Sowing the Seeds of Victory: The US Army War College in the Interwar Period

A Monograph

by

MAJ Luke A. Calvert
US Army

School of Advanced Military Studies
US Army Command and General Staff College
Fort Leavenworth, KS

2018

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	**2. REPORT TYPE**	**3. DATES COVERED** *(From - To)*
12-04-2018	Master's Thesis	June 2017 – April 2018

4. TITLE AND SUBTITLE
Sowing the Seeds of Victory: The US Army War College in the Interwar Period

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
Major Luke A. Calvert

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
U.S. Army Command and General Staff College
ATTN: ATZL-SWD-GD
Fort Leavenworth, KS 66027-2301

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Advanced Military Studies Program

10. SPONSOR/MONITOR'S ACRONYM(S) NUMBER(S)

12. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for Public Release; Distribution is Unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

World War I changed the strategic context of the 20th century and led to broad changes in the officer education system of the US Army. During the interwar period, the US Army War College trained senior military officers for large-scale, combined arms maneuver. This monograph evaluates the War College's preparation of leaders for the challenges they would face in World War II, primarily by examining the college's curriculum and training process. This study argues that the War College provided select officers with a dedicated venue for studying war in the broadest scope. Additionally, the educational process and curriculum produced agile, adaptive leaders who shared understanding with their fellow graduates. In the crucible of modern combat, War College graduates succeeded as commanders, staff members and planners.

15. SUBJECT TERMS
Interwar Period, World War I, World War II, Officer Education, Operational Art

16. SECURITY CLASSIFICATION OF:			**17. LIMITATION OF ABSTRACT**	**18. NUMBER OF PAGES**	**19a. NAME OF RESPONSIBLE PERSON**
					Major Luke A. Calvert
a. REPORT	**b. ABSTRACT**	**c. THIS PAGE**	(U)	43	**19b. TELEPHONE NUMBER** *(include area code)*
(U)	(U)	(U)			

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

Monograph Approval Page

Name of Candidate: MAJ Luke A. Calvert

Monograph Title: Sowing the Seeds of Victory: The US Army War College in the Interwar Period

Approved by:

_____, Monograph Director
Peter J. Schifferle, PhD

_____, Seminar Leader
Eric J. Adams, LtCol

_____, Director, School of Advanced Military Studies
James C. Markert, COL

Accepted this 24th day of May 2018 by:

_____, Director, Graduate Degree Programs
Robert F. Baumann, PhD

Abstract

Sowing the Seeds of Victory: The US Army War College in the Interwar Period, by MAJ Luke A. Calvert, Army, 43 pages.

World War I changed the strategic context of the 20th century and led to broad changes in the officer education system of the US Army. During the interwar period, the US Army War College trained senior military officers for large-scale, combined arms maneuver. This monograph evaluates the War College's preparation of leaders for the challenges they would face in World War II, primarily by examining the college's curriculum and training process. This study argues that the War College provided select officers with a dedicated venue for studying war in the broadest scope. Additionally, the educational process and curriculum produced agile, adaptive leaders who shared understanding with their fellow graduates. In the crucible of modern combat, War College graduates succeeded as commanders, staff members and planners.

Contents

Acknowledgements

I would like to thank my monograph director, Dr. Peter Schifferle, and the staff of the Advanced Military Studies Program for their dedicated support in my effort to produce a monograph that adds value to the profession. I would also like to thank my Seminar leader, LtCol Eric Adams for his mentorship, encouragement, and demonstration of officer values. I would like to thank my monograph syndicate for their candid feedback on this work. I extend my gratitude to COL (RET) T.J. Jamison, COL (RET) John Norris, COL Michael Demirjian, COL Allan Pepin, COL John Kline, and LTC Christopher Martinez for giving me the opportunity to grow as an officer, leader, and student of the profession of arms. Most importantly, I wish to recognize my wife, Andrea, who has surely borne more than her share of the task in carrying our family thus far in the SAMS experience.

