

The “Name Enough” Division and Seizing the Initiative in Large-Scale Combat Operations

A Monograph

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Abstract

The “Name Enough” Division and Seizing the Initiative in Large-Scale Combat Operations, by MAJ Nicholas W. Drake, US Army, 47 pages.

The recently published *Field Manual (FM) 3-0, Operations* identifies large-scale combat operations as the greatest challenge facing US Army forces in the future. These operations against peer threats will be significantly more demanding in terms of operational tempo and lethality relative to the US Army’s recent experiences in overseas contingency operations. The US Army’s armored forces must prepare to seize and maintain the initiative by employing the elements of operational art to succeed in large-scale combat operations. Considering this challenge, the US Army 4th Armored Division’s application of the elements of operational art — specifically tempo, operational reach, transitions, and risk — in large-scale combat operations provides an example of how armored units seized, retained, and exploited the initiative against a peer threat in the European Theater of Operations of WWII. Insights gathered from case studies of the 4th Armored Division’s actions against the German Army in Operation Cobra and the encirclement of Nancy can inform today’s commanders and staffs as they wrestle with overcoming the challenges presented by large-scale combat operations.

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Acronyms

A2AD	Anti-Access, Area Denial
ABCT	Armored Brigade Combat Team
ADP	Army Doctrine Publication
CCA	Combat Command A
CCB	Combat Command B
CCR	Combat Command Reserve
ETO	European Theatre of Operations
FM	Field Manual
IADS	Integrated Air Defense System
IFC	Integrated Fires Command
LSCO	Large-Scale Combat Operations
MDO	Multi-Domain Operations
OODA	Observe – Orient – Decide – Act
TAC	Tactical Air Command
WWII	World War Two

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Introduction: The Challenge of Large-Scale Combat Operations

We must prepare for the most lethal and challenging threat to our nation: the increasing likelihood of great power conflict across the full range of military operations and the conflict continuum.

—Lieutenant General Michael D. Lundy, *Bringing Order to Chaos*

The likelihood of a large-scale war between global powers is on the rise. The 2018 *National Defense Strategy* identifies the reemergence of long-term, strategic competition with revisionist powers, specifically China and Russia, and the weakening post-World War Two (WWII) international order as factors contributing to a dangerous strategic environment. These trends are creating fertile ground for armed conflict of a scale and intensity that the United States has not engaged in since the end of the Second World War.¹ The increasingly high stakes, coupled with the proliferation of so-called “gray-zone” activities below the threshold of open war, make miscalculation and escalation a grave and growing possibility.² The conflicts that spring forth from this environment may not be ones from which the United States can choose to opt out or fight in the same limited fashion as it has done in Afghanistan and Iraq.³ The character of war is evolving, and both the United States and its adversaries have identified that they must adapt to meet new demands and leverage emerging capabilities if they are to ensure their security in the future.⁴

Unfortunately, these revisionist powers and their militaries, formerly considered to be aging Cold War relics, have undergone substantial defense reforms and development programs

¹ Office of the Secretary of Defense, *National Defense Strategy: Sharpening America’s Competitive Edge* (Washington, DC: Department of Defense, 2018), 2-3

² Strategic Studies Institute, *Outplayed: Regaining Strategic Initiative in the Gray Zone* (Carlisle Barracks: US Army War College, 2016), xiv.

³ H. R. McMaster, “Continuity and Change: The Army Operating Concept and Clear Thinking about Future War,” *Military Review* (March-April 2015): 12-15.

⁴ Lieutenant General Michael D. Lundy, “Today and Tomorrow: Echelons Above Brigade – Combined Arms Maneuver in Large-Scale Ground Combat Operations,” in *Bringing Order to Chaos: Historical Case Studies of Combined Arms Maneuver in Large-Scale Combat Operations*, ed. Peter J. Schifferle (Fort Leavenworth: Army University Press, 2018), 187.

while the United States focused on counterterrorism and counterinsurgency operations. As a result, their forces have emerged as peer and near-peer threats, purposefully designed to leverage new disruptive technological developments and novel methods to counteract traditional US advantages in conventional military power. This includes contesting US dominance in the maritime and air domains through Anti-Access and Area Denial (A2AD) capabilities as well as operating aggressively in the cyber, space, and information domains.⁵ On land, adversary advances in long-range precision fires, electronic warfare, and unmanned systems threaten to neutralize US advantages in mission command, fires, and logistics capabilities and may preclude traditional techniques of massing combat power on the battlefield.⁶ These advances, among a myriad of others, indicate that future Large-Scale Combat Operations (LSCO) against peer competitors will be chaotic and lethal, where decisive one-sided lightning victories, in the image of the 1991 Gulf War, are not guaranteed.

The erosion of the US military's preparedness for large-scale combat, particularly within the US Army, exacerbates the challenges posed by the United States' strategic competitors. In the years after the collapse of the Soviet Union, the US Army enjoyed an asymmetric advantage in conventional ground combat capability, exemplified by its victories in Operation Desert Storm, as well as the opening stages of Operation Enduring Freedom and Operation Iraqi Freedom. However, almost two decades of focus on stability and counterinsurgency operations has understandably caused the US Army's readiness to conduct large-scale ground combat to atrophy. This degradation is partially due to changes in force structure and deferred equipment modernization efforts but, perhaps more importantly, it is also because of the loss of institutional knowledge about how the Army fights large-scale ground combat operations against a peer or

⁵ US Department of the Army, *TRADOC Pamphlet 525-3-1, The US Army in Multi-Domain Operations 2028* (Washington, DC: Government Printing Office, 2018), vi.

⁶ US Department of the Army, *Field Manual (FM) 3-0, Operations* (Washington, DC: Government Printing Office, 2017), ix.

near-peer enemy.⁷ The US Army recognizes these shortcomings and has set off on a campaign to rectify them post haste.

While matters of force structure, technological development, and equipment acquisitions will take time to resolve, the US Army must continue to shape how it thinks about and prepares for future LSCO. The US Army's recently published *Field Manual (FM), 3-0 Operations* lays out a vision for how the US Army will be employed as an element of the Joint Force to deter, shape, win, and consolidate gains in future armed conflict and provides a doctrinal foundation for training and professional education looking forward.⁸ To compliment this, the US Army Combined Arms Center has published a series of historical case studies on LSCO to tap the Army's organizational memory to illuminate the future.⁹ To that end, this monograph contributes to both institutional and individual understanding of LSCO through case studies examining the experiences of the US Army's 4th Armored Division in the European Theatre of Operations (ETO) of WWII. By examining these cases to determine how one division defeated a peer enemy in LSCO, this monograph provides insights into approaches commanders and staffs of today's US Army might employ to achieve victory and, ultimately, save lives in the next war.

The 4th Armored "Name Enough" Division routinely served as the spearhead of the US Third Army across the ETO where it played key roles in the St-Lô Breakout, the Brittany Campaign, the pursuit of the broken German Army across France, and the relief of Bastogne during the Battle of the Bulge. Its battlefield success led General Patton to state that "there has never been such a superb fighting organization as the 4th Armored Division," referring not only

⁷ US Government Accountability Office, *Department of Defense: Actions Needed to Address Five Key Mission Challenges* (Washington, DC: Government Printing Office, 2017), 9.

⁸ US Army, *FM 3-0, Operations*, vii.

⁹ Lieutenant General Michael D. Lundy, "Foreword," in *Bringing Order to Chaos: Historical Case Studies of Combined Arms Maneuver in Large-Scale Combat Operations*, ed Peter J. Schifferle, (Fort Leavenworth: Army University Press, 2018), vi.

to WWII but to all military history.¹⁰ 4th Armored Division's aggressive operations—made possible by controlling tempo, operational reach, transitions, and risk—enabled the unit to seize and exploit the initiative during its campaigns against the German Army in France. These successes provide insights for today's division commanders and their staffs on how to achieve the initiative against modern peer and near-peer adversaries in LSCO.

This monograph follows a case study methodology to examine two distinct occasions where the 4th Armored Division was able to seize, retain, and exploit the initiative against their enemies: the attack to seize Avranches as part of the St-Lô Breakout, and the encirclement of Nancy along the Moselle River in the Lorraine Campaign. Both battles were tactical engagements with operational level implications where US forces faced off against a skilled and tenacious German Army. Each case is analyzed through the lens of the elements of operational art to judge how 4th Armored Division leveraged these elements—tempo, operational reach, transitions, and risk—to gain physical and cognitive advantages over its German adversaries.¹¹ Additionally, this analysis reveals how control of the initiative influenced the outcome of the examined campaigns. The findings of this analysis, viewed through the lens of contemporary challenges facing the US Army, highlight enduring continuities that can shape how commanders and staffs in armored divisions apply the elements of operational art to seize and exploit the initiative against peer threats in the future.¹²

¹⁰ Albin F. Irzyk, "The 'Name Enough' Division: The Remarkable Combat History of the 4th Armored Division, a Model of Mobile Warfare," *Armor* 96, no. 4 (July-August 1987): 20. While Patton was well known for theatrics and hyperbole, he certainly felt that the 4th AD was an exceedingly capable and effective fighting force.

¹¹ US Department of the Army, *Army Doctrine Reference Publication (ADRP) 3-0, Operations* (Washington, DC: Government Printing Office, 2017), 2-1 – 2-10.

¹² John Lewis Gaddis, *The Landscape of History: How Historians Map the Past* (Oxford: Oxford University Press, 2002), 30.

Defining the Initiative

Current US Army doctrine separates individual initiative, the willingness to act on one's judgment in the absence of orders or when a tactical situation changes to present unforeseen threats or opportunities, from operational initiative, or "the setting or dictating the terms of action throughout an operation."¹³ While the exercise of individual initiative is a critical component of seizing, retaining, and exploiting the operational initiative in a campaign, the distinction between these two concepts remains important. The first involves an individual propensity or capacity for action in circumstances of ambiguity. The second centers on a relationship between two or more actors where one exerts a measure of control over the options available to each, with the aim of forcing negative options upon an opponent while increasing positive options for oneself.¹⁴ Operations doctrine from the WWII era similarly uses the term *initiative* interchangeably to mean both individual and operational initiative. In both modern and WWII terminology one sees terms such as freedom of action used frequently to express equivalent ideas; after scrutinizing the context of their usage, one can often treat them as synonymous. For the remainder of this monograph, operational initiative is used interchangeably with initiative, while individual initiative will be specifically labeled as such.

