



THE LAND WARFARE PAPERS

No. 90W SEPTEMBER 2012

General Matthew B. Ridgway: A Commander's Maturation of Operational Art

Joseph R. Kurz

A National Security Affairs Paper
published on occasion by

**THE INSTITUTE OF
LAND WARFARE**

ASSOCIATION OF THE
UNITED STATES ARMY
Arlington, Virginia

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The Institute of Land Warfare
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AN INSTITUTE OF LAND WARFARE PAPER

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LAND WARFARE PAPER NO. 90W, September 2012

General Matthew B. Ridgway:

A Commander's Maturation of Operational Art

by

Joseph R. Kurz

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Foreword

Current U.S. Army doctrine specifies for commanders a model of understanding, visualizing, describing, directing, leading and assessing operations. Within Army mission command, posits this author, the most important subcomponent of visualization depends on the 11 elements of operational art. Those elements are the template used here in considering the factors of General Matthew B. Ridgway's maturation of operational art through five combat operations.

During World War II, Ridgway commanded the 82d Airborne Division in Operations Husky and Neptune, and then the XVIII Airborne Corps in Operation Market, the "Battle of the Bulge" and Operation Varsity. According to the author, he achieved tactical success but did not adequately apply operational art for Husky, Neptune and Market. He learned from his failures and progressively improved his application of operational art during the Bulge and Varsity.

This monograph, through an investigation into available primary sources—field orders, after-action reports and personal accounts reinforced with secondary source analysis—demonstrates that Ridgway overcame inadequacy. Although he completed all the military education available in his era, it was only after the intense crucible of three combat operations that he eventually applied operational art successfully.

Ridgway's astonishing ability to visualize a military campaign matured based on his leader development and the lessons he learned from failure and from personally mastering operational art.



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4 September 2012

General Matthew B. Ridgway: A Commander's Maturation of Operational Art

All your study, all your training, all your drill anticipates the moment when abruptly the responsibility rests solely on you to decide whether to stand or pull back, or to order an attack that will expose thousands of men to sudden death.

General Matthew B. Ridgway¹

Introduction

On 22 December 1950, the situation for the Eighth U.S. Army fighting in Korea was dire. Eighth Army had previously advanced through nearly the entire expanse of the Korean Peninsula to its northern boundary at the Yalu River. It abandoned the capital city of Pyongyang and retreated below the 38th Parallel that centrally divided the peninsula because of an attack by two hundred thousand Chinese. Eighth Army had already lost every bit of its fighting spirit, and then its commander, General Walton Walker, died in a jeep accident.² Less than four days later, Lieutenant General Matthew B. Ridgway assumed command. He immediately met with Supreme Allied Commander General Douglas A. MacArthur and Eighth Army's subordinate corps commanders to gain understanding of the situation. Next he visited the soldiers on the front lines to get a sensing of the enemy and the operating environment. Thus began Ridgway's visualization of how future military operations should unfold.³

General Ridgway developed this astonishing ability of accurately visualizing military operations through the means of a solid foundation of leader development combined with combat experience. Over the course of the first 24 years of his career, he received professional schooling through the Army's educational institutions. Key training assignments—such as nearly three years at the War Department, War Plans Division (WPD)—reinforced his education. Moreover, his World War II combat experiences—including several failures during Operations Husky, Neptune and Market, followed by successes in the Battle of the Bulge and Operation Varsity—solidified his ability to quickly and accurately assess and then visualize combat operations. Well-developed leadership and extensive combat experience produced a commander capable of rapidly visualizing an entire campaign and reversing an all-but-lost situation. General Ridgway so successfully visualized and reversed the deteriorating situation in Korea that, within five months, President Harry S. Truman had named Ridgway Supreme Commander, Allied Powers, replacing MacArthur.⁴

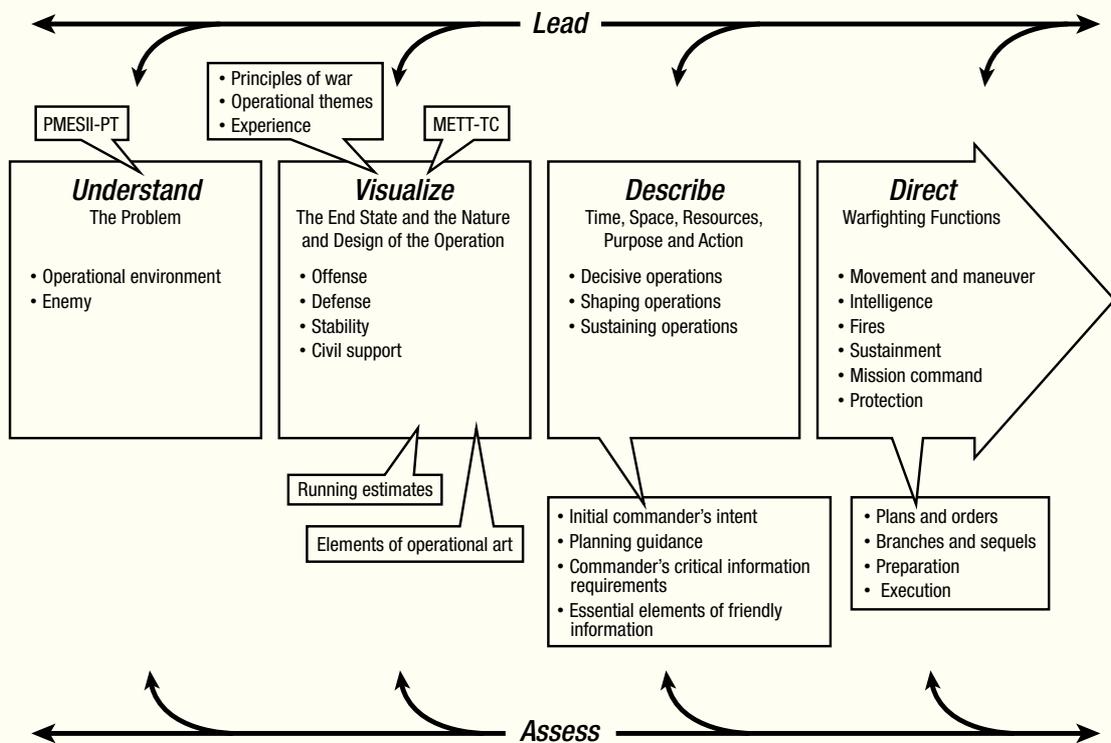
General Matthew Bunker Ridgway (1895–1993) was one of the United States Army’s greatest general officers; he commanded at every level, finishing his 38 years of service as the 19th Chief of Staff, Army. Throughout his career, he demonstrated that determination in every duty assignment and educational program led to more advanced duty assignments and educational programs. General Ridgway was a 1917 graduate of the United States Military Academy, a 1935 graduate of the Army Command and General Staff School and a 1937 graduate of the Army War College. Several prominent figures mentored General Ridgway in his life, among them four men who eventually became the Army’s four five-star generals: Generals of the Army George C. Marshall, Dwight D. Eisenhower, Douglas A. MacArthur and Omar N. Bradley.⁵ During World War II, General Ridgway served as commander of the 82d Airborne Division through Operations Husky and Neptune and later as commander of the XVIII Airborne Corps through Operation Market, at the Battle of the Bulge and during Operation Varsity. During the Korean War, he served as field army commander of the Eighth U.S. Army. Late in his career, Ridgway served twice as a theater commander and twice as supreme commander of allied forces.⁶ He reached the zenith of the Army Officer Corps having led thousands of soldiers in battle through two wars, first at the operational level and then at the strategic level.

Throughout the years that Ridgway served, the U.S. Army did not recognize the operational level of war, as it currently does, as the intermediate level between battlefield tactics and national strategy.⁷ Although several prominent military theorists in the late 19th and early 20th centuries wrote extensively about operational art, U.S. Army doctrine did not incorporate the concept, nor did professional military schools teach it, during Ridgway’s era. Yet Ridgway eventually applied operational art based on an informed vision that facilitated the integration of ends, ways and means across the levels of war.