Acronyms

1LT	First Lieutenant
AEF	American Expeditionary Force
AG	Army Group
AIC	Army Industrial College
AWC	Army War College
CSA	Chief of Staff of the Army
CGSS	Command and General Staff School
DIV	Division
FSR	Field Service Regulations
GEN	General
GOP	General Organization Project
GS	General Staff
IR	Infantry Regiment
LTC	Lieutenant Colonel
LTG	Lieutenant General
MAJ	Major
MG	Major General
NDA	National Defense Act
OES	Officer Education System
SHAEF	Supreme Headquarters Allied Expeditionary Force
SS	Schutzstaffel
WPD	War Plans Division

Introduction

> The War College marks a great change in the thinking or, let us say, the formal education of officers of our armed services. That formal education up until the time of the War College had been concerned with the techniques, the tactics, the logistics of the battle, of campaigns; the preparation and the operation of troops. Now you are thinking about war and about victory in war, or better, about keeping us out of war. The strength of a nation can never be measured merely in guns, planes, tanks, and ships. The real influence of a nation in the world is measured by the product of its spiritual, its economic, and its military strength. And so, realizing that war involves every single facet of human existence and thinking, every asset that humans have developed, all of the resources of nature, here [at the Army War College] education deserts the formerly rather narrow business of winning a tactical victory on the battlefield; it is now concerned with the nation.
>
> —Dwight Eisenhower, *Address to the US Army War College*, 21 August 1966

In the history of warfare, there are two worlds: the one before 1914 and the one that emerged in 1918 when the guns fell silent. In the war that engulfed the world for four years of the twentieth century, the armies of industrialized nations collided until the death toll reached into the millions, and until once thriving economies ground to a halt. World War I (WWI) was a cataclysm that marked power redistributions on a global scale, a revolution in military affairs, and broad societal changes for the many nations touched by the conflict. When the United States entered WWI in 1917, the war machines of the European powers were beginning to disintegrate after three years of fighting for a decision. Long range artillery, the airplane, and the tank supported millions of soldiers in combined arms maneuver. Yet, stalemate became the frustrating norm. Exhaustion rather than decisive victories, the encirclement and destruction of armies, or the capture of capitals would lead to the November 1918 armistice. For the United States, the experiences of the Allied Expeditionary Force (AEF) on the western front drove significant changes in American thinking on war. [1]

In the aftermath of the war, America emerged as a global power with global interests. For the United States, success in a future conflict like WWI would demand the ability to mobilize,

[1] Epigraph from George Pappas, *Prudens Futuri: The US Army War College 1901-1967* (Carlisle Barracks, PA: The Alumni Association of the US Army War College, 1967), 137.

deploy, and fight in distant theaters. America's first experience at this proved cumbersome and demanded a restructuring of the defense establishment. To ease the transition from peace to war, Congress passed the National Defense Act (NDA) of 1920. For the US Army, success on the modern battlefield required professional soldiers who could focus the nation's war-making potential towards strategic objectives. Thus, the Army's school for training senior leaders, the US Army War College (AWC), expanded its scope to consider war at the national level and increased its emphasis on large scale, combined arms maneuver. From 1919-1940, the AWC sought to develop leaders who could consider modern war holistically, devise plans for operations, and lead effectively. As the second global war of the twentieth century escalated, graduates of the AWC took their places as commanders, staff members, and planners. World War II (WWII) would serve as a proving ground for the senior officer education and training system in the US Army.

This monograph analyzes the role of the AWC in preparing leaders for the challenges they faced in WWII, suggesting in the end that the War College prepared its graduates to plan and lead in modern combat. The college developed high-quality graduates who could apply critical thinking skills in a variety of roles. The ever-evolving education and training process of the War College instilled in students the ability to account for the strategic context of operations, devise operational plans, and see those plans through to completion in the fog of war. This monograph will argue that the graduates of the AWC, equipped with these skills, had a significant and positive impact on the conduct of WWII.

This monograph consists of five sections. Section I portrays the character of modern war using vignettes from WWI. It emphasizes the development of combined arms maneuver by large units and uses the Cantigny campaign in WWI to illustrate the state of modern combat. Section II describes the impact of WWI on both US National policy and on the US Army officer corps. It shows the impact of the NDA in terms of effects on the Army. The section then looks at how the Army interpreted its experiences in WWI. Section III begins by examining the historical roots of the AWC and then proceeds to cover its evolution from inception to WWII. This section focuses

on the educational process and the major outputs of the academic curriculum, emphasizing the AWC method for training its students to plan for and conduct modern war. Section IV surveys the impact of AWC graduates on the conduct of WWII. Rather than focusing on the impact of one graduate, it looks briefly at several key leaders at all levels of war and attempts to draw out the unique skills and competencies that enabled their success when facing complex problems. This section offers a value judgement on the AWC's contribution to the conduct of WWII. From Sections I-IV, Section V distills out a few key lessons for the modern military professional. It suggests the value of outputs like those created at the AWC for the modern strategist and practitioner of operational art.