This monograph focuses on how the 4th Armored Division seized, retained, and exploited operational initiative, setting the terms of action in operations against their German enemies in the summer and fall of 1944. Because the initiative is routinely referred to as a crucial element of achieving operational success in theory and doctrine, and will likely remain important in future armed conflict, it is a subject worthy of critical study. Retired US Army Brigadier General Huba

¹³ US Department of the Army, *Army Doctrine Reference Publication (ADRP) 1-02, Terms and Military Symbols* (Washington, DC: Government Printing Office, 2016), 1-70.

¹⁴ US Army, *FM 3-0, Operations*, 1-17; Ian W. Fleischmann, "Operational Initiative in Theory and Doctrine" (monograph, School of Advanced Military Studies, US Army Command and General Staff College, 2015), 20. This definition is an amalgamation of definitions from US Army doctrine and the definition proposed by Major Fleischmann's monograph.

Wass de Czege, one of the key developers of the concept of AirLand Battle, called it “the greatest advantage in war.”¹⁵ John Boyd, in his works *Destruction and Creation* and *Patterns of Conflict*, argued that within competitive systems like warfare each actor seeks relative gain in freedom of action for friendly forces and a corresponding loss in freedom of action for an adversary. Boyd’s idea of the Observe-Orient-Decide Act (OODA) loop was a means to gain and maintain the initiative, which would enable a combatant to repeatedly penetrate vulnerabilities and exploit weaknesses exposed by action.¹⁶ Modern US Army Doctrine reflects these ideas when it states that under Unified Land Operations the initiative is essential to gaining the positions of relative advantage that enable the Army to prevent or deter conflict, prevail in war, and create the conditions for favorable conflict resolution.¹⁷ *FM 3-0 Operations* further asserts that controlling the initiative drives the enemy into untenable positions and causes the enemy to make mistakes which create opportunities for exploitation.¹⁸ Given its vital role in theory and doctrine, it is safe to assume that the initiative will continue to be a crucial element of armed conflict in the future. Yet untested concepts like Multi-Domain Operations (MDO) will rely on the US Army, as part of the joint force, to leverage the initiative to create temporary windows of opportunity to penetrate and disintegrate peer and near-peer adversary defenses and exploit the resultant freedom of maneuver to achieve strategic objectives in LSCO.¹⁹

The 4th Armored “Name Enough” Division

Established on 15 April 1941 at Pine Camp, New York, the 4th Armored Division would enter combat on the European continent in July 1944 as one of the US Army’s “light” armored

¹⁵ Huba Wass de Czege, “Toward a New American Approach to Warfare,” *The Art of War Quarterly* 2 (September 1983): 53.

¹⁶ Frans P. B. Osinga, *Science, Strategy, and War: The Strategic Theory of John Boyd* (New York: Routledge, 2007), 173-74.

¹⁷ US Army, *ADRP 3-0, Operations*, 3-6.

¹⁸ US Army, *FM 3-0, Operations*, 1-17.

¹⁹ US Army, *TRADOC Pamphlet 525-3-1, The US Army in Multi-Domain Operations 2028*, vii.

divisions. Learning lessons from US and British experiences in North Africa and stateside training maneuvers, the US Army eliminated the regimental echelon of command, replacing these headquarters with Combat Commands, and adopted a battalion centric organization (Figure 1). The division, with an aggregate strength on paper of just under 11,000 personnel, 263 tanks, and 54 artillery pieces, was organized into three battalions each of armor, armored infantry, and armored artillery, supported by a mechanized cavalry squadron, armored engineer battalion, and the requisite support formations. The three Combat Commands, designated Combat Command A (CCA), Combat Command B (CCB), and Combat Command Reserve (CCR), were assigned no organic formations but were purpose built to accept the division’s organic battalions as well as outside augmentation as the tactical situation demanded.²⁰ This streamlined force design increased the division’s ability to create and employ effective combined arms task forces—a capability that became a hallmark of the 4th Armored Division’s operations in the ETO.

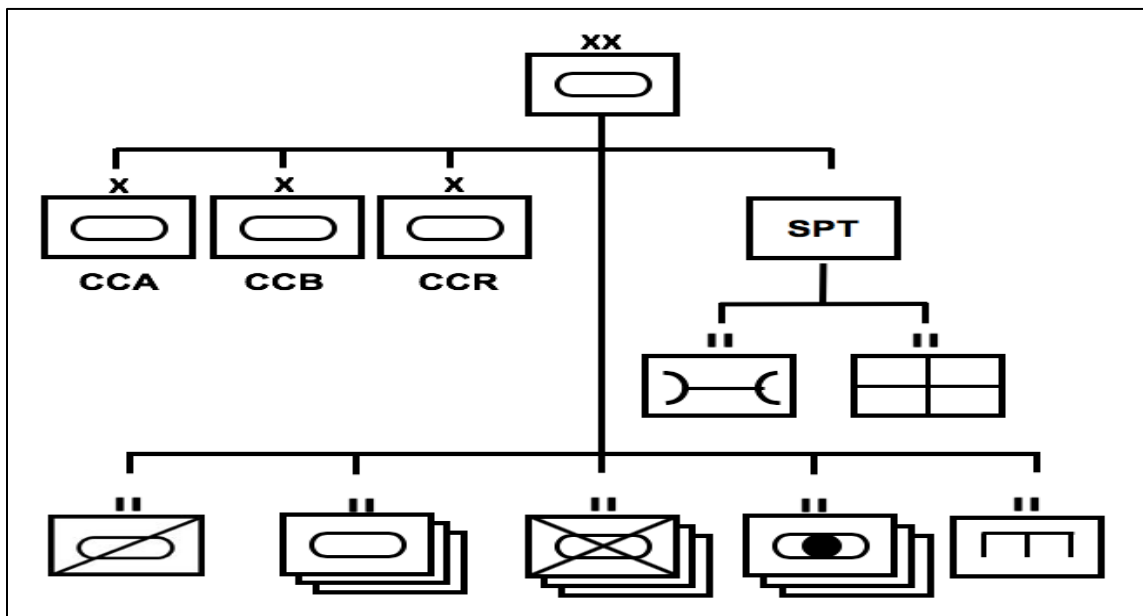


Figure 1. “Light” Armored Division Organization, 1944. Created by the author based on figure presented in Christopher R. Gabel, *The 4th Armored Division in the Encirclement of Nancy*.

²⁰ US Army Ground Forces, *History of the Armored Force, Command and Center: Study No. 27* (Washington, DC: Government Printing Office, 1946), 33-35. The shift from “heavy” to “light” organization in September 1943 created a division that “could move faster, occupy less road space, be subject to more unified control, and include a greater proportion of infantry to support armored units.”

Armored Command *FM 17-100, The Armored Division* dictated the primary role of the armored division was “offensive operations against hostile rear areas.”²¹ Doctrine at the time stated that, rather than battering through a succession of enemy positions, armored divisions would rely on surprise, rapidity of action, and mass to exploit opportunities and gaps created by infantry divisions to destroy enemy formations or seize key terrain.²² The division tested and trained on these concepts during maneuvers in Tennessee, California’s Mojave Desert, England’s Salisbury Plain, and at Camp Bowie, Texas. In these exercises, the division gained a reputation for aggressive action and exploitation of the initiative, so much so that the division’s commander, Major General John S. Wood, narrowly avoided reprimand in Tennessee for routinely moving further and faster than his superiors thought possible and disrupting set-piece training scenarios.²³ 4th Armored Division’s character was forged in part by this rigorous training regimen and doctrine oriented on audacious exploitation of the enemy rear area, but also by the deliberate efforts of the division commander.

Originally an artillery officer, Wood was an early convert to the ideas of mechanized warfare and served as George S. Patton’s artillery commander in 2nd Armored Division before assuming command in the 4th. He possessed a rare combination of leadership characteristics that made him exceptionally aggressive, yet capable of deep introspection.²⁴ Wood detested boasting and refused to allow the division to adopt an unearned nickname, stating that “they shall be

²¹ US War Department, *FM 17-100 Armored Command Field Manual: The Armored Division* (Washington, DC: Government Printing Office, 1944), 2; Robert S. Cameron, *Mobility, Shock, and Firepower: The Emergence of the U.S. Army’s Armor Branch, 1917 - 1945* (Washington, DC: US Army Center of Military History, 2008), 435-37.

²² US War Department, *FM 17-100 Armored Command Field Manual*, 2; Cameron, *Mobility, Shock, and Firepower*, 435-37.

²³ Irzyk, “The ‘Name Enough’ Division,” 21.

²⁴ Hanson W. Baldwin, *Tiger Jack* (Fort Collins: The Old Army Press, 1979), 109. Wood’s nicknames are indicative of these personality traits. To his peers he was commonly referred to as “P,” West Point slang for Professor, for his intellectual nature. He was also called “Tiger Jack” due to his propensity to pace and growl like a caged predator when arguing with superiors.

known by their deeds alone.”²⁵ In the 4th Armored Division he cultivated audacity and independent thinking, often encouraging junior leaders to take risk and experiment during the division’s stateside training exercises. As a result of this training, the division’s subordinate commanders readily exercised individual initiative once in combat and overcame obstacles rapidly through combined arms maneuver.²⁶ Perhaps no one personified these attributes more famously than one of Wood’s tank battalion commanders, Lieutenant Colonel Creighton Abrams, who would be perpetually at the critical point on the battlefield providing decisive leadership and driving violence of action.²⁷ Well trained and with great confidence in their leaders, the 4th Armored Division arrived in France in July 1944 bristling with confidence and prepared to make good on Wood’s promise to earn their reputation by deeds alone.