Current U.S. Department of Defense doctrine defines operational art as the

application of creative imagination by commanders and staffs—supported by their skill, knowledge and experience—to design strategies, campaigns and major operations and organize and employ military forces. Operational art integrates ends, ways, and means across the levels of war.⁸

Army operational-level commanders visualize this integration based on an understanding of their environment and reliance on personal factors of their education, experience, intellect, intuition and creativity.⁹ U.S. Army doctrine prescribes that commanders exercise mission command through a model of “understanding, visualizing, describing, directing, leading and assessing operations” (see figure 1).¹⁰ The second of the six components—visualization—is the most important and the one that Ridgway eventually mastered. In the Army, the concept of mission command is the application of “leadership to translate decisions into actions—by synchronizing forces and warfighting functions in time, space and purpose—to accomplish missions.”¹¹ The operational commander first starts to “understand” by recognizing the national strategic end state, the enemy and analyzing operational variables.¹² Following understanding, the operational commander then must “visualize” operations. Commanders do so based on visualization subcomponents such as principles of war, operational themes, experience, running estimates and the elements of operational art. The most important subcomponent of visualization is the elements of operational art, of which there are 11 listed in U.S. Army doctrine: end state and conditions; centers of gravity; direct or indirect approach; decisive points; lines of operation or effort; operational reach; tempo; simultaneity and depth; phasing and transitions; culmination; and risk (see appendix for key terms and definitions). How did General Matthew Ridgway’s visualization mature?



METT-TC – mission, enemy, terrain and weather, troops and support available, time available, civil considerations
 PMESII-PT – political, military, economic, social, information, infrastructure, physical environment, time

Figure 1: Understand, Visualize, Describe, Direct, Lead and Assess, (U.S. Army FM 3-0).¹³

To understand how Ridgway’s ability to visualize matured, this study first reviewed how Ridgway’s visualization began in his leader development; it then analyzed several primary sources in determining when he learned from the experiences of failure and, finally, when he succeeded. Primary sources reviewed regarding Ridgway’s leader development include the *Regulations Governing the System of Military Education in the Army*, *Annual Report of the Secretary of War 1920*, *United States Army Field Service Regulations 1923*, *The Papers of George Catlett Marshall* and *Annual Report for the Command and General Staff School Year 1933–1934*, as well as General Ridgway’s own memoirs. Key historical accounts from the military schools—such as *History of the U.S. Army War College* and *Military History of the U.S. Army Command and General Staff College*, among other relevant secondary works—reinforced these sources. Primary sources analyzed regarding Ridgway’s combat experience include actual reports of operations, administrative orders and field orders issued by Ridgway’s headquarters. Among these reports are “82d Airborne Division in Sicily and Italy,” “Report of Normandy Operations,” “Summary of Operations 18 December 1944 to 13 February 1945” and “Summary of Ground Forces Participation in Operation Varsity.” In most cases, Ridgway himself signed these after-action reports. The *Army Field Service Regulations* from 1941 stated that a “decision as to a specific course of action is the responsibility of the commander alone. While he may accept advice and suggestions from any of his subordinates, he alone is responsible for what his unit does or fails to do.”¹⁴ This study analyzed the results of Ridgway’s first five sequential combat experiences for the absence or presence of the elements of operational art. Since Ridgway bore total responsibility for the results of the operations, it is logical that

he would have conceptualized the operations ahead of time. The presence of these elements proves that not only did the organizations mature, but so did Ridgway's visualization. By his sixth combat experience, Ridgway demonstrated superior vision that had not been evident in his first combat experience. The thesis of this study is that General Matthew Ridgway's visualization of operations matured based on his leader development and what he learned from failure and from mastering operational art.

Leader Development

General Matthew B. Ridgway completed all the military education available in his era starting with the USMA at West Point, New York, and followed by courses at the Infantry School at Fort Benning, Georgia, then the Army Command and General Staff School (CGSS) and finally the Army War College (AWC). Developmental assignments—such as teaching at USMA, serving as Assistant Chief of Staff for Operations and Training (G-3) at field-army level, and planning experience at the War Department—reinforced Ridgway's education. Additionally, several general officers, including Marshall, MacArthur and General Frank R. McCoy, directly mentored Ridgway. These Army educational institutions, key training experiences and mentorship from senior officers collectively formed the pillars of General Ridgway's leader development and the foundation necessary for mastering operational art.

Education

Building on the core leadership values West Point taught him, Ridgway attended the Company Commander's Course and the Infantry Advanced Course at the Infantry School at Fort Benning. Infantry officers expected to attend these two courses in their careers. However, Ridgway's selection for attendance at CGSS and the AWC marked the trajectory of an extraordinary career. In 1933, Ridgway entered CGSS, a highly selective school focused on preparing officers to command large Army organizations. The two-year CGSS curriculum provided field-grade student officers with in-depth doctrinal knowledge drawn from the Army's experiences in the First World War. CGSS was critical to Ridgway's leader development. The mission of CGSS at the time was

training officers in: 1) the combined use of all arms in the division and the army corps; 2) the proper functions of commanders of division and or army corps; and 3) the proper functions of General Staff officers of divisions and army corps.¹⁵

Complementing the Army capstone doctrine for operations at the time—the U.S. *Army Field Service Regulations*, published in 1923—CGSS taught Ridgway the principles of combat operations. According to historian Peter J. Schifferle, CGSS taught combined arms, effective command and control, a reliance on firepower, a consistent doctrine, a thorough knowledge of the principles of operations, knowledge of large formations, the science of war and problem solving.¹⁶ Ridgway benefitted from what author Timothy K. Nenninger recognized: that the

heart of the course, “tactical principles and decisions,” consisted of increasingly complex tactical problems involving increasingly large combined arms formations. The entire curriculum emphasized the command process, involving interaction between commanders and general staff officers, and tactical decision making.¹⁷

Just two years later, the Army selected Matthew Ridgway for the capstone of the officer education system, what Ridgway considered “the most advanced school in the Army,” the Army War College.¹⁸

AWC prepared senior field-grade officers for commanding the Army's largest organizations through a curriculum focused on carefully planning the execution of joint combat operations. AWC taught its student officers, including Matthew Ridgway, to think and plan joint campaigns linking strategy to the tactical level. Historian Henry G. Gole observed, "The [AWC] mission was to prepare officers to command echelons above corps [and] to prepare officers for duty in the War Department General Staff."¹⁹ Unlike CGSS, which prepared him for the organization and functioning of divisions and corps, AWC taught Ridgway strategic warfare through practical application methods. According to historian Harry P. Ball, the AWC curriculum in 1937 required Ridgway to conduct planning using scenarios of the "Rainbow Plans" developed concurrently with the War Plans Division. Additionally, Gole discovered, "In the years between 1934 and 1940, AWC classes conducted systematic planning for coalition warfare against Japan, versus Japan and Germany, and for hemispheric defense with Latin American allies."²⁰ It is particularly interesting that one of the plans was the "Orange" plan, in which students considered "coalition warfare, hypothesizing a situation in which the United States would align itself with Great Britain, China, and the Soviet Union against Japan."²¹ Ridgway practiced, albeit in a classroom setting, campaigning beside Russians, whose military theorists, Mikhail Tukhachevsky and Aleksandr A. Svechin, initially developed operational art more than a decade earlier.²²

With USMA, the Infantry Courses, CGSS and the AWC, Ridgway possessed the institutional knowledge he needed for commanding large organizations in war. However, that education comprised only a third of the essential leader development. Subsequent to these courses, Ridgway reinforced his knowledge through practical applications.

Training

Three key training assignments reinforced Ridgway's education. Early in his career, he served as an instructor at West Point. Later, he served as the Assistant Chief of Staff for Operations and Training (G-3) at Second Army; then, on the eve of World War II, he served nearly three years at the War Department's War Plans Division (WPD).

In September 1918, only 16 months after graduating from USMA and with only the experience of one noncombat assignment along the Mexican border, Ridgway was selected for a teaching position at the academy. He remained there for six years, teaching Spanish and tactics and serving as the athletic director. The cyclic, fundamental leader development of cadets, year after year, solidified Ridgway's personal leader development as a company-grade officer.

Ridgway's next great training experience was serving as the G-3 (Operations and Training) at Second Army, headquartered in Chicago, where he planned training maneuvers and command post exercises.²³ It was Ridgway's first field-grade officer assignment after graduating from CGSS, and he implemented the staff lessons he had learned in school. With war looming in Europe, Ridgway took the assignment seriously and pushed himself to visualize how mechanized forces would maneuver across farm fields in Michigan. Ridgway did everything he could to survey the terrain, including conducting an aerial reconnaissance from an open-cockpit, two-seat airplane in freezing temperatures. In his memoirs he recounted his serious approach to visualizing the training:

Even after we were so far committed that it would be impossible to change the plans, I would wake up at night in a cold sweat, visualizing hosts of angry farmers chasing me with pitch-forks because their cornfields had been ruined. I had proved to be a pretty good school soldier, but this thing wasn't on paper. It was real.²⁴

The Army recognized Ridgway's determination in planning as the G-3 and later rewarded him with another prominent training opportunity.

