the analysis of land operations conducted during Cobra is the strict adherence to movement in a given LOO. As US forces deploy to distant lands in the future to combat diverse kinds of enemies, LOO will be extremely important. As US commanders distribute AOs during LSCO planning in the twenty-first century, they will have to account for new weapons capabilities, cyber warfare, and hybrid and conventional forces operating at speeds much faster than German forces did in 1944.

The LOO violation made by a VII Corps subordinate unit could have an even more significant impact in today's large battlefield frameworks created by modern deep fires capabilities at corps and division levels. No longer will moving into another units LOO or AO in an uncoordinated manner justify only a halt in movement. If commanders do not appropriately coordinate the crossing of boundaries, the multi-echeloned and component fires delivered within a given AO will come fast and furious onto an unsuspecting friendly organization during a high intensity LSCO fight.

[67] John Kotter, *Power and Influence: Beyond Formal Authority* (New York: The Free Press, 1985), 98.

Finally, the overwhelming success of Cobra was due to many aspects but one stands out front and center and should be replicated in today's military. The most effective weapon in the US arsenal during Cobra was the cognitive power of most of First Army's leaders and subordinates. Bad decisions by leaders did occur at times, such as General Bradley's one-hour window for the initial air bombardment, but in most cases, decisions were sound and therefore good operational art resulted. For the most part, the mental abilities of the US officers and non-commissioned officers facilitated a climate where subordinates could confidently put forth ideas, allowing for disciplined initiative and decisive action. Sergeant Culin's hedgerow cutters and General Rose's subordinates new integrated infantry and armor tactics were only a couple examples of talented and motivated soldiers who had significant impacts on the operation and the campaign as a whole. As the US military moves boldly into the future, its decision makers must remember two things: cutting edge technology is a significant force multiplier that must be understood but fostering an environment where innovative military personnel can contribute fully, enables operational art and will always be the strength of our combat arms.

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