Operation Cobra: Exploiting the Operational Initiative

After years of fighting on the periphery of Axis occupied territory, the Allies initiated the long-awaited cross-channel invasion, Operation Overlord, to directly strike into German territory, defeat the Nazi war machine, and ultimately liberate western Europe. While the Allies successfully seized a foothold in Normandy, they struggled to expand the lodgment due to the region’s exceptionally complex terrain, dogged German defensive efforts, and inadequate lines of supply.²⁸ Attempts to break the emerging stalemate in the hedgerows provided only slight gains at enormous cost; for example, First Army sustained roughly forty thousand casualties in the month

²⁵ Irzyk, “The ‘Name Enough’ Division,” 20.

²⁶ Baldwin, *Tiger Jack*, 118.

²⁷ Robert M. Citino, *Armored Forces: History and Sourcebook* (Westport: Greenwood Press, 1994), 223. General George S. Patton Jr held two men his equal as leaders of armored forces: Creighton Abrams and John S. Wood.

²⁸ Martin Blumenson, *Breakout and Pursuit*, U.S. Army in World War II, European Theater of Operations, ed. Stetson Conn (Washington, DC: Office of the Chief of Military History, 1961), 3-4. By the end of June, the Allies held less than one fifth the territory they had hoped to have seized to serve as a lodgment to support future offensive operations. Allied commanders were becoming concerned that the invasion of Normandy might prove a costly stalemate.

of July alone.²⁹ The Germans had largely contained the successive Allied offensives by adeptly shifting units and committing reserves, but at a cost as German formations grew increasingly stretched and fragile.³⁰ Troubled by the prospect of the campaign bogging down into an unsustainable, grinding war of attrition, Allied leaders grew increasingly desperate to seize the initiative and restore freedom of movement.

To create the maneuver room required to break through the German ring of containment, General Omar Bradley envisioned an operation, later to be named Operation Cobra, that integrated both massed ground maneuver and an overwhelming aerial bombardment. The operation was preceded by a large British armored thrust on the eastern edge of the Allied beachhead on 18 July, codenamed Operation Goodwood. During Goodwood, the British sent three armored divisions through a constricted axis of advance behind a substantial heavy aerial bombing saturation, much like the concept conceived by Bradley, to seize key terrain beyond the still-contested city of Caen. Unfortunately, the operation lost momentum early due to friction and stalled against determined German defenses in depth. While Goodwood proved to be a disappointment for the British Army, it ultimately set the stage for Operation Cobra by forcing the Germans to commit much of their remaining mobile reserves against the British and Canadians, far from the planned US axis of attack.³¹

In a similar fashion to Operation Goodwood, Bradley's First Army plan called for the VII Corps, commanded by Major General J. Lawton Collins, to attack on a narrow 4.5-mile front to breach the German line west of the recently captured town of St-Lô with aid from heavy and

²⁹ Steven L. Ossad, *Omar Nelson Bradley: America's GI General 1893-1981* (Columbia: University of Missouri Press, 2017), 204.

³⁰ Blumenson, *Breakout and Pursuit*, 175-80; Carlo D'Este, *Decision in Normandy* (New York: HarperCollins, 1983), 257. At this point in the campaign Allied casualty rates had become so high that the British Army was facing a critical manpower shortage, especially within the infantry, which forced them to disband units in order to replace losses in others. While this problem of unsustainable casualty rates was not as urgent for US Army units, it was certainly a concern.

³¹ Carlo D'Este, *Decision in Normandy*, 386.

medium bombers. This penetration would force German units opposing the VIII Corps to withdraw or risk isolation, thus freeing the VIII Corps, under the command of Major General Troy Middleton, to advance south against weakened resistance towards the objective town of Coutances and, if possible, the base of the Cotentin Peninsula.³² By massing units on a relatively narrow front, US Forces enjoyed a five to one advantage during Operation Cobra as the combined strength of eight US infantry divisions and four armored divisions were brought to bear against several understrength German divisions organized under the LXXXIV Corps, totaling fewer than 17,000 men and 100 tanks.³³ 4th Armored Division's task as part of VIII Corps during the operation was to pass through breaches in the German line created by the 90th Infantry Division and drive on to capture Coutances.

Following an abortive initial attempt which delayed its start for twenty-four hours due to a series of miscommunications that led to several costly "short drops" on US positions, Operation Cobra kicked off on 25 July behind nearly 4,200 tons of bombs dropped across the VII Corps axis of advance.³⁴ German forces, despite being confused and demoralized by the opening bombardment, still put up determined defenses and restricted initial progress by VII Corps. However, through rapid exploitation of local penetrations US infantry and armor divisions overwhelmed the German front line forces, preventing reinforcements from bolstering the defense and thereby retaining VII Corps' freedom of maneuver. By 27 July First Army achieved a

³² Blumenson, *Breakout and Pursuit*, 197, 215.

³³ Blumenson, *Breakout and Pursuit*, 224-27. German units consisted mostly of capable veteran divisions but were poorly supplied with ammunition, fuel, and replacement personnel. While capable of defending the complex terrain of the hedgerows, they lacked the ability to act offensively and were low on reserves by the start of Cobra.

³⁴ Jim Schmidt, *Operation COBRA: 4th Armored Division Deliberate Attack, Exploitation. CSI Battle Book, 21 A* (Fort Leavenworth, KS: Combat Studies Institute, 1968.), 2-3; Mark T. Calhoun, "Close Air Support and Bombardment Theory: Operation Cobra," in *Lethal and Non-Lethal Fires: Historical Case Studies of Converging Cross-Domain Fires in Large-Scale Combat Operations*, ed Thomas G. Bradbeer, (Fort Leavenworth: Army University Press, 2018), 175. The bombardment on 25 July also resulted in a number of bombs landing on US troops, resulting in 601 Casualties and 111 killed, this on top of the 156 casualties and twenty-five killed in the previous day's mishap. While the bombing in support of Operation Cobra stunned the German defenders near St-Lô, it also did great harm to the morale and strength of much of VII Corps which makes their successes from 25-27 July all the more impressive.

decisive breakthrough twelve miles behind German lines, forcing the enemy to redeploy forces from the VIII Corps front to close gaps in the line.³⁵ Finding themselves with uncommitted units postured to support an already successful attack and an enemy forced to make rushed decisions to commit its remaining reserves, First Army had seized the operational initiative. It was at this point that Middleton's VIII Corps, and with it 4th Armored Division, were committed to execute the mission they had trained for — exploit the initiative and press deep into enemy territory.

Shortly after dawn on 28 July, Brigadier General Holmes Dager's Combat Command B of 4th Armored Division started its forward passage of lines through the 90th Infantry Division against minimal resistance. After a sharp engagement where the combined arms design and aggressive tactics of the US Army armored division were brought to bear against hastily formed German defenses, CCB seized its initial objective, the town of Coutances (Figure 2). Recognizing that the enemy was now “completely disorganized with no sign of coordinated resistance” and his own division was postured to continue the exploitation, Wood and his superiors elected to press the attack on to Avranches, a critical crossroads at the base of the Cotentin Peninsula some thirty miles south of their current position, before the enemy could consolidate his defenses.³⁶

³⁵ Blumenson, *Breakout and Pursuit*, 240-53; Russell A. Hart, *Clash of Arms: How the Allies Won in Normandy*. (Norman, OK: University of Oklahoma Press, 2001), 254-55. The Germans were able to establish an especially stiff defense along the Périers – St-Lô Highway area, however LXXXIV Corps ordered units from Lessay and Périers, directly across from VIII Corps, to attack to seal off the penetration rather than withdraw to maintain a continuous line of defense. This created an opportunity for VIII Corps to exploit.

³⁶ Blumenson, *Breakout and Pursuit*, 310-13; Baldwin, *Tiger Jack*, 30

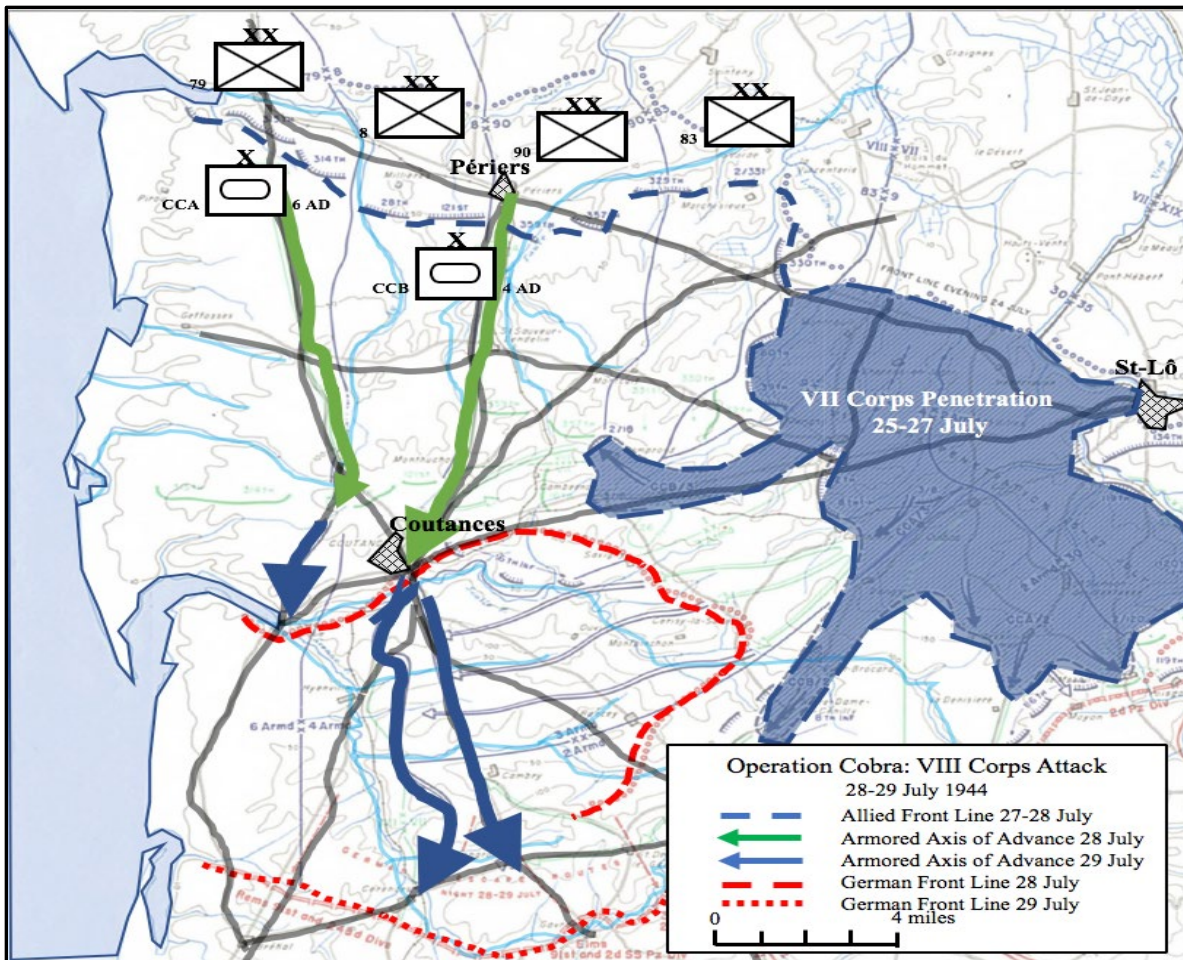


Figure 2. VIII Corps Attack in Operation Cobra. Emphasis added by the author based on map presented in Martin Blumenson's *Breakout and Pursuit*.