The Character of Modern War

WWI created a new paradigm for armed conflict in the modern age. For the United States, it marked a transition from a period of small scale, unilateral actions to total wars of national existence.[2] The total ends of modern conflicts involved the destruction of armies, the occupation of territory, and the defeat of the enemy's will. Achieving victory or avoiding defeat required the mobilization of a nation's war-making potential. Industrialized societies fielded enormous armies equipped with the latest implements of war. Mass-produced trucks, tanks, airplanes, and artillery enabled the rapid concentration of combat power. These new implements supported the attack of the infantryman, inspired by the spirit of the offensive, the great guarantor of decisive results in war.[3]

[2] Allan R. Millett, "Cantigny," in *America's First Battles, 1776-1965,* ed. Charles E. Heller and William A. Stofft (Lawrence: University of Kansas Press, 1986), 150; Antulio J. Echevarria II, "American Operational Art, 1917-2008," in *The Evolution of Operational Art, From Napoleon to the Present,* ed. John Andreas Olsen and Martin van Creveld (Oxford: Oxford University Press, 2011), 139.

[3] Michael R. Matheny, *Carrying the War to the Enemy: American Operational Art to 1945* (Norman: University of Oklahoma Press, 2011), 37; Millett, "Cantigny," in *America's First Battles,* 152-153.

The Great War marked an inflection point in the evolution of combined arms integration. Commanders directed interdependent forces in the land, air, sea, and information domains towards operational objectives. Motorization offered speed of concentration and firepower provided the means to destroy. Thus equipped, German and French forces clashed in the Battle of the Marne after mutual attempts to envelop the other failed. The breakdown of the Schlieffen-Moltke Plan resulted in a war of attrition in which each side tried repeatedly to restore maneuver to the battlefield.[4] Heavy artillery and machinegun fire on both sides stopped these attempts short of decision. To fortify against the massed infantry assault, each side dug in, forming a long, defensive line that stretched the length of the front. To break the stalemate, the opposing forces integrated artillery barrage with infantry assault, hoping to penetrate the enemy's layered defenses and strike a decisive blow at lines of communication or command and control nodes.[5]

The AEF's first major offensive in WWI, the Battle of Cantigny, introduced the American army to this type of modern warfare.[6] Despite three years of hard, attritional combat, wins against Russia bolstered the German spirit. On March 21, 1918, General Ludendorff initiated a 47-division offensive that created a 40 by 50 mile salient and threatened to rupture the allied lines.[7] In response, General Pershing committed the yet untested AEF 1st Division to assist the French forces who were coalescing north of Paris to push back the Germans. General Pershing saw an opportunity for a limited objective attack at Cantigny which sat inside the newly formed German salient.[8] Lieutenant Colonel (LTC) George Marshall, the Division (DIV) G-3,

---

[4] Holger Herwig, *The Marne, 1914: The Opening of World War I and the Battle that Changed the World* (New York: Random House Publishing Group, 2009), 310.

[5] Herwig, *The Marne, 1914,* 306.

[6] "History of the First Division: World War I," 1st Division Museum, accessed March 11, 2018, https://www.fdmuseum.org/about-the-1st-infantry-division/history-of-the-first-division/.

[7] James Scott Wheeler, *The Big Red One: America's Legendary 1st Infantry Division* (Lawrence: University of Kansas Press, 2017), 32, Kindle; Millett, "Cantigny," in *America's First Battles,* 152-163.