In September 1939, the Army selected Matthew Ridgway for an assignment considered indicative of general-officer potential; service in the WPD at the War Department in Washington, D.C. There, his primary responsibility was planning for contingency operations throughout Latin America.²⁵ Ridgway made great use of more than 22 years of training experience and the lessons of the AWC by directly applying his knowledge to the planning efforts at WPD. Additionally, while at WPD Ridgway enjoyed a close working relationship with General Marshall and the benefit of his mentorship.

Mentorship

The advantage of relationships with more experienced senior officers completed Ridgway's total leader development. Generals MacArthur, McCoy and Marshall mentored Ridgway at various points in his career prior to World War II. Marshall, more so than the others, seemed to have close and frequent direct contact with Ridgway. In 1922, Ridgway commanded a company in the 15th Infantry Regiment stationed in Tientsin, China; his battalion commander was George C. Marshall.²⁶ The two men's paths crossed several more times. Marshall was assistant commandant of the Infantry school when Ridgway graduated at the top of his advanced course class, and Marshall recognized his "dramatic talent."²⁷ Marshall was impressed once again with the younger man's performance when Marshall oversaw Ridgway's training exercises in Michigan. In a personal letter to Ridgway afterwards, Marshall wrote, "You personally are to be congratulated for the major success of all the tactical phases of the enterprise . . . did such a perfect job that there should be some way of rewarding you other than saying it was well done."²⁸ In May 1939, Marshall—at that time already identified as the next Chief of Staff, Army—detailed Ridgway, then still a major, to accompany him on a diplomatic mission to Rio de Janeiro. Marshall and Ridgway traveled by ship and "had long conversations" on the cruise to Brazil. On that trip, Marshall solicited Ridgway's thoughts for rebuilding the Army, and Ridgway's competence, according to historian Harold Winton, pulled him deeper into Marshall's "circle of confidants."²⁹ Ridgway's next assignment was his tour at WPD, where he was Marshall's daily operations briefer.³⁰ Later, as Chief of Staff, Marshall drew upon his past observations of officers rotating through the Infantry school, the AWC and working in the WPD in selecting the best for division and corps commands in the Second World War. In 1942, Matthew Ridgway was one of Marshall's picks for a division.³¹

Learning from Failure

General Ridgway commanded the 82d Airborne Division in Operation Husky in Sicily and Operation Neptune in Normandy. Later, he commanded the XVIII Airborne Corps in Operation Market in the Netherlands. In all three instances, forces under Ridgway's command achieved considerable tactical success. However, there is little evidence that Ridgway applied operational art in these three operations. In Sicily, not one of the 11 elements of operational art is evident. In Normandy, Ridgway applied three of the 11 elements of operational art. In Holland, six of the 11 were present in planned operations for which Ridgway bore responsibility. The progressive application of the elements of operational art in these three sequential operations indicates that General Ridgway's operational art, informed by his ability to visualize, was beginning to develop. In Husky, Ridgway's leader development was not enough.

Operation Husky

The airborne assault invasion into Sicily was both the first combat test for General Matthew B. Ridgway and the first test for employing the airborne division.³² Although Ridgway had developed skill and knowledge, he lacked combat experience; all three characteristics are required in the operational art definition. He prepared the 82d Airborne Division through intensive training conducted in North Africa, but Operation Husky was marked with insufficient resources, inconsistent command and control measures and no unity of effort. Although units of the 82d Airborne Division achieved tactical success, there was no evidence to indicate that Ridgway linked tactics to strategic ends or had an adequate visualization of operations.

There is sufficient evidence to support this claim, beginning with the comprehensive report of operations from the 82d Airborne Division Headquarters published in 1945, accounting the division's experiences in Sicily and Italy. A key fact in that report was the mission as issued by II Corps to the 82d for its 505th Parachute Infantry Regiment (PIR):

- (1) Land during the night D-1/D in area N and E of Gela, capture and secure high ground in that area; (2) disrupt communications and movement of reserves during night; (3) be attached to 1st Infantry Division effective H+1 hours on D-Day; and (4) assist 1st Infantry Division in capturing and securing landing field at Ponte Olivo.³³

The mission for the remainder of the 82d Airborne was to

- (a) . . . concentrate rapidly by successive air lifts in Sicily by D+7, in either or both the DIME (45th Infantry Division) or JOSS (3d Infantry Division) areas . . . and (b) 2d Battalion, 509th Parachute Infantry remain in North Africa in reserve, available for drop mission as directed.³⁴

The report also contained an after-action report (AAR) provided by the 505th PIR commander, Colonel James M. Gavin, submitted to General Ridgway a month after the airborne assault operations. In that AAR, Gavin cited the 82d's mission in simple terms: "the mission of securing the amphibious landing of the 1st Division in Sicily by establishing an airborne bridge-head."³⁵ Military objectives mentioned in the report included tactical tasks such as "attack and overcome an enemy strong point . . . establish and defend road blocks . . . [and demolish] rail and road crossings of the Acate River." Gavin's AAR cited the method of accomplishing this mission as "a parachute combat team to seize and hold the road net[work] and surrounding terrain running from Catagirone to the sea."³⁶ These ways of airborne insertion required significant means in addition to the parachute combat team.

Ridgway knew that he needed more resources than the division controlled and he fought for them. When forced to share the available troop carrier planes with British Airborne Forces, Ridgway argued bitterly with the British commander, Major General Frederick "Boy" Browning over control of the allocations. Although Ridgway received full support from Lieutenant General George S. Patton, Jr., for all of the troop carriers, ultimately General Eisenhower decided that Ridgway would receive 250 of the C-47s (69 percent) and Browning would receive 110 (31 percent). Therefore, Ridgway had only enough planes to drop one regimental combat team reinforced with a battalion from the other, rather than dropping two full regiments as intended.³⁷ As a result, the 82d Airborne Division was piecemealed into various assault positions to hold high ground. Only one PIR, the 505th, jumped the first night of Operation Husky. In that jump, paratroopers were scattered beyond the designated drop zones and interspersed with the 1st Infantry Division's lines on the ground. The Headquarters Command serial was dropped 30

miles from its predetermined drop zone, the first battalion serial was dropped 50 miles from its predetermined drop zone (Gela) and the second battalion serial dropped 40 kilometers (more than 24 miles) from its scheduled drop zone.³⁸ On the second night, the 504th PIR jumped, similarly scattered outside the designated drop zone. Had Ridgway received all 360 troop carriers, that still would not have been enough to employ the third of the 82d Airborne Division's three regiments, its glider regiment, which remained in Tunisia as a reserve force intended for later "drop missions as directed."³⁹ However, the shortage of troop carrier planes was not Ridgway's only resource shortfall.

Among Ridgway's many concerns was ensuring "adequate night fighter protection for the troop carriers."⁴⁰ The Northwest African Tactical Air Force (NATAF) denied Ridgway's request for more troop transports because, as he was told, "other missions were of greater importance."⁴¹ Ridgway was concerned that "naval representatives . . . refused to provide a definite corridor for any airborne mission after D-Day."⁴² Ridgway understood the refusal meant that "unless a clear aerial corridor into Sicily could be provided, no subsequent airborne troop movement could be made after D-Day."⁴³

Another contributing factor to Ridgway's failure at the operational level is that he not only did not make the jump with any of the airborne assault forces but also was not personally present with the 82d Division.⁴⁴ Rather, he was afloat on General Patton's Seventh Army command vessel, the *Monrovia*, where he had been since 4 July (D-5).⁴⁵ Aboard a ship and away from two-thirds of his organization in Tunisia, Ridgway was, as author Julian Burns correctly concluded, "out of contact with his forces, [and therefore] he was out of command."⁴⁶

As an operational commander, Ridgway violated all 11 elements of operational art required for commander's visualization. There is no evidence to suggest that he identified an enemy center of gravity (COG) as the source of power that provided moral or physical strength. He should have identified the COG and applied combat power against it either directly or indirectly.