On 29 July, following an approved boundary change by the division commander, Dager's CCB spread out across two parallel axes of advance, enabling it to maintain its momentum and gain a further ten miles, destroying or bypassing sporadic resistance by isolated German infantry and tanks as it went.³⁷ Facing demolished bridges and a prepared German ambush, the eastern column of CCB made little progress the following day, especially compared with CCB units advancing on the western route. The western column, under Dager's command, penetrated so

³⁷ Blumenson, *Breakout and Pursuit*, 315. 29 July saw the 6th Armored Division, advancing on the 4th Armored Division's right, delayed for most of the day as destroyed bridges prevented them from crossing the Sienne River. While the tactical situation prevented the Germans from capitalizing on this loss in momentum, 6th Armored Division slow tempo could well have caused the loss of the initiative had 4th Armored not assumed portions of their axis of advance.

deeply that he narrowly missed an opportunity to capture the advanced command post of the German Seventh Army, forcing several enemy general officers and their staffs to abandon their command responsibilities and flee on foot. Lead elements of 4th Armored Division approached the bridges over the Sée River north of Avranches by the evening of 30 July and, finding them intact, hastily moved in to capture the crucial juncture (Figure 3).³⁸ During the night the small force from CCB held off series of hasty counterattacks by German units and by the morning the town remained firmly under US control.³⁹

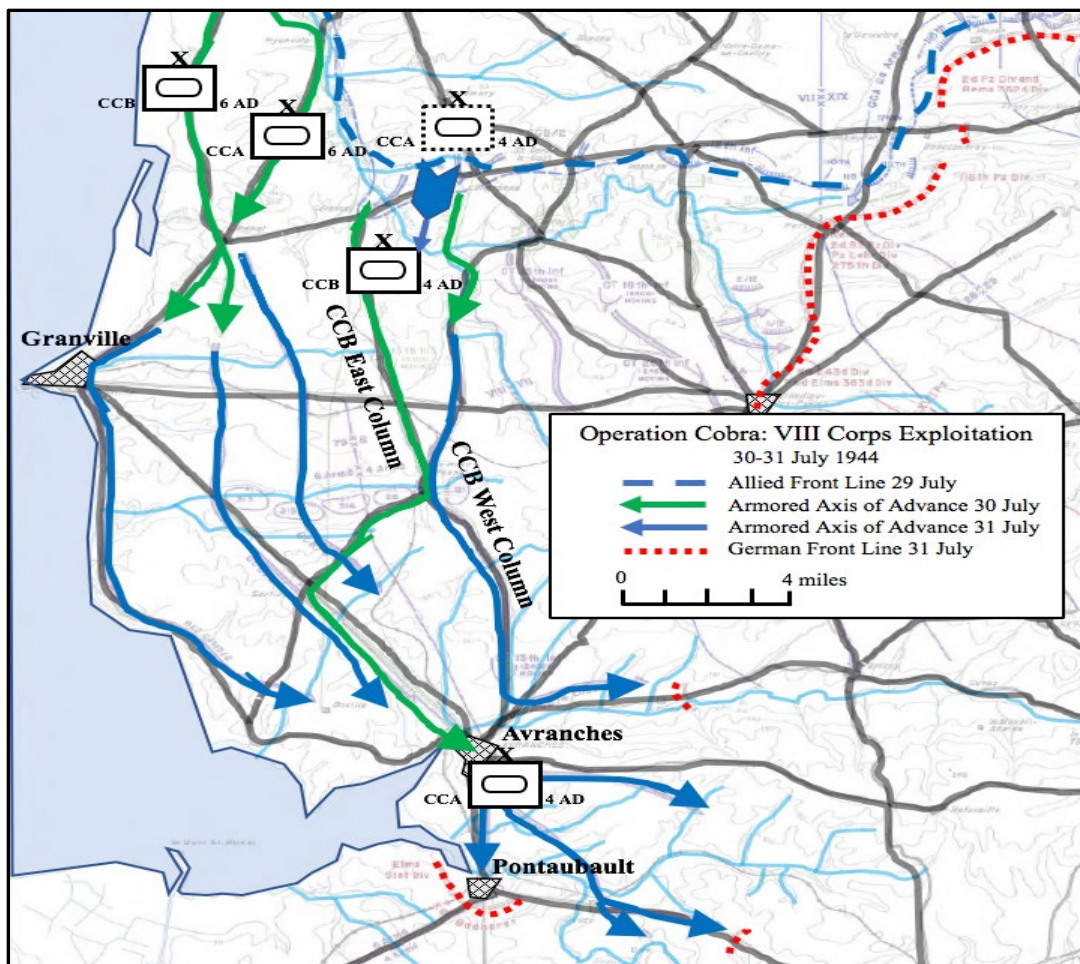


Figure 3. VIII Corps Exploitation. Emphasis added by the author based on map presented in Martin Blumenson's *Breakout and Pursuit*.

³⁸ Blumenson, *Breakout and Pursuit*, 317.

³⁹ *Ibid.*, 319. Dager concluded that the units encountered the night of 30-31 July were actually not trying to recapture Avranches and were in fact isolated units trapped between CCB and the 6th Armored Division attempting to escape destruction or capture.

At this juncture Wood saw an opportunity to continue his exploitation of the initiative, while recognizing that his CCB was nearing culmination, making its position in Avranches vulnerable to counterattack. In response, he attached both his CCA, under the command of Colonel Bruce Clarke, and a motorized infantry regiment from 8th Infantry Division directly under Dager's control to enable him, as the commander on the scene, to make decisions and commit combat power quickly towards continued offensive operations.⁴⁰ On the 31st of July these forces made good on CCB's success by securing the bridges south and east of Avranches and opening routes into both Brittany and into heart of France.⁴¹

By retaining and exploiting the initiative seized by VII Corps during Operation Cobra, 4th Armored Division changed the dynamic of the battlefield in northwest Europe. The division's actions restored operational mobility to Allied forces by transforming the initial breakthrough into a breakout of the German line of containment in Normandy. Also, by capturing the key crossroads of Avranches, the division opened the corridor through which Patton's Third Army would pour into west into Brittany and launch east towards Paris. 4th Armored Division had covered roughly fifty miles and captured more than three thousand prisoners of war in three days of aggressive fighting against an experienced and capable, but ruinously disorganized, enemy.⁴² Wood's drive down the Cotentin, in concert with the efforts of the rest of VIII and VII Corps, left the German defensive position in the west shattered. *Generalfeldmarschall* Guenther von Kluge, the German OB West Commander, had lost the ability to contact and coordinate the efforts of his subordinate commanders in Normandy and could no longer effectively stem the rising Allied tide. He simply described the situation as "a madhouse."⁴³

⁴⁰ Albin F. Irzyk, "The Mystery of 'Tiger Jack'," *Armor* 96, no. 1 (January-February 1990): 31.

⁴¹ Blumenson, *Breakout and Pursuit*, 319-21.

⁴² Robert S. Allen, *Lucky Forward: The History of Patton's Third US Army* (New York: The Vanguard Press, Inc., 1947), 86; Baldwin, *Tiger Jack*, 32.

⁴³ Blumenson, *Breakout and Pursuit*, 323.

Analysis of Operational Art in Operation Cobra

While the decisive outcome of Operation Cobra might give the impression that success was inevitable, the skillful application of the elements of operational art, especially tempo, operational reach, transitions, and risk, by Wood and his subordinate commanders, proved crucial in turning the breakthrough into the breakout. Controlling tempo enabled the division to operate within the enemy's decision cycle by moving faster than the German Army could react. Deliberately extending the division's operational reach helped to avoid unplanned culmination and significantly increased the depth that the division could penetrate. Managing transitions, particularly changing the task organization and mission of the subordinate combat commands, enabled the division to capitalize on opportunities and respond quickly to developments on the battlefield. Finally, Wood's audacity and willingness to accept risk created conditions that enabled the division to overcome uncertainty and threats to meet the desired end-state. The critical decisions and actions of the division, which enabled its success in the breakout from Normandy, are worthy of further examination.

Wood insisted that his division always maintain a higher operational tempo than his German adversaries and this was a crucial element of how the division conducted itself during Operation Cobra. The "light" armored division's design, centered around the concept of the combat command, enabled the 4th Armored Division to task organize and break down into independent, highly mobile combined arms teams. These teams allowed the tanks and armored infantry of the maneuver battalions, supported by the division's organic self-propelled armored artillery and armored engineers, to quickly deploy and destroy or establish bypasses for the numerous roadblocks and pockets of German resistance they encountered on the advance to Avranches without losing crucial momentum.⁴⁴ In addition, when the division encountered obstacles that threatened to halt the combat command columns, such as minefields and destroyed

⁴⁴ Baldwin, *Tiger Jack*, 32.

bridges, energetic reconnaissance from the division's cavalry and reconnaissance formations quickly found alternate routes or fords to prevent prolonged halts.⁴⁵ Wood also dictated that the division's lead elements were not to invest the considerable time required to clear the hedgerows and complex terrain that bordered their axis of advance. As the spearhead for VIII Corps, CCB's front was to be only as wide as the road on which it travelled.⁴⁶ This enabled the division to maintain mass and speed, but left substantial enemy forces bypassed in the division's rear areas.