[8] Millett, "Cantigny," in *America's First Battles,* 168.

planned the ground advance and Brigadier General (BG) Summerall coordinated the artillery support. In LTC Marshall's opinion, success at Cantigny would require surprise and well-coordinated fires to suppress enemy artillery as the three battalions of the 28th Infantry Regiment (IR) carried out the assault. To add firepower to the attack, the French loaned one-hundred supplementary field guns and contributed to a stockpile of 200,000 artillery rounds, which was a nine-day supply. As part of the final preparations, the 1st Division conducted combined arms rehearsals that incorporated tanks, artillery, and engineers.[9]

In the initial attack, the 28th Infantry met light resistance after a two-hour preparatory barrage of indirect fire surprised the enemy. By the end of the first day, the Germans mounted a piece-meal counter-attack that lacked infantry and artillery synchronization. On the second day, two additional German counterattacks failed to break the American lines. The AEF focused intense indirect fire on likely enemy avenues of approach which dissipated the German attack and destroyed two enemy infantry regiments.[10] After the second day of fighting, tactical sophistication broke down and the contest became one of wills and the strength of each side's artillery.[11] By the fourth day, the 28th IR had defeated the German penetration, yet at significant cost.

Cantigny stands as an archetype for the operational problem of World War I: how to maneuver a large army supported by artillery, tanks, and aircraft in the pursuit of meaningful objectives.[12] The vulnerability of the infantry in the assault required carefully planned fires to suppress enemy indirect and machine gun fire. Coordination between maneuver and fire elements

---

[9] George C. Marshall, *Memoirs of My Services in the World War, 1917-1918* (Boston: Houghton Mifflin, 1976), 92; Millett, "Cantigny," in *America's First Battles,* 168-171.

[10] Wheeler, *The Big Red One,* 43, Kindle; Heller and Stofft, *America's First Battles,* 178-179.

[11] Marshall, *Memoirs,* 95; Millett, "Cantigny," in *America's First Battles,* 172-179.

[12] Olsen and Creveld, *The Evolution of Operational Art,* 140.

depended on reliable communication and adherence to detailed plans.[13] On both sides, the friction of battle more often led to the decoupling of the elements of combat power.[14] From Cantigny to the Meuse-Argonne, commanders focused their efforts on using the new implements of war in various combinations that would restore mobility to the battlefield; however, doctrinal, and technical solutions could not overcome the strength of those capabilities in the defense.[15]

After the war, US Army doctrine reflected the challenges that the AEF experienced in integrating capabilities on the battlefield. The 1923 *Field Service Regulations* (FSR) stated that "success in war can be achieved only by all branches and arms of the service mutually helping and supporting one another in the common effort to attain the desired end."[16] The 1923 regulation promoted the concentration of combined arms effects at the decisive place and time in order to destroy the enemy, the ultimate goal of combat. In his book, *America's School for War,* Dr. Peter Schifferle argues that "the critical elements of modern war, the need for effective command control, reliance on firepower, and the requirement for offensive operations utilizing combined arms to generate either envelopment or a penetration remained consistent beginning with the 1923 *FSR* through the 1944 *FM 100-5*." [17]

WWI made manifest in combined arms conflict several underlying societal shifts. Nations conscripted their men into armies numbering in the millions. The growth of industry and technological advancements enabled the motorization of these forces, now supported by tanks

---

[13] Millett, "Cantigny," in *America's First Battles,* 180-185. Heavy artillery fire often destroyed communication cables, exacerbating the already difficult problem of coordinating fires and maneuver in the midst of battle.

[14] Marshall, *Memoirs,* 92; Millett, "Cantigny," in *America's First Battles,* 149-185.

[15] Matheny, *Carrying the War to the Enemy*, 44.

[16] US War Department, *Field Service Regulations (FSR), United States Army, 1923* (Washington, DC: Government Printing Office, 1924), iv, accessed March 11, 2018, http://cgsc.cdmhost.com/cdm/ref/collection/p4013coll9/id/126.

[17] Peter J. Schifferle, *America's School for War: Fort Leavenworth, Officer Education, and Victory in World War II* (Lawrence: University of Kansas Press, 2010), 48.

and airplanes. Commanders in the Great War struggled to concentrate the new means of combat power, destroy the enemy, and achieve decisive victory. The scope and complexity of the modern battlefield challenged the ability of leaders to organize and fight effectively.

In addition to combined arms maneuver, large unit operations defined the modern battlefield. To win or prevent defeat in an interstate war of survival required nations to train, equip, and deploy millions of men. The United States faced the challenges of this task as it prepared to deploy the AEF. The War Department's study to finalize the organization of the US Army, the General Organization Project (GOP), was