The 82d Airborne Division culminated immediately as a result of scattered drops such as that of the 504th PIR, where "only 400 of the regiment's 1,600 men (25 percent) had reached the regimental area [drop zone]."⁴⁷ Among the 5,733 men of the 82d employed in the Sicily campaign, there were 964 casualties (16.8 percent); 190 of those casualties were killed in action (KIA), six died of wounds, 172 were prisoners of war, 48 were missing in action (MIA), 73 missing and later returned, and 575 wounded (WIA).⁴⁸ Inserting those lightly equipped paratroopers into combat against German Panzer divisions—at an enormous cost in common military terms of American blood and treasure—provided little in terms of decisive results or conditions set toward a desired end state.

Since so many elements of the regiments were isolated and forced to attach themselves to Canadian or Seventh Army Forces, there was no evidence of a decisive point or a key event that contributed materially to success. Although it is reasonable to suggest that Ridgway would have known the strategic importance of invading Italy—he received planning guidance directly from General Marshall⁴⁹—there was no mention of purpose in the mission statements, nor was there a description of a desired future condition that the commander wanted to see at the conclusion of operations. Historian Carlo D'Este concluded, "Most of Gavin's men were not even aware their destination that night was Sicily until moments before take-off from Tunisia."⁵⁰ Since there was no clear end state, there also was no linkage of the tactical objectives to that end state or lines of effort. The division elements on the ground later procured transportation and relied on a single basic load of ammunition for the remainder of the campaign, and at one

point the 505th PIR “marched continuously [one] day without food or water . . . a distance of 23 miles” because the 82d Airborne Division maintained its emergency stockpile of supplies in Africa.⁵¹

Although the Sicily campaign contained two planned phases with sequential drops and different missions for the two participating regiments, there was no advantage gained with this phasing. Had the entire division jumped concentrated at a decisive point in a combined effort with offensive ground forces, the element of simultaneity and depth might have overwhelmed the enemy and achieved lasting effects. Although General Ridgway received congratulatory remarks from his higher headquarters for the “remarkably rapid and successful conclusion of the mission assigned . . . to capture Palermo,” there is no evidence that he planned or envisioned this incidental tempo prior to execution.⁵²

“That jump,” as Ridgway proclaimed, “developed into one of the tragic errors of World War II”⁵³—an error that might have been avoided had the totality of the 82d Airborne Division’s maneuvers and battles been directed toward achieving a common goal as Svechin’s theory of operational art suggested. Additionally, the division’s employment in Husky violated several doctrines of combat—ultimate objective, simple and direct plans, unity of effort and concentration—that Ridgway should have had knowledge of because *Army Field Service Regulations* of 1941 prescribed them.⁵⁴ Many of these problems might have been avoided had the operation been rehearsed as the regulations outlined, including “joint training by the combined arms detailed to participate in the operation.”⁵⁵ Operation Husky caused Ridgway to relearn these doctrines through the “sad bitter lesson” of the loss of planes and men caused by the lack of unity of effort.⁵⁶

In his memoirs, Ridgway stated,

Nervous and excited gunners, who had just been under heavy attack, forgot that friendly planes [the airborne assault force] were to be in the air at that hour, and continued firing in the belief that our transports were enemy bombers making another pass at them.⁵⁷

Intuitively, Ridgway understood the importance of air corridors, pressed for them, did the best he could when denied the corridors and strived never to repeat the error. He later successfully prevented what would have been a disaster had the division jumped as planned into Rome.⁵⁸

Ridgway learned another important lesson. He was never again away from his paratroopers during combat. In future operations, he would put himself all the way forward. Ridgway said that advanced elements would stop moving forward once they came under fire. Therefore, he determined, “the best way to keep them moving was to be right there with them, moving with the point of the advanced guard.”⁵⁹ For the next airborne operation, Ridgway jumped with his paratroopers.⁶⁰ He maintained this lead-from-the-front leadership style for the remainder of his career.

Operation Neptune

Even though General Ridgway jumped into Normandy during Operation Neptune and into direct combat action with the 82d Airborne Division, he was still unable to command his organization effectively. In his memoirs, he wrote, “There was little I could do during that first day toward exercising division control. I could only be where the fighting seemed the hottest, to exercise whatever personal influence I could on the battalion commanders.”⁶¹ As in Operation

Husky, the 82d Airborne Division achieved limited tactical success in Operation Neptune, but once again Ridgway experienced failure at the operational level because he did not link tactics to strategic ends. Nor did he develop an adequate visualization of operations. In Ridgway's second trial in combat, his skill, knowledge and experience in employing airborne forces improved but still resulted in an inadequate application of operational art.

A 10 March 1944 order from the Supreme Headquarters Allied Expeditionary Force (SHAEF) to the 21st Army Group Commander clearly outlined the object of Operation Overlord, the comprehensive invasion operation that included Neptune as an amphibious component. The end state was "to secure a lodgment area on the continent from which further offensive operations can be developed."⁶² The conditions listed required that the lodgment "contain sufficient port facilities to maintain a force of some twenty-six to thirty divisions, and enable that force to be augmented by follow-up shipments."⁶³ There is evidence that Ridgway understood this strategic end state and these conditions sought for the European invasion because four months later, on 25 July 1944, he justified the decisions of the Supreme Command, and the employment of airborne forces during Operation Neptune, in a memorandum to SHAEF.⁶⁴

By the time the SHAEF end state and conditions filtered down three levels to the 82d Airborne Division, Ridgway's mission statement contained five tactical tasks and omitted any requirement for him to visualize the nature and design of operations. An 82d Airborne report of operations cited the mission received from First Army as:

Land by parachute and glider before and after dawn of D-Day astride the Merderet River, seize, clear and secure the general area [eight geographical coordinates] within its zone; capture Ste. Mere-Eglise; seize and secure the crossings of the Merderet River at [two geographical coordinates] and a bridgehead covering them, with MLR [the main line of resistance] along the general line [five geographical coordinates]; seize and destroy the crossings of the Douve River at Beuzeville Las Bastille and Etienville; protect the north-west flank of the VII Corps within the Division zone; and be prepared to advance west on Corps order to the line of the Douve north of its junction with the Prairies Marcageuses.⁶⁵

At the tactical level, the 82d Airborne Division achieved success. On 10 July 1944, at the conclusion of the Normandy operations and after 53 days of front-line battle, General Ridgway reported that the 82d had "accomplished every mission on or ahead of orders; had decisively beaten all enemy forces opposing it; [and] had never lost ground gained."⁶⁶ However, this success, centered on the tactical tasks of securing four key crossing sites over the Merderet River, came at a tremendous cost. In the same one-page report, Ridgway accounted that the division sustained 5,363 casualties (46 percent of a committed force of 11,657 paratroopers): 778 (15 percent) killed in action, 3,373 (63 percent) evacuated wounded, nine (less than .01 percent) simply missing in action and, perhaps most significant, 1,203 (22 percent) missing in action from the initial airborne assault landings.⁶⁷

In spite of such losses—and Ridgway's accompanying passionate declaration that the division held "a fighting spirit higher than ever"—the division was culminated and incapable of further operations.⁶⁸ Ridgway should have visualized the nature and design of operations above the tactical level. In evaluating Ridgway's performance at the operational level, he violated the operational art element of culmination as well as seven more of the 11 elements required for commander's visualization.