Furthermore, Wood recognized that the speed of decision making and communication were essential elements to maintaining a faster tempo than his opponents. He held the position that "If you can't see it happen, it is too late to hear about it back in the rear area and meet it with proper force."⁴⁷ In keeping with this philosophy, Wood either ensured that he himself was in the position to make rapid decisions and issue clear, concise guidance, as he did outside Coutances, or delegated that authority to his subordinate commanders on the scene, as he did with Dager during CCB's attack to seize Avranches.⁴⁸ By fighting as a combined arms team, bypassing enemy forces, and placing leaders at the right place to quickly make critical decisions, 4th Armored Division was able to maintain a rapid tempo that outpaced the enemy's ability to effectively respond or retake the initiative.

While the division's rapid tempo allowed them to exploit the German Army's confusion and shock from the initial stages of Operation Cobra, controlling operational reach was vital to sustaining the breakout without unexpectedly culminating. In order to bolster its logistical endurance, the 4th Armored Division overstocked fuel and ammunition, both within their combat formations and their organic support units, before crossing the initial line of departure on 28 July.

⁴⁵ Schmidt, *Operation COBRA*, 3-9.

⁴⁶ Baldwin, *Tiger Jack*, 32.

⁴⁷ Irzyk, "The Mystery of 'Tiger Jack'," 32.

⁴⁸ Baldwin, *Tiger Jack*, 28-29, 146. Wood's order to Dager outside Coutances, after he had identified a bypass in the German minefield, was simply "General Dager, send the infantry through after me" written on a small scrap of paper; Blumenson, *Breakout and Pursuit*, 317-18.

This method, combined with relatively short lines of supply between depots and the division's lead units, extended the division's reach and enabled the combat units to sustain operations through to Avranches without fear they would prematurely run low on crucial supplies. In contrast, subsequent offensive operations into the Brittany Peninsula ultimately caused this method of overstocking to fail as extended lines of supply prevented sufficient resupply which forced formations to involuntarily pause once their supplementary fuel stocks had been consumed.⁴⁹ To prevent the combat commands from outrunning their fire support as they tore down the Cotentin Peninsula the division's armored field artillery battalions had to constantly leapfrog one another. This process guaranteed at least a full battalion of 105mm artillery available to support the maneuver units forward.⁵⁰ This effort was also complimented by the actions of the IX Tactical Air Command (TAC) which not only provided close air support, coordinated directly through liaison officers posted in the lead echelons of the individual combat commands, but also conducted deep interdiction attacks against enemy lines of communication which harmed the ability of the enemy to marshal reserves to blunt the depth of the division's advance.⁵¹

Perhaps most importantly, the division retained uncommitted combat forces in the form of Clarke's CCA, arranged in depth along the axis of advance and ready to maintain offensive momentum or prevent culmination at an opportune point in the battle. This moment came as CCB reached the outskirts of Avranches and found that it lacked the combat power required to continue the attack to control the town and seize the key bridges to its southwest. Wood gave tactical control of CCA to Devers at this critical juncture, who committed forces to these missions immediately. The division seized these pieces of key terrain just before a series of German

⁴⁹ Schmidt, *Operation COBRA*, 4-3. Later vehicles from the field artillery and engineer battalions were pressed into service hauling fuel cans to help overcome the challenges of extended lines of supply in Brittany; Baldwin, *Tiger Jack*, 157.

⁵⁰ Don M. Fox, *Patton's Vanguard: The United States Army Fourth Armored Division* (Jefferson, NC: McFarland, 2003), 47.

⁵¹ Blumenson, *Breakout and Pursuit*, 207.

counterattacks commenced to retake the key terrain.⁵² Had 4th Armored Division not managed its operational reach by overstocking critical supplies, extending the depth of its supporting fires, and maintaining uncommitted combat power, it would have likely culminated before seizing the decisive terrain near Avranches and the ceded the initiative to the enemy.

By smoothly executing transitions during Operation Cobra, Wood further enabled 4th Armored Division to maintain the initiative as the tactical situation evolved and unanticipated circumstances emerged. As the lead element for the division, CCB conducted several battle handovers to trailing units at key points in the operation to avoid disrupting the division's tempo. As such, to prevent his spearhead from halting to clear complex urban terrain after obtaining control of the key routes through the town of Coutances, Wood ordered CCB's lead units to pass responsibility for the town back to units from CCA, thus enabling the division to continue its attack south.⁵³ In addition, the division routinely adjusted command relationships to facilitate effective command and control, in situations like the transition of CCA and the attached regiment from 8th Infantry Division to Dager's tactical control outside Avranches. This empowered Dager—the commander best positioned to make rapid decisions—to maintain the initiative. The division also fluidly transitioned missions and objectives to rapidly exploit fleeting opportunities as they presented themselves. After stiff German resistance halted 6th Armored Division's advance on the division's right, this ability to quickly receive and execute a change of mission enabled the division to assume the mission to seize Avranches and prevent VIII Corps from losing the initiative.⁵⁴ Several factors made these efficient transitions possible, including the flexible design of the combat command system, concise mission-type orders, and effective radio communications between units.⁵⁵ This ability to transition responsibilities, command and control

⁵² Fox, *Patton's Vanguard*, 50.

⁵³ *Ibid.*, 45.

⁵⁴ *Ibid.*, 49.

⁵⁵ Robert S. Cameron, "The Army Vision: The 4th AD in World War II," *Military Review* (December 2003): 59-68; Fox, *Patton's Vanguard*, 49. These mission type orders provided purpose and

arrangements, and missions ensured that the division remained flexible and able to retain the initiative despite an extremely fluid tactical situation.

Finally, Wood's and his subordinate commanders' ability to balance audacity against risk during Operation Cobra underpinned the division's ability to retain and exploit the initiative. In accordance with Wood's intent, the fast-moving columns of the division's combat commands penetrated deeply into enemy rear areas in order to sow confusion and disintegrate enemy resistance in depth. However, this approach also resulted in relatively small formations operating on extended lines of communication, often outrunning supporting arms, and exposing themselves to German counterattacks. Outside Avranches on the night of 30 July, CCB was roughly ten miles forward of the closest unit outside the division and found itself facing enemy in all directions, including a large force of Germans attempting to break through the unit's tenuous positions from its rear.⁵⁶ Additionally, the division's deep armored penetrations necessitated bypassing significant numbers of German defenders, hastily clearing obstacles, and sending enemy prisoners to the rear without guards to maintain a rapid tempo. As such, the division's leadership assumed substantial risk that trailing units would be under threat of enemy attack throughout the operation. On several occasions the Germans made good on these hazards. Field artillery and maintenance battalions in the rear of the advancing columns also encountered sporadic contact with German units and several vehicles were lost to inadequately cleared or marked minefields, including the one carrying the commander of the division's combat command reserve.⁵⁷ While these hazards dealt losses to the division, Wood's audacity in assuming these risks enabled them to achieve success. Had they chosen to take counsel of their fears and endeavor to mitigate these

direction to the division's subordinate commanders without inhibiting the exercise of individual initiative. When the division changed CCB's objective to Avranches the guidance given was limited to "Present mission cancelled – using any roads [in zone] move on Avranches... to capture it and secure crossings east thereof."

⁵⁶ Blumenson, *Breakout and Pursuit*, 318.

⁵⁷ Fox, *Patton's Vanguard*, 52.

risks, rather than accept them, they probably would have lost the initiative and with it, the opportunity to break out of Normandy.

By successfully managing tempo, operational reach, transitions, and risk, 4th Armored Division was able to exploit the operational initiative during Operation Cobra and played crucial role in transforming a breakthrough into a breakout. In doing so they seized decisive terrain, further shattered German resistance in Normandy, and took roughly 3,000 prisoners at the cost of only 52 killed in action, 64 wounded, and 9 missing.⁵⁸ 4th Armored Division's actions on the drive down the Cotentin Peninsula served as a validation of the concepts laid out in *FM 17-100, The Armored Division*. The "Name Enough" division's success in Normandy would serve as a model as it continued to exploit the initiative into Brittany and in the rapid dash across northern France to the German frontier.⁵⁹

The Encirclement of Nancy: Seizing the Operational Initiative

During the month of August 1944, 4th Armored Division, with close support from the fighter bombers of the XIX TAC, relentlessly pursued the broken German Army across some 700 miles of French territory.⁶⁰ As the spearhead of Third Army, the division blazed across the Marne, Aisne, and Meuse Rivers, ground over which millions had struggled during the First World War, and by month's end were in position to threaten the German frontier and the critical Saar industrial region. Unfortunately, the race across France was not to continue into September. The inadequate capacity of captured channel ports, ever extending lines of supply, and worsening weather came together to make sustaining the numerous Allied offensives temporarily

⁵⁸ 4th Armored Division, *After-Action Report for Period 17 July to 31 August 1944*, digital file, Ike Skelton Combined Arms Research Library, Fort Leavenworth, KS.

⁵⁹ Cameron, *Mobility, Shock and Firepower*, 437.

⁶⁰ Christopher R. Gabel, *The 4th Armored Division in the Encirclement of Nancy* (Fort Leavenworth, KS: US Army Command and General Staff College, 1986), 6-8. The role played by XIX TAC in exploiting the initiative across France cannot be understated. Gabel notes that "XIX TAC maintained constant patrols in advance of Wood's armored columns. Army Air Force liaison officers riding in the lead tanks called out targets for the fighter-bombers and kept the ground troops informed as to what lay ahead of the column."

impossible. Over Patton's objections, theatre priorities of supply shifted away from his Third Army to 21 Army Group and the US First Army to the north. Resources provided to Third Army reduced to a trickle until 3 September, forcing 4th Armored Division and XII Corps, to which it was assigned, to drastically reduce their tempo.⁶¹

A five-day lull in operations provided the German Army valuable time to consolidate forces and bring up reinforcements to form a coordinated defensive line roughly along the Moselle River. Near Nancy, the XLVII Panzer Corps received the newly constituted 553rd *Volks Grenadier* Division and placed it in a tentative defensive line beside the experienced but understrength 3rd and 15th *Panzer Grenadier* Divisions. To the rear of the Moselle line, the Germans had massed reinforcements to mount a substantial counterattack against Third Army and bring its drive to a halt before it reached German territory and the vital Saar industrial zone.⁶² Unaware of the recently arrived reinforcements and dismissive of the German capability to resist the continued offensives by his armored divisions, on 5 September General Patton ordered the XII Corps' Commander, Major General Manton Eddy, to seize a bridgehead across the Moselle near Nancy and press on to the Rhine River.⁶³ The task would prove much more difficult than anticipated.

To replicate the success XII Corps experienced in August, Eddy planned to cross the Moselle by rapidly pushing an armored column across the river before the German defenders could react, after which elements of the 80th Infantry Division commanded by Major General Horace McBride would expand and exploit the breach. Both McBride and Wood believed that the pause along the Meuse had given the Germans an opportunity to consolidate their defenses

⁶¹ Allen, *Lucky Forward*, 131; Roland G. Ruppenthal, "Logistics and the Broad-Front Strategy," in *Command Decisions*, ed. Kent Roberts Greenfield (Washington, DC: Government Printing Office, 2000), 424-27.

⁶² Hugh M. Cole, *The Lorraine Campaign*, United States Army in World War II: The European Theater of Operations, ed. Series Editor (Washington, DC: US Army Center of Military History, 1950), 49, 190-95.

⁶³ Cole, *The Lorraine Campaign*, 54-55.

around the natural obstacles near Nancy. As such, they argued to Eddy that proceeding as though XII Corps still retained the initiative would be unwise. The corps commander acceded to their request and ordered a regimental team from the 80th Division to execute a reconnaissance in force in lieu of one of 4th Armored Division's combat commands. His subordinate commander's concerns proved well founded when the 317th Regiment was repulsed with substantial losses north of Nancy on September 5th by the 3rd *Panzergranadier* Division. Considering this setback, Eddy revised his plan and directed the corps main effort, now consisting of the 35th Infantry Division and 4th Armored Division's CCB, to cross the series of tributary rivers and canals south of Nancy in the hope that enemy resistance would be weaker than in the north. Again, Wood expressed concern that the XII Corps plan would not enable his armored columns to break through to the enemy's rear areas, this time on account of the complex terrain south of Nancy, and convinced Eddy to modify his plan further. To maximize his chances of vaulting across the Moselle, the corps commander tasked the 80th Division to attempt another crossing north of Nancy twenty-four hours after the 35th Division commenced its effort in the south and placed Wood's CCA as the corps reserve so that it would be available to exploit any penetration of German defenses.⁶⁴

Operations South of Nancy proceeded slower than intended and Dager's CCB struggled to achieve a breakthrough. While the 35th Infantry Division was initially successful in seizing an intact bridge on 10 September, German counter attacks and artillery stymied the infantry's attempts to consolidate their position and they were forced to withdraw under pressure. Aware the 35th Division had lost momentum, the 8th Tank Battalion of CCB pressed forward and identified a ford and were able to move across the river out of contact before moving in to support the infantry in establishing a bridgehead. Despite successfully securing an initial crossing over the Moselle, CCB was unable to exploit its superior mobility due to numerous enemy counter attacks,

⁶⁴ Gabel, *The 4th Armored Division in the Encirclement of Nancy*, 10-12.

poor roads, and inadequate bridging resources to span the canals and tributaries which had previously concerned Wood (Figure 4).⁶⁵ Although CCB would not be prepared to renew its advance until 13 September, Wood had already shifted his focus back to the north and to Clarke's CCA.

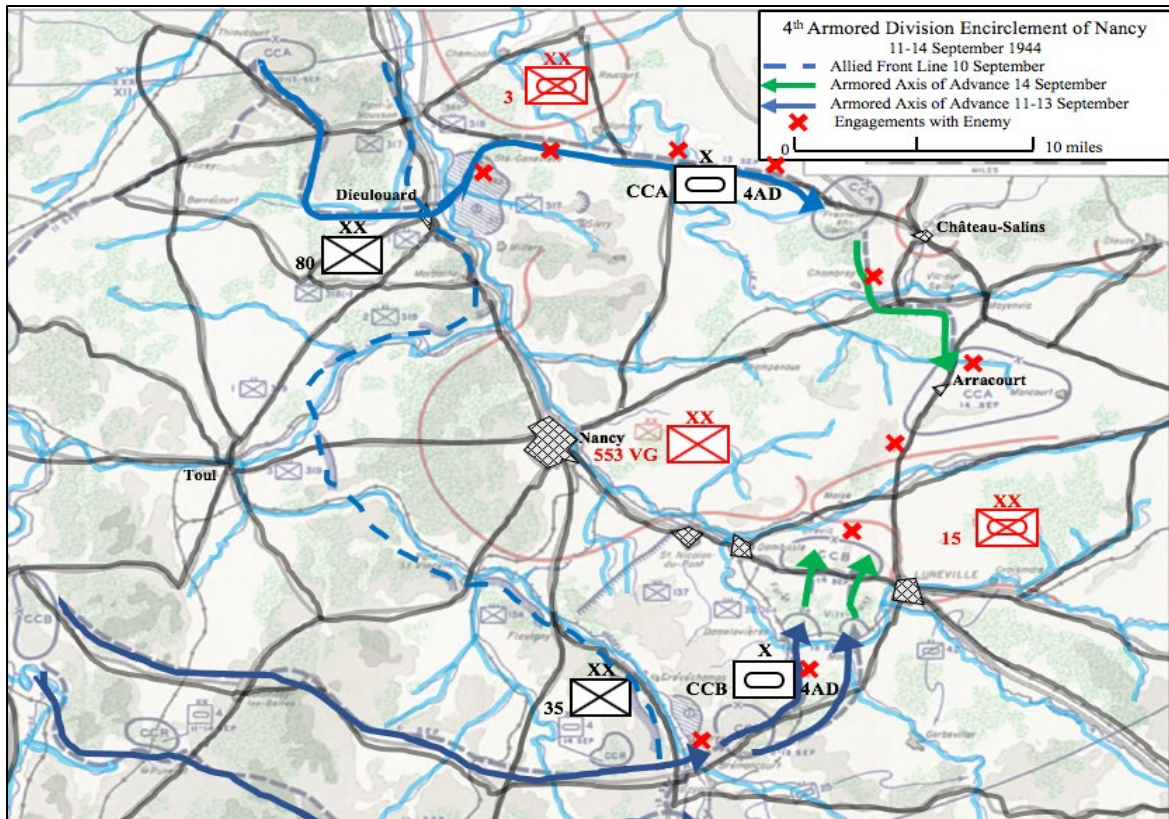


Figure 4. 4th Armored Division Encirclement of Nancy. Emphasis added by the author based on map presented in Hugh M. Cole's *The Lorraine Campaign*.

As the 35th Infantry Division and CCB battled their way through the rivers and canals on the XII Corps right, the 80th Infantry Division struck across the Moselle north of Nancy near the town of Dieulouard on 12 September. There they were able to establish a tentative hold on the far bank before facing yet another strong counterattack by the 3rd *Panzer Grenadier* Division. With help from the light tanks of CCA's mechanized cavalry troops, the infantry of the 80th Division checked the German counterpunch in the early morning hours of 13 September, setting conditions

⁶⁵ Fox, *Patton's Vanguard*, 110-13; Gabel, *The 4th Armored Division in the Encirclement of Nancy*, 12.

for a powerful push by the rest of CCA that would enable 4th Armored Division to establish a secure crossing.⁶⁶ By mid-day, the three task forces of CCA were across the Moselle and had transitioned to rapidly exploiting their penetration along a narrow axis of advance towards their objective, Château-Salins, located roughly twenty miles behind German lines. The lead task force, commanded by Abrams, swept aside the enemy's hastily erected roadblocks using combined arms tactics and literally collided with and ran through unsuspecting German infantry reinforcements before reaching the outskirts of Château-Salins by nightfall.⁶⁷

Based upon CCA's assessment that Château-Salins was strongly held by German forces, the division commander ordered Clarke to bypass the town and instead drive south early on 14 September with CCA to sever the lines of communication supporting the 553rd *Volksgrnadier* Division defending Nancy. Again, the lead elements of CCA quickly overwhelmed the disjointed resistance thrown against them and caught repositioning German forces unaware before seizing the town of Arracourt. From this dominant position more than twenty miles behind enemy lines, CCA set about strengthening its position by initiating four days of raiding in all directions, further disrupting the enemy's ability to respond the threat in their rear, and linking up with the lead elements of CCB, thus completing the encirclement of the German forces in Nancy on 16 September.⁶⁸

4th Armored Division's encirclement of the German-held town of Nancy temporarily regained the operational initiative for XII Corps following the unfortunate pause at the end of August due to lack of fuel. By severing the German lines of communication, 4th Armored Division forced their enemies to abandon a strongly defended position or face isolation and,

⁶⁶Michael D. Doubler, *Closing with the Enemy: How GIs Fought the War in Europe, 1944-1945* (Lawrence, KS: University Press of Kansas, 1994), 152.

⁶⁷Gabel, *The 4th Armored Division in the Encirclement of Nancy*, 14-15. In the hours after crossing the Moselle, CCA had taken 354 prisoners and destroyed twelve tanks, eighty-five vehicles, and five guns. CCA's total casualties for 13 September were twelve dead and sixteen wounded.