The following passage is representative of Ridgway's circumstances after the jump:

The dawn of D plus 1 confronted the 82d Airborne Division with the unsolved problems of the day before. The la Fiere bridge and Ste. Mere-Eglise remained the critical areas in the western sector. Until 0900 the division continued to be out of touch with higher headquarters. D-Day had left all of the division units hard-pressed, and General Ridgway's primary concern was in the arrival of expected tank and infantry reinforcements. At the close of the day, he had reported his position, his losses in men and materiel, and his need for artillery, antitank guns, ammunition, and medical supplies. He had stated that he was prepared to continue his mission when reinforcements came. But the communication was one-way and General Ridgway did not even know whether his messages got through.⁶⁹

The 82d Airborne Division did not have sufficient operational reach. An 82d administrative order for supply for Operation Neptune articulated the supplies in type and quantity, e.g., "one 'K' and two 'D' rations," carried by airborne and seaborne troops.⁷⁰ However, it did not discuss supply replenishment in terms of where, when or from whom 82d troopers would receive more rations or any other supply commodity. The same order stated "none in combat" in terms of replacement personnel. The AAR mentioned only one aerial resupply mission and that "a small amount of equipment and supplies were received later by glider."⁷¹

Although the 82d Airborne Division employed its assets in three approaches—three PIRs by parachute, a regiment by glider and supporting enablers by sea—there is no evidence to suggest that Ridgway visualized a center of gravity, or that he arranged operations directly or indirectly against a center of gravity. Nor did the three approach methods link the tactical objectives to the end state as operational art lines of operation, or effort, require. If Ridgway visualized any phasing or transition, he failed to achieve it. The culminated division without operational reach was not, as was its mission to be, "prepared to advance west on Corps order to the line of the Douve."⁷²

Ridgway also lost the tempo that airborne forces inherently provided to operations as the *Army Field Service Regulations* prescribed in 1941.⁷³ After jumping with the lead parachute forces, he was out of radio contact for 36 hours. His subordinate units, as in Sicily, executed plans based on pre-jump rehearsals rather than through real-time control by the division command post.⁷⁴

Ridgway did not achieve the decisive point of this operation, which was inserting the airborne parachute and glider forces on their designated drop zones. Only the 505th PIR "landed generally in the vicinity of its drop zone," while the 507th and 508th PIRs as well as the gliders were "scattered" due to enemy reaction.⁷⁵

There was, however, some operational success beyond the tactical success. Because the 82d Airborne Division's forces were so scattered, they incidentally achieved simultaneity and depth against the enemy. Although disaggregated, the 82d paratroopers continued to bear on the enemy since "individuals who had been scattered in the landings rejoined their units throughout the day" and "small groups assembled to form small task forces until such time as the regiment could assemble completely."⁷⁶ Because "all men were briefed thoroughly on their missions" prior to the jump, Ridgway created opportunities to defeat the enemy in spite of the risk of potential mission failure caused by scattering.

This evidence demonstrates that Ridgway's operational art matured slightly, from the Sicily experience that saw near mission failure at enormous cost, to the Normandy experience that

saw huge mission accomplishment—although still at enormous cost. In Normandy, Ridgway applied three of the 11 elements of operational art where before he had applied none. The Army recognized Ridgway's tactical achievements and immediately placed him in command of the newly created XVIII Airborne Corps—a larger organization consisting of three airborne divisions.⁷⁷ Along with the 82d, the corps included the 101st and 17th Airborne Divisions.

Operation Market

General Ridgway had little opportunity to apply operational art in the first test of the XVIII Airborne Corps—Operation Market in Holland in September 1944. Only two of the corps' three divisions—the 82d and the 101st—participated in the Holland campaign, and both were “detached and placed under British operational control.”⁷⁸ Ridgway's command relationship and, equally imperative, his planning responsibilities, were relegated to merely administrative in nature. He could do little more than observe his two participating divisions, but he continued learning from the experience.

First Allied Airborne Army clearly provided the end state and conditions required. Operation Market facilitated the strategic drive into Germany and exploited the withdrawing enemy.⁷⁹ The mission statements of the two divisions were similar and tactically focused. The 82d Airborne Division was to

land by parachute and glider commencing D Day [south] of Nijmegen; seize and hold the highway bridges across the Maas River at Graves and the Waal River at Nijmegen; seize, organize and hold the high ground between Nijmegen and Groesbeek; deny the roads in the Division area to the enemy; and dominate the area shown on operations overlay, annex 3.⁸⁰

The mission of the 101st Airborne Division was to

land units in the general area [south] of Uden, seize and hold highway crossings near Neerpelt, Valkenswaard, Eindhoven, Son, St. Oedenrode, Veghel and Uden, and insure the advantage of the Second British Army.⁸¹

These missions to capture bridges and roads were essential to creating the conditions required and by D+3 the divisions had accomplished their missions.⁸²

The Holland operation required extensive operational reach. Both airborne divisions, along with the British 1st Airborne, departed for the jump from England. The 101st was “transported in 424 U.S. parachute aircraft and 70 American gliders.”⁸³ The first echelons of the 82d arrived in “480 U.S. parachute aircraft and 50 American gliders.”⁸⁴ Ensuring adequate operational reach, the airlift included sufficient fighter support for escort and drop-zone coverage as well as bombers over enemy positions.⁸⁵ Additionally, “two hundred forty-six [B-24s] dropped 782 tons [of supplies] with good to excellent results,” also ensuring operational reach on D+1; later supply drops fell into enemy hands due to poor visibility during unfavorable weather.⁸⁶

Ridgway sent a report of operations to Lieutenant General Lewis H. Brereton, Commanding General, First Allied Airborne Army, in December 1944 in which he discussed the element of risk in creating and maintaining the conditions necessary to achieve decisive results. In Holland Ridgway observed the first airborne operations conducted in daylight, which was divergent from the nighttime method previously conducted in Sicily and Normandy. For reasons of less dispersion, quicker troop assembly and less training required, Ridgway concluded that, by leveraging the effective allied air superiority, “a daylight airborne operation presents decided

advantage over the same operation conducted at night.”⁸⁷ The decision to jump in daylight was a decisive point because it allowed for greater accuracy over the drop zones.

That accuracy prevented culmination. Where the Normandy jump suffered a high casualty rate (46 percent), the Holland jump suffered a far lower rate. The 82d Airborne Division suffered 1,637 casualties (13.9 percent KIA, WIA and MIA) of 11,397 committed troops, and the 101st Airborne Division experienced 2,034 casualties (15.2 percent) of 12,767 committed troops.⁸⁸

Ridgway also observed a decisive point that justified the risk of employing airborne forces. During the planning for Market, the “enemy was engaged in a hasty and somewhat disorganized withdrawal under powerful Allied pressure . . . enemy command had been badly shattered, and his control severely crippled.”⁸⁹ The simultaneous drops of the airborne divisions into the depth of the German defenses overwhelmed the enemy’s forces and their will to resist.

Ridgway’s XVIII Airborne Corps forces planned an operation that considered six of the 11 elements of operational art—an indication that Ridgway’s operational art had matured. However, he had not yet considered several other elements. There was no consideration given to determining the enemy center of gravity as a source of moral or physical strength, nor were there any direct or indirect approaches in contending against an identified center of gravity. The plan lacked any significant phasing or transitions or developed lines of operations. Additionally, any tempo attained with an airborne troop insertion was lost, as the airborne troops became simply ground troops when the British Second Army failed to reinforce them.

The progressive application of the elements of operational art in Operations Husky, Neptune and Market demonstrated that General Ridgway’s visualization ability continued to develop. His unintended failure to adequately apply operational art prevented these operations from achieving improved efficiency at the cost of Allied troops, time and resources. As a division and corps commander, General Ridgway initially fought more as a tactical-level commander than at the operational level. If he had created campaigns by arranging tactical battles in sequence enabled by better visualization, he would have generated the conditions sought in the desired strategic end state⁹⁰—and he would have done so better and sooner. Ridgway learned from failure. For his fourth and fifth sequential combat operations in World War II, the increasing presence of the 11 elements indicate that Ridgway was beginning to master operational art.

Mastering Operational Art

The XVIII Airborne Corps, under Ridgway’s command, fought in the Battle of the Bulge in the Ardennes Forest and in Operation Varsity along the Rhine River in Germany. At the Bulge, nine of the 11 elements of operational art were present in the operations. In Varsity, all 11 elements were present. Ridgway’s education, skills gained from his training and lessons learned from his earlier combat experience complemented one another in a compounding effect. At the Bulge, Ridgway’s visualization matured.

Battle of the Bulge

General Ridgway learned a great deal from the shortcomings of Operation Market, and he applied operational art significantly better in the Ardennes Forest at the Battle of the Bulge from 18 December 1944 to 14 February 1945. As Ridgway’s skill increased, so did his responsibilities. In those weeks, the XVIII Airborne Corps employed an often-changing task organization comprising 10 divisions—nearly 97,000 soldiers.⁹¹ In the Bulge, Ridgway visualized and

The Maturation of General Ridgway's Operational Art—Elements of Operational Art	Husky Sicily 82d Division	Neptune Normandy 82d Division	Market Eindhoven XVIII Corps
Center of Gravity	No	No	No
Culmination	No	No	Yes
Decisive Points	No	No	Yes
Direct / Indirect Approach	No	No	No
Endstate and Conditions	No	Yes	Yes
Lines of Operation / Effort	No	No	No
Operational Reach	No	No	Yes
Phasing and Transitions	No	No	No
Simultaneity and Depth	No	Yes	Yes
Risk	No	Yes	Yes
Tempo	No	No	No
Analysis	0/11	3/11	6/11

Figure 2. Ridgway's Operational Art at Operations Husky, Neptune and Market (author created).

designed an operation that consisted of both defensive and offensive operations and incorporated nine of the 11 elements of operational art.