⁶⁸Ibid., 15-16.

ultimately, defeat. Likewise, by penetrating to operational depth and threatening to advance on to the Saar and Germany itself, 4th Armored forced the Germans to forego their planned massed counteroffensive against Third Army. Instead of launching a coordinated attack at an opportune time, the Fifth Panzer Army committed its panzer brigades in a series of piecemeal, hasty attacks against the Arracourt salient between 18 and 25 September which were adeptly defeated in detail by Wood's division. Regrettably, the division was unable to exploit the hard-won initiative. Although the Germans were still struggling to react to 4th Armored Division's encirclement of their defenses in Nancy, XII Corps was unable to support a continued armored exploitation of the situation as its remaining divisions were committed in defense against persistent counterattacks at the Dielouhard bridgehead and tasked to clear remnant forces from the pocket around Nancy itself. Wood, despite his desire to continue the offensive, recognized that his division had lost the initiative and ordered the 4th Armored Division to take up defensive positions around Arracourt on 18 September.⁶⁹

Analysis of Operational Art in the Encirclement of Nancy

4th Armored Division's leveraging of the previously mentioned elements of operational art— tempo, operational reach, transitions, and risk— made the encirclement of Nancy and seizure of the initiative between 13 and 18 September 1944 possible. To penetrate to their objectives behind the enemy's front lines the division deliberately maintained a rapid tempo to prevent the enemy from responding effectively to their attack. Efforts made to increase operational reach supported the division's ability to reach objectives well beyond the Moselle River at operational depth. Smooth and effective transitions provided flexibility in the division's responses to the changing tactical situation, enabling Wood to maintain momentum during the operation. Wood's willingness to assume substantial risks allowed the division to execute a bold encirclement which enabled them to reclaim the operational initiative from the defending

⁶⁹ Gabel, *The 4th Armored Division in the Encirclement of Nancy*, 18-19.

Germans. Unfortunately, shortcomings in the XII Corps' ability to address operational reach and risk ultimately halted the 4th Armored Division and prevented the corps from further exploiting the initiative on the east side of the Moselle.

Wood and his subordinate commanders understood the importance of managing tempo to enable success in maneuver warfare. Their decisions during the attack across the Moselle permitted the 4th Armored Division to set and maintain a rapid tempo which allowed the division to seize the initiative from their German adversaries. First, and most importantly, they recognized that the pause at the end of August had cost Third Army the initiative and gave the Germans the time necessary to consolidate their defenses along the Moselle River. Wood was able to convince the XII Corps commander that his division could not replicate the high tempo operations which had allowed the 4th Armored Division to seize several key bridgeheads against minimal resistance in the race across France. This resulted in Eddy adjusting his scheme of maneuver to adopt a more deliberate crossing of the Moselle, led by the 80th and 35th Infantry Divisions, and preserving the combat power of the 4th Armored Division for breaking out from the bridgehead line.⁷⁰ Wood and his combat command commanders also understood that the mobility and shock power of the armored division could serve to restore momentum to a stalled attack but that the division's strengths could be nullified if it lost tempo and was forced to defend a static line. During XII Corps' crossing of the Moselle, both CCA and CCB were committed to support the Corps' infantry divisions as they fought to establish bridgeheads on the east side of the river, but neither command remained inside the initial foothold to defend them. By quickly attacking out of the bridgehead line 4th Armored Division was able to prevent enemy forces from massing to contain them and begin to move faster than their enemy could react.⁷¹

⁷⁰ Cole, *The Lorraine Campaign*, 57-58; Gabel, *The 4th Armored Division in the Encirclement of Nancy*, 14.

⁷¹ Doubler, *Closing with the Enemy*, 153.

Two factors helped the division retain the initiative once the combat commands broke out from the initial crossing areas. The first was the use of combined arms tactics to quickly overwhelm enemy units encountered on the way to the division's objectives. CCA, in its drive towards Arracourt, encountered unsuspecting columns of German Infantry and rear echelon units which it destroyed using task forces that employed a combination of tanks, armored infantry, and self-propelled artillery. These combined arms tactics enabled the columns to maintain momentum and flexibility as they sought to sustain a high operational tempo. Second, the combat commands, often guided by the division or combat command commander in their light reconnaissance aircraft, routinely bypassed enemy resistance rather than fight to clear the enemy out of complex terrain.⁷² While this created additional risk by leaving isolated enemy forces in the column's rear, it was essential to setting a tempo that outpaced the German's ability to muster a force capable of halting the armored division's advance.

4th Armored Division was able to penetrate to operational depth during its encirclement of Nancy because it sought to extend its operational reach through proper management of its endurance, momentum, and protection. To increase the division's endurance the Combat Command Commanders ensured that their supply trucks entered the operation overloaded, often by 50 percent or higher, with essential fuel and ammunition. Additionally, the trains for each combat command, augmented with medical and maintenance detachments from the division, moved within the "vacuum" created by the tanks and infantry to both provide responsive logistical support and to secure themselves against attack as the division operated in enemy rear areas.⁷³ To further enable the responsiveness of the combat command trains, the division G4 established control points for supply transfers as far forward as practical to minimize transit to

⁷² Fox, *Patton's Vanguard*, 115-16.

⁷³ Gabel, *The 4th Armored Division in the Encirclement of Nancy*, 8.

and from the front.⁷⁴ A crucial element of sustaining momentum during 4th Armored Division's race across France was the integration of fighter-bombers from the XIX TAC to identify and destroy enemy positions along the division's axis of advance. However, during the Moselle crossing the division's armored field artillery battalions fulfilled this role as foul weather and commitments to other areas in the theatre severely limited the available air support. The self-propelled guns enabled the field artillery batteries to travel near the head of CCA's column and ensure that the command never maneuvered beyond the effective range of its organic fire support.⁷⁵ As the combat commands penetrated deeper into enemy territory protection became increasingly important to preserving operational reach. Mechanized cavalry and light tanks provided rolling flank security for the combat commands to prevent enemy counterattacks from surprising the main column and allowed the division to mitigate the risk of premature culmination due to enemy action.⁷⁶

In the attack across the Moselle, 4th Armored Division was required to make a number of transitions in order to maintain momentum and enable the division to seize the initiative. These transitions ranged from changing task organization after CCA shifted from securing the initial bridgehead to attacking east, to changing objectives from Château-Salins to Arracourt to bypass enemy strongpoints, to designating CCA the division main effort after CCB encountered delays south of Nancy. Consistent with their command philosophy of leading from the front, Wood and his subordinate commanders made their decisions as far forward as possible, often radioing their concise orders from their light reconnaissance aircraft ahead of the combat command's lead tanks or from the hood of a command vehicle within earshot of the thickest fighting.⁷⁷ Many of these

⁷⁴ Herbert F. Krucker, "Quartermaster Supply in an Armored Division in Combat," *Military Review* 25, no. 7 (October 1945): 62–63.

⁷⁵ Gabel, *The Encirclement of Nancy*, 15.

⁷⁶ Fox, *Patton's Vanguard*, 115.

⁷⁷ Baldwin, *Tiger Jack*, 156.

decisions were made in collaboration with the division's subordinate battalion commanders, thus further accelerating and easing transitions by building a common operating picture between echelons. In considering the decision to commit CCA to the Dielouhard bridgehead to support the 80th Division, each commander from corps to lead battalion were engaged in the discussion with the battalion commander's opinion being the decisive vote.⁷⁸ These methods of making decisions in combat, coupled with the inherent flexibility brought on by the combined arms nature of the armored division, allowed the 4th Armored Division to rapidly and smoothly make transitions. These transitions not only allowed the division to maintain momentum in the attack but they also posed multiple dilemmas to the enemy, thereby enabling the division to reclaim the initiative.

Wood's willingness—shared fully by his subordinate leaders—to accept great risk in seizing the initiative from the Germans along the Moselle line made the encirclement of Nancy possible. By design, 4th Armored Division assumed risk to penetrate enemy rear areas with relatively small, highly-mobile units and destroy vulnerable enemy fires, logistics, and headquarters capabilities. At Nancy this risk increased as the division divided the combat commands to operate on non-mutually supporting routes. Risk was further amplified as the combat commands initiated their encirclement operations while 80th and 35th Infantry Divisions remained under significant pressure from German counterattacks. While the Germans were able to take limited advantage of some of these risks, most notably when they temporarily cut the lines of communication between CCA and the 80th Infantry Division on 15 September, the rewards for 4th Armored Division far outweighed the cost.⁷⁹ The division successfully encircled a heavily defended German occupied town, forced its defenders to withdraw, inflicted significant losses on the German XLVII Panzer Corps, and seized the initiative from a capable, prepared enemy. Unfortunately, the division's control of the initiative would not last long.

⁷⁸ Cole, *The Lorraine Campaign*, 86.

⁷⁹ Fox, *Patton's Vanguard*, 120-21.

By penetrating the Moselle line and controlling key terrain in the enemy's rear area, the 4th Armored Division had successfully achieved a position which forcing the enemy into a series of undesirable decisions. Despite this success, XII Corps was unable to exploit this hard-won initiative. Due to continued vicious counterattacks against the bridgeheads, particularly the 80th Division's position near Dielouhard, Eddy could not free up sufficient combat power to follow in support of 4th Armored Division in order to free it for continued exploitation. This shortage of available forces was exacerbated by another downturn in the availability of fuel and ammunition due to theatre-wide transportation and distribution shortfalls. Unwilling to underwrite the risk of initiating an attack to the east without adequate fuel or forces to extend the operational reach, Eddy prudently elected to halt the XII Corps and consolidate in preparation for a future attack. This pause cost the XII Corps and 4th Armored Division the initiative.⁸⁰

4th Armored Division's success in applying the elements of operational art allowed the division to seize the initiative and inflict substantial losses on the German defenders. In addition to compelling the Germans to withdraw from Nancy and much of the Moselle line, 4th Armored Division's deep penetration forced the enemy to commit the well-trained and equipped units of the Fifth Panzer Army in an ad hoc fashion rather than a coordinated attack. The resulting battles around Arracourt were among the largest tank battles on the western front of WWII and effectively defeated the Fifth Panzer Army, setting the German's plans for a massive counterstrike back months.

Conclusions: What Made 4th Armored Division Successful?

4th Armored Division's actions during Operation Cobra and the encirclement of Nancy demonstrated that the division could seize, retain, and exploit the initiative against a peer enemy in LSCO. Several factors made these successful operations possible. First, the division's skillful management of tempo, operational reach, transitions, and risk enabled the division to generate

⁸⁰ Gabel, *The Encirclement of Nancy*, 18.

physical and cognitive advantages over their adversary. Secondly, the division's organizational design maximized combined arms capability and flexibility which was crucial to gaining and maintaining the initiative in a dynamic operational environment. Finally, the case studies reinforced the criticality of synchronizing the division's efforts with those of the corps and army to transform transitory tactical advantages into decisive operational effects.

Both examined cases in this monograph confirm the essential role that the proper application of the elements of operational art played in 4th Armored Division's ability to seize, retain, and exploit the initiative in large-scale ground combat operations. Of the four elements examined in detail, the most critical factor in 4th Armored Division's success was tempo. By maintaining a faster relative pace and rhythm of operations when compared to that of the enemy Wood's division was able to create and capitalize upon opportunities while closing off options for the enemy.⁸¹ This higher tempo yielded both physical and cognitive advantages. The division's rapid tempo enabled it to seize key terrain in enemy rear areas, such as the bridges south of Avranches and the crucial lines of communication running through Arracourt, before their German adversaries could reposition defenses or form an effective counterattacks. In the cognitive space, high tempo operations allowed the division to operate within the enemy's decision cycle and demoralized enemy units through surprise and shock effect. This caused German units to lose their ability to maintain situational awareness and exercise command and control, resulting in mistakes, such as premature withdrawals and poorly synchronized counterattacks, which further hampered enemy efforts. The other elements of operational art analyzed above played a vital role in maintaining tempo through extending operational reach to enable operations deep in the enemy rear areas, facilitating smooth transitions as circumstances changed on the battlefield, and accepting the risk to support audacious maneuvers to support the seizure and exploitation of the initiative. The 4th Armored Division's ability to manage

⁸¹ US Army, *ADRP 3-0, Operations*, 2-7.

operational reach, transitions, and risk to support a rapid offensive tempo during the Normandy breakout and Moselle crossing allowed it to control the initiative and achieve important tactical victories over the German war machine.

The 4th Armored Division's organizational design and command structure also played an important part in enabling the division to seize and exploit the initiative as it provided crucial combined arms capabilities and flexibility. The division's organizational design enabled comparable mobility across the formation to ensure the combat commands maneuvered at high rate of speed without need for external mobility augmentation. It also provided Wood and his combat command commanders with an ideal balance of armor, infantry, fires, and supporting arms to organically execute combat operations as combined arms teams. This ran counter to the US Army's previous inclination to separate organizations by tactical function. As the above case studies demonstrate, the division's inherent mobility and combined arms design enabled the division to penetrate rapidly into enemy rear areas and overcome resistance to maintain tempo and the initiative.⁸² Additionally, the combat command headquarters design of the "light" armored divisions allowed the division commander to tailor combined arms commands to meet the demands a fluid operational environment and provided a simplified means of command and control which offered distinct advantages over the more rigid regimental system of the "heavy" armored divisions.⁸³ This flexible command and control structure also enabled the division to fight on widely separated axes of advance and in coordination with the corps' infantry divisions, as was seen during the encirclement of Nancy, in addition to fighting as a concentrated division. 4th Armored Division's combat command commanders, because of this flexibility and combined arms capability, were able to readily exercise individual initiative to bypass or overwhelm enemy resistance to maintain the tempo necessary to control the operational initiative.

⁸² Cameron, *Mobility, Shock, and Firepower*, 435.

⁸³ *Ibid.*, 381.

A final conclusion to be drawn from the two case studies of 4th Armored Division's actions in the ETO is that division level tactical successes in large-scale ground combat are unlikely to translate into decisive operational effects in isolation. During Operation Cobra, 4th Armored Division's tactical success in exploiting the initiative during the drive down the Cotentin Peninsula were expanded upon by the aggressive actions of VIII Corps and, after it was officially stood up on 1 August, Third Army. As 4th Armored Division approached culmination outside Avranches, VIII Corps provided an infantry regiment from the 8th Division to help 4th Armored consolidate their gains while Third Army poured west into Brittany and east towards Falaise. By capitalizing on the tactical success of 4th Armored Division, VIII Corps and Third Army were able to translate the transitory advantage of holding Avranches into a decisive operational victory in the Normandy Campaign. In contrast, when 4th Armored Division seized the initiative by encircling the German occupied city of Nancy, the XII Corps and Third Army were unable to capitalize on the deep penetration and continue offensive actions. Stiff enemy resistance, paralyzing fuel shortages, and insufficient available combat power prevented Eddy's XII Corps from transforming 4th Armored Division's tactical achievements into an expanded operational effect. This reinforces the principle that operations must be synchronized in time, space, and purpose at all echelons to achieve decisive outcomes in LSCO.

Implications for Future Large-Scale Combat Operations

Examination of 4th Armored Division's actions in the ETO reinforce for contemporary armored division leaders both the critical advantages offered from seizing the operational initiative in LSCO and how that advantage is achieved. By seizing and exploiting the initiative 4th Armored Division was able to significantly shape the operational situation in the Normandy and Lorraine Campaigns with relatively meager losses in lives and equipment. As contemporary planners consider the potential lethality and destruction of future LSCO, they should strive to set conditions across all domains that allow mobile, combined arms formations, namely US Army Armored Brigade Combat Teams (ABCT) and armored divisions, to operate within the enemy's

decision-cycle and deny them options to respond. Conservative approaches to future challenges, while appearing lower risk, play to the strength of US adversaries and will likely not only result in significant loss of life, but also operational defeat.

The lessons provided from the examination of 4th Armored Division's operations in the ETO provide insights to the contemporary challenges facing leaders and planners in today's US Army. Specifically, 4th Armored Division's provides an example of how US Army armored divisions can gain the initiative and enable joint force access against peer threats in future LSCO. One of the most complex challenges facing the joint force in future LSCO is the proliferation of A2AD capabilities among the United States' peer and near-peer adversaries. An emerging potential response to this challenge, under the US Army's MDO concept, is the execution of bold cross-domain maneuvers to penetrate enemy denied access areas to create windows of opportunity which will enable the joint force as a whole to disintegrate enemy A2AD capabilities and set conditions for exploitation to achieve strategic objectives.⁸⁴

The actions of 4th Armored Division in Operation Cobra and the encirclement of Nancy could serve as a model of how a ground maneuver unit can seize the initiative and penetrate the defenses of a peer enemy army in support of the multi-domain effort to disintegrate enemy A2AD systems and set conditions for exploitation. 4th Armored Division's organization, training, and leadership made it capable of executing high tempo, combined arms maneuver to penetrate the defenses of peer adversaries and seize the initiative in large-scale ground combat. Modern US Army armored divisions, composed around a core of two or three ABCTs, share many of the same characteristics which made 4th Armored Division such a potent offensive force. If properly supported by corps and joint capabilities, contemporary US Army Armored Divisions could — by controlling tempo, operational reach, transitions, and risk — seize the operational initiative from a peer adversary and penetrate to operational depth. This penetration into an enemy's rear area

⁸⁴ US Army, *TRADOC Pamphlet 525-3-1*, 17.

would sever lines of communication, degrade enemy mission command, and threaten critical assets, such as medium range anti-aircraft platforms or counter-battery radars, which are critical to the function of Integrated Air Defense Systems (IADS) and Integrated Fires Commands (IFC). By destroying enemy critical assets or forcing them to displace, the armored division would seize the initiative and create a window of temporary physical and cognitive advantage that other assets—like long-range precision surface to surface fires, army aviation, or joint air to surface fires—could utilize to disintegrate the enemy’s broader A2AD capability and exploit to defeat the enemy.

Operations in the information, space, and cyber domains would likewise require significant commitment of effort, but in turn could create cognitive advantages over the enemy to compliment the physical advantages created by an armored division penetrating to operational depth. If applied in complimentary and synchronized fashion, these domains can have decisive effects on the enemy’s situational awareness, mission command capability, and overall willingness to sustain the fight. In the same fashion that fighter-bombers from the IX and XIX TAC supported 4th Armored Division by moving ahead of the lead tanks to reduce enemy strongpoints in 1944, seventy years later the Islamic State in Iraq and Syria, with assistance from a dispersed army of supporters and bots, employed aggressive social media campaign, rallied around the Arabic translation of #AllEyesOnISIS, to defeat of Iraqi Security Forces in Mosul by destroying its morale before a single vehicle came within sight of the city.⁸⁵ Against a peer adversary these domains would be crucial to establishing a cognitive advantage by degrading enemy communications and systems, particularly the IADS and IFC, supporting deception efforts, and presenting counter-narratives to shape the information space for both enemy combatants and enemy domestic audiences.

⁸⁵ P.W. Singer and Emerson T. Brooking, *LikeWar: The Weaponization of Social Media* (New York: Houghton Mifflin Harcourt, 2018), 5.

To enable success contemporary armored division leaders and planners can further lean on 4th Armored Division's experience to see the necessity of synchronizing efforts across echelons of command and the importance of properly employing the elements of operational art. As the case studies demonstrated, 4th Armored Division did not achieve operational success in isolation. Tactical victories at the combat command and division level allowed the 4th Armored Division to seize and retain the initiative, however support from the corps and army level were necessary to translate these temporary advantages into lasting positive operational effects. The corps and army must back up the division through shaping operations, extending operational reach, and providing depth, both in the form of reserve combat power and by prosecuting the deep fight beyond what the division can influence. The imperative of synchronizing efforts across echelons of command has not waned since WWII. In fact, given the anticipated complexity of future LSCO, this imperative is now expanding to include harmonizing effects across all domains. 4th Armored Division's example also demonstrates that while tempo was the determining factor which enabled the division to control the initiative, it was only made possible by effective employment of the other elements of operational art, namely operational reach, transitions, and risk. This interdependence and interrelationship between the elements of operational art remains true today. Contemporary planners must understand the relationships between the various elements and be prepared to manipulate each to develop concepts and plans that will help armored divisions succeed in large-scale ground combat in the future.

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