General Walter Bedell Smith, SHAEF Chief of Staff, said that Eisenhower correctly estimated the situation—the enemy “risking all of their reserves”—when the Germans “pushed three full armies into the Ardennes.”⁹² On 16 December 1944, the 7th Armored Division held the town of St. Vith with elements of the 106th and 28th Infantry Divisions and the 9th Armored Division holding territory directly south that appeared to “bulge” eastward from the Allied front lines.⁹³ On 17 December, the German Sixth Panzer Army enveloped those units. Instead of invading enemy-held territory with an airborne force insertion, SHAEF ordered the XVIII Airborne Corps on short notice to fly from England to Reims, France, then move by truck to Bastogne and reinforce allied defenses under the First U.S. Army against the German attack.⁹⁴ Ridgway promptly moved the 82d and 101st Airborne Divisions to the Ardennes, expecting the 17th Airborne Division as soon as possible afterwards.⁹⁵ Without the benefit of pre-planned orders, Ridgway’s assigned mission arrived in the form of “oral instructions” from General Courtney Hodges, Commander, First U.S. Army, for Ridgway “personally to do everything in [his] power to get these divisions out of their bivouacs and into combat fast.”⁹⁶ Ridgway’s “power” in this instance was the benefit of his experiential learning that enabled him to visualize how the operations should unfold.

In his first three combat operations, Ridgway had not considered phasing and transitions. In the Ardennes, it was the most prominent element of his operational art. Ridgway visualized a plan through 11 sequential maneuvers that he described in terms of a concentration, an attack, a relief-in-place, a withdrawal, an active defense, an attack, a regrouping, another attack, seizing key terrain, another relief and a movement to contact.⁹⁷ In the first operational phase, between 20 and 23 December, the XVIII Airborne Corps concentrated its forces, having

assumed command of various divisions already committed to repelling German forces attacking westward and maintaining an allied defensive line. In addition to its habitual command of the 82d Airborne, the corps controlled the 7th Armored along with the 30th, 84th, 106th and 28th Infantry Divisions. The 30th Infantry, the 82d Airborne and the 7th Armored comprised the front line in the corps sector.⁹⁸ With the 82d screening, the XVIII Airborne Corps conducted a withdrawal of the 7th Armored and the 28th and 106th Infantry Divisions “with all their attached units intact, a force of approximately fifteen thousand, and with all their supplies and equipment . . . [this] marked the successful completion of the initial operation of the XVIII Corps (Airborne).”⁹⁹ By the end of December, the 82d Airborne and the 30th Infantry held the line, “every attack was repulsed” and the XVIII Airborne Corps prepared for attack. In the second operational phase, between 3 and 10 January, the 82d Airborne and the 75th and 30th Infantry Divisions, with the 7th Armored Division in corps reserve (later switching with the 82d), conducted a three-pronged attack southward against defending German forces.¹⁰⁰ In the third operational phase, between 28 January and 5 February, the 1st Infantry and 82d Airborne Divisions exploited success and changed direction with a two-pronged attack eastward toward the Siegfried Line fortifications.¹⁰¹

In addition to the element of phasing and transitions, there were several other firsts for Ridgway. For the first time, he applied his forces in a direct approach in contending with the operational center of gravity that the XVIII Airborne Corps faced. Initially, while the Allies were defending, the German Army’s source of strength that enabled its freedom of action was the Sixth Panzer Army with its three corps of “overwhelming superiority of men and materiel.”¹⁰² Later, after XVIII Airborne Corps advances successfully recaptured St. Vith, Ridgway attacked what served as the German Army’s new center of gravity, the fortifications of the Siegfried Line.¹⁰³

Also for the first time, Ridgway commanded armored forces in addition to the airborne and light infantry divisions already familiar to him. The XVIII Airborne Corps had such sufficient force structure, with as many as seven divisions for most of the attack, that Ridgway rotated divisions into reserve and prevented culmination. The force structure also enabled Ridgway to design the operation adhering to the elements of simultaneity and depth. On 25 January, the XVIII Airborne Corps received orders for “a new Corps attack . . . changing direction to the northeast . . . to provide a powerful attack on a narrow front, in great depth . . . [as] a sustained advance by successive attacks by rested divisions abreast.”¹⁰⁴ Sufficient force size with rotating reserve divisions did more than overwhelm the enemy and prevent XVIII Airborne Corps culmination—the force gave Ridgway the operational reach necessary to gain a marked advantage materially in achieving success decisively.

There were three decisive points of the operation. First, the timely response of the XVIII Airborne Corps in becoming operational less than 34 hours after alert proved decisive to denying the enemy further advances into friendly territory. Second, Ridgway’s decision to withdraw the 7th Armored Division at the urgent request of its commander, Brigadier General R. W. Hasbrouck, prevented German interdiction of the 7th Armored supply lines and that division’s culmination inside the pincer envelopment of the German counteroffensive on 17 December.¹⁰⁵ The third decisive point was regaining the initiative and exploiting success over an overwhelmed enemy, thus allowing the recapture on 23 January of St. Vith and its road network that were critical to German resupply.¹⁰⁶

On 17 January, Ridgway demonstrated ability to balance risk with opportunity. After careful assessment of the 75th Infantry Division’s seizure of the city of Vielsalm, Ridgway

issued orders to the division for “exploiting the advantage gained over the enemy.”¹⁰⁷ Ridgway called the commanding general of the 75th Infantry Division, Major General Ray E. Porter, and said,

I understand that you are having an extremely favorable condition in your sector. I want that situation exploited to the limit of physical capacity. Push out small groups with automatic weapons fire. Secondly, block passage to the south. This is an opportunity for your division to make a name for itself. Keep me informed.¹⁰⁸

The success from that exploitation enabled Ridgway to utilize another operational art element he had not considered until this point. The XVIII Airborne Corps now had tempo.

On 28 January 1945, the XVIII Airborne Corps attacked the Siegfried Line with such a tempo that the corps gained “complete initial surprise.”¹⁰⁹ Added to the divisions aligned under the command and control of the XVIII Airborne, the 1st Infantry Division attacked alongside the 82d Airborne. The results were so successful that the 1st Infantry Division “ran over German positions where individuals were found asleep and the 82d Airborne Division caught the enemy at breakfast.”¹¹⁰ Ridgway achieved intended tempo for the first time, as well as considerable operational success. There were only two operational art elements Ridgway did not consider in the Ardennes.

Since the employment of the XVIII Airborne Corps in the Ardennes was in reaction to the German counteroffensive, Ridgway expressed no clear end state or desired future conditions that he wanted to see when the Battle of the Bulge ended. Nor was Ridgway able to develop clear lines of operations in order to bridge a broad concept linking discreet tactical tasks to operational objectives and the end state. However, Ridgway learned enough experientially that by the next pre-planned operations, he visualized his operations with these two operational art elements in mind.

It is interesting to note how the Army appraised General Ridgway’s performance. On 1 February 1945, at the request of Army Chief of Staff General George Marshall, General Dwight Eisenhower, as the Supreme Allied Commander–Europe, appraised the performance of 38 general officers serving in the European Theater of Operations. Ridgway, as the XVIII Airborne Corps commander, ranked 16th (in the top 42 percent of his peers). In a memo reflecting the rank-ordered list, Eisenhower wrote that he evaluated these officers “based primarily upon [his] conclusions as to value of services each officer has rendered in this war and only secondarily upon my opinion as to his qualifications for future usefulness.”¹¹¹ Eisenhower’s personal comments described Ridgway as “magnetic; courageous; [and a] balanced fighter.”¹¹² Ridgway had matured not only as a general officer but also as an operational artist.

Operation Varsity

General Ridgway’s operational art had matured significantly in the 20 months since the disastrous airborne operation on Sicily in July 1943. In the fifth sequential appraisal of General Ridgway’s maturation of operational art in World War II, it is apparent that he adequately visualized the nature of Operation Varsity through careful consideration of all 11 elements of operational art. By March 1945, Ridgway’s apprenticeship in operational art was nearly complete.

In the XVIII Airborne Corps “Summary of Ground Forces Participation in Operation Varsity,” dated 25 April 1945, Ridgway cited guidance received directly from the Supreme Commander. In a face-to-face conversation with General Eisenhower on 9 February 1945,

Ridgway received orders to plan an airborne corps assault operation east of the Rhine River. The operational end state and its conditions were clear. The Rhine River, the last major defensive line of a disintegrating German Army, protected the Ruhr region east of the Rhine, which was “the heart of Germany’s industry” and a center of gravity.¹¹³ The 21st Army Group, to which the XVIII Airborne Corps was subordinate, intended to “isolate the Ruhr from the rest of Germany and break into the North German Plain.”¹¹⁴ A critical requirement of the COG was the “hundreds of thousands of enemy troops” protecting the Ruhr. A 21st Army Group report of operations identified a critical vulnerability to that COG in the system of dikes. The report expressed concern about the dikes: “If these were ‘breached, a rise in the water table would result in widespread flooding of’ the low-lying areas on either side of the river. The normal width of 400–500 yards might increase to as much as 3 miles.”¹¹⁵ The German front-line forces facing the 21st Army Group between the Rhine and the Ruhr area consisted of four parachute and three infantry divisions, with another infantry and two panzer divisions in immediate reserve.¹¹⁶ Understanding all of this, Ridgway began to visualize integrating ways and means to achieve the ends at a level of warfare between tactics and strategy.

Operationally, Ridgway’s visualization was that the XVIII Airborne Corps needed to seize “key terrain to disrupt the hostile defenses, and [prevent] the rapid establishment of a deep bridgehead by airborne troops with early link-up by other river crossing forces.”¹¹⁷ Ridgway also visualized that the corps needed to “seal off Wesel,” an industrial city east of the Rhine, and then be prepared to “exploit eastward.”¹¹⁸ The XVIII Airborne mission statement was

to disrupt the hostile defense of the Rhine in the Wesel sector by the seizure of key terrain by airborne attack, in order to rapidly deepen the bridgehead, facilitate crossing by Second British Army and link-up with Ninth U.S. Army; then be prepared for further offensive action eastward on Second British Army order.¹¹⁹

Wesel was key terrain, with a driving distance of only 344 miles (554 kilometers) to Berlin. In addition to seizing Wesel and destroying two existing bridges over the Rhine, the XVIII Airborne Corps planned to seize and secure a large area with four objectives of high ground designated as “areas to be held at all cost.”¹²⁰ The forces aligned under the corps headquarters for this operation consisted, according to Ridgway, of the “6th British and the 13th and 17th U.S. Airborne Divisions.”¹²¹ However, the 13th Airborne Division—which had only recently arrived on the continent and had not yet seen combat—was later withdrawn to ensure adequate resource availability for the other two divisions.¹²² That was a smart decision.

Withdrawing the 13th Airborne Division, along with tying in with adjacent units once the airborne divisions hit the ground, appreciably increased Ridgway’s operational reach and prevented culmination. For this jump, Ridgway ensured sufficient means were available. At 1000 hours on D-Day, 1,700 aircraft and 1,300 gliders delivered both airborne divisions—a total of 14,000 troops.¹²³ The drop was complete within three hours and, unlike the scattering of the airborne operations at Sicily and Normandy, the jump across the Rhine was so accurate that by nightfall the XVIII Airborne Corps had seized all but one objective, including five intact bridges across the Issel River.¹²⁴ The first resupply mission was right there also; 240 B-24 aircraft dropped “five hundred and forty (540) tons of ammunition, food and gasoline at 1300 hours.”¹²⁵ The aerial resupply mission scheduled for the next day was deemed unnecessary and duly cancelled.¹²⁶

Contributing to the XVIII Airborne Corps’ operational reach, Ridgway visualized a combined-arms offensive in phases. He arranged operations in a direct approach incorporating

combined arms in a joint and multinational effort against the enemy defenses. The XVIII Airborne Corps conducted a daylight airborne strike, leveraging what Ridgway described as the “complete Allied air supremacy and the overwhelming superiority of available Allied artillery.”¹²⁷ Varsity opened with a heavy bombing of German airports at D-3 and then the town of Wesel, along with a massed artillery preparation at D-1 that lasted until P-hour (the jump at 1000 hours) on D-Day. The continuous attack by medium bombers was a decisive point in the first phase of operations. For the next phase on D-Day, the 1st British Commandos had “launched a sneak attack on Wesel,” securing the western half of the town while ground forces assaulted across the Rhine north of Wesel and air transport assets supported the jump.¹²⁸ After the jump, artillery provided close support to the troopers on the ground. Ridgway also planned objectives by phases, with different lines seized by corps elements by D+1, D+2 and D+3, and the XVIII Airborne Corps executed the plan with a tempo that secured all the corps objectives within six days. The lines of operation also included deepening the bridgehead by 10,000 to 15,000 yards (5.6 to 8.5 miles) and tying in with left, right and rearward ground units.¹²⁹ Ridgway’s combined-arms effort enabled the XVIII Airborne Corps to achieve success across the Rhine ahead of schedule.

The tempo gained against the enemy was so effective that the XVIII Airborne Corps “averaged a daily advance of over seven miles, took 8,000 prisoners, and destroyed the 84th Infantry Division.”¹³⁰ After six days, the XVIII Airborne Corps had advanced 41 miles.¹³¹ The corps was ordered to exploit its successes eastward toward the areas of Dulmen and Haltern, thereby rapidly deepening the bridgehead. Ridgway later reported, in November 1945, that the key terrain of Dulmen and Haltern defiles east of the Rhine, seized and held by the 17th Airborne Corps, were “decisive contributions to this operation and subsequent developments of both British and U.S. armor were able to debouch into the north German plain at full strength and momentum.”¹³²

The operation’s plan also considered simultaneity and depth. Unlike the disastrous airborne operations on Sicily that saw forces inserted incongruously in time, space and purpose, this attack was coordinated between divisions, between adjacent corps and between national elements. The British 1st Commando Brigade conducted the ground assault across the Rhine River and then became the XVIII Airborne Corps’ reserve after the airborne assault as each division cleared and secured its area. Two airborne divisions enabled “simultaneous parachute drops and glider landings in the area north of Wesel.”¹³³ The vertical envelopment in conjunction with the river crossing and seizure of the town of Wesel gave the operation considerable depth that overwhelmed the enemy.¹³⁴

Ridgway indicated that he, along with British Second Army, planned to delay operations “by as much as five days if weather should compel postponement of the airborne effort.”¹³⁵ Ridgway knew he needed to balance the risk of catastrophe associated with airdrops in bad weather against the opportunities presented through the magnitude of such a detailed and coordinated joint and multinational effort. Fortunately, nothing prevented execution across the Rhine on 24 March 1945.

That execution, along with its prior planning, demonstrates how Ridgway’s operational art matured. Reflecting on the attack across the Rhine, Ridgway later wrote,

Throughout both planning and execution, the cooperation and actual assistance provided by the Commanders, Staff, and troops of the British formations under which this [XVIII Airborne] Corps served, which it commanded . . . [and] with which it was associated, left nothing to be desired.¹³⁶

It is conceivable that operational art matured among all the joint and multinational partners in the Allied war effort between 1943 and 1945.

Conclusion

General Matthew Ridgway’s visualization of operations matured based on his leader development, the lessons he learned from failure and from personally mastering operational art. His professional military education, as well as the doctrine of the era, prepared him for commanding a division and a corps. However, instead of linking the tactical level to the strategic level of war by integrating ways and means to accomplish the ends, as operational art suggested prior to World War II, the education and doctrinal training Ridgway received merely reflected the principles of war for employing large formations consisting of combined-arms maneuver in combat. It was not enough.

Ridgway learned the application of operational art experientially. In evaluations of his first five combat operations, it was easy to recognize that he initially considered none of the 11 Army operational art elements and, by the fifth operation, considered them all. These were costly lessons.

The Maturation of General Ridgway’s Operational Art—Elements of Operational Art	Husky Sicily 82d Division	Neptune Normandy 82d Division	Market Eindhoven XVIII Corps	The Bulge Ardennes XVIII Corps	Varsity Rhine River XVIII Corps
Center of Gravity	No	No	No	Yes	Yes
Culmination	No	No	Yes	Yes	Yes
Decisive Points	No	No	Yes	Yes	Yes
Direct / Indirect Approach	No	No	No	Yes	Yes
Endstate and Conditions	No	Yes	Yes	No	Yes
Lines of Operation / Effort	No	No	No	No	Yes
Operational Reach	No	No	Yes	Yes	Yes
Phasing and Transitions	No	No	No	Yes	Yes
Simultaneity and Depth	No	Yes	Yes	Yes	Yes
Risk	No	Yes	Yes	Yes	Yes
Tempo	No	No	No	Yes	Yes
Analysis	0/11	3/11	6/11	9/11	11/11

Figure 3. Ridgway’s Maturation of Operational Art (author created).

General Ridgway completed all the military education available in his era. However, it was only after the crucible of three combat operations that he eventually applied operational art successfully and not until his fifth that he mastered operational art. Had he known how to better apply operational art in Operation Husky, the first of his five combat operations in World War II, then Ridgway might have avoided the deaths of hundreds of friendly and enemy soldiers as well as civilians. Ridgway was just one of 34 corps commanders in the U.S. Army during World War II.¹³⁷ Perhaps if the Army had taught every large-unit commander operational art and its elements as current doctrine prescribes these terms, Allied forces could have ended the war sooner.

Implications

The U.S. Army cannot afford for operational-level commanders to learn operational art on the job at the cost of Soldiers' lives as General Ridgway learned the application of operational art informed by visualization. The current operational art doctrine is valid; it is imperative that the U.S. Army teach operational art to its field-grade officers as part of professional military education in the Army learning institutions. Operational art applied through a systemic approach using its 11 elements is critical to an operational-level commander's visualization in mission command. In academic year 2009–10, Army officers received only 18 hours of operational art instruction through Intermediate Level Education (ILE),¹³⁸ described as the "Army's formal education program for majors" and taught at the U.S. Army Command and General Staff College CGSC).¹³⁹ Since the Army War College presents a curriculum for senior lieutenant colonels that focuses at the strategic level of warfare, those 18 hours taught to majors at ILE are most likely the only lessons on operational art an officer ever receives unless that officer is one of approximately 126 selected annually for the highly competitive School of Advanced Military Studies (SAMS) at CGSC. In the following academic year (2010–11), SAMS taught operational art through 19 lessons totaling 200 hours.¹⁴⁰ Comparatively, operational art instruction received at ILE was only 9 percent of that received at SAMS.

Recommendations

Four recommendations have been drawn from this investigation of General Ridgway's maturation of operational art. The first and most important recommendation is that CGSC should increase emphasis on operational art. Second, those Army officers not selected for attendance at SAMS should conduct self-development by thoroughly reading doctrinal publications that include the topic of operational art (e.g., Joint Publication 3-0, *Joint Operations*, and Army Field Manual 3-0, *Operations*). Additionally, a considerable amount of literature related to operational art is available through CGSC's Combined Arms Research Library.¹⁴¹ Third, the scope of this investigation did not expand beyond World War II. A similar evaluation of General Ridgway as commander of the Eighth U.S. Army in Korea in 1951, viewed through the lens of the operational art elements, would be interesting. It might also prove educational to senior Army leaders. Finally, this study considered the 11 U.S. Army elements of operational art because General Ridgway served as an Army officer and because Army organizations authored most of the primary source documents investigated. However, Department of Defense Joint doctrine lists 17 elements of operational design in Joint Publication 3-0, *Joint Operations*—a more comprehensive listing with the exception of the element of risk, which JP 3-0 omits.¹⁴² Since current operations, and likely those in the future, are conducted jointly with sister services, further study of operational art should consider the expanded joint listing.

APPENDIX

Key Terms and Definitions

Center of Gravity: A center of gravity is the source of power that provides moral or physical strength, freedom of action or will to act.¹⁴³

Culmination: The culminating point is that point in time and space at which a force no longer possesses the capability to continue its current form of operations.¹⁴⁴

Decisive Point: A decisive point is a geographic place, specific key event, critical factor or function that, when acted upon, allows commanders to gain a marked advantage over an adversary or contribute materially to achieving success.¹⁴⁵

End State and Conditions: The end state is a desired future condition represented by the expressed conditions that the commander wants to exist when an operation ends.¹⁴⁶

Lines of Operation/Effort: In an operational design, lines of operations and lines of effort bridge the broad concept of operations across to discreet tactical tasks. They link tactical and operational objectives to the end state.¹⁴⁷

Direct or Indirect Approach: The *approach* is the manner in which a commander contends with a center of gravity. The *direct approach* is the manner in which a commander attacks the enemy's center of gravity or principal strength by applying combat power directly against it. The *indirect approach* is the manner in which a commander attacks the enemy's center of gravity by applying combat power against a series of decisive points while avoiding enemy strength.¹⁴⁸

Operational Reach: Operational reach is the distance and duration across which a unit can successfully employ military capabilities.¹⁴⁹

Phasing and Transitions: A phase is a planning and execution tool used to divide an operation in duration or activity. A change in phase usually involves a change of mission, task organization or rules of engagement. Phasing helps in planning and controlling and may be indicated by time, distance, terrain or an event.¹⁵⁰

Risk: Operational art balances risk and opportunity to create and maintain the conditions necessary to seize, retain and exploit the initiative and achieve decisive results.¹⁵¹

Simultaneity and Depth: Simultaneity and depth extend operations in time and space. Simultaneity has two components; both depend on depth to attain lasting effects and maximum synergy. Simultaneous combinations of offensive, defensive and stability tasks overwhelm enemy forces and their will to resist while setting the conditions for a lasting, stable peace.¹⁵²

Tempo: Tempo is the relative speed and rhythm of military operations over time with respect to the enemy.¹⁵³

Endnotes

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- ³ U.S. Army Field Manual (FM) 3-0, *Operations 2008, Change No. 1* (Washington, DC: U.S. Government Printing Office, 22 February 2011), para. 5-25. Defines commander's visualization as "the mental process of developing situational understanding, determining a desired end state and envisioning the broad sequence of events by which the force will achieve that end state."
- ⁴ Harry S. Truman, *Public Papers of the Presidents of the United States: Harry S. Truman, 1951* (Washington, DC: U.S. Government Printing Office, 1965), pp. 222–227. [http://www.trumanlibrary.org/publicpapers/index.php?pid=289&st=General Ridgway &st1=](http://www.trumanlibrary.org/publicpapers/index.php?pid=289&st=General+Ridgway+&st1=) (accessed January 23, 2011). Included the duty titles of Commander in Chief, Far East; and Commanding General, U.S. Army, Far East.
- ⁵ Not included in this list is General of the Army Henry H. Arnold, who was redesignated General of the Air Force pursuant to Public Law 58, 81st Congress, 7 May 1949, <http://www.history.army.mil/html/faq/5star.html>.
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- ⁷ For more discussion on the operational level of war, see U.S. Army Field Manual (FM) 3-0, *Operations 2008, Change No. 1*, para. 7-12. "The operational level links employing tactical forces to achieving the strategic end state. At the operational level, commanders conduct campaigns and major operations to establish conditions that define that end state."
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- ⁹ Army FM 3-0, *Operations 2008, Change No. 1*, para. 7-18.
- ¹⁰ *Ibid.*, para. 5-15.
- ¹¹ *Ibid.*, para. 5-70.
- ¹² *Ibid.*, para. 1-5. Army operational variables are political, military, economic, social, information, infrastructure, physical environment and time variables.
- ¹³ *Ibid.*, para. 5-3.
- ¹⁴ War Department, Field Manual (FM) 100-5, *Field Service Regulations, Operations* (Washington, DC: U.S. Government Printing Office, 22 May 1941), para. 120.
- ¹⁵ U.S. Army Command and General Staff College (CGSC) Library, *A Military History of the U.S. Army Command and General Staff College, 1881–1963* (Fort Leavenworth, KS: U.S. Army Command and General Staff College), pp. 28–29. No author named.
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- 18 Ridgway, *Soldier*, p. 46.
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- 35 *Ibid.*, p. 26.
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- 37 Clay Blair, *Ridgway’s Paratroopers* (Garden City, NY: Dial Press, 1985), pp. 74–75.
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- 88 First Allied Airborne Army, "Narrative of Operations in Holland," pp. 22–24.
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- ¹⁰¹ *Ibid.*, p. 13.
- ¹⁰² *Ibid.*, p. 7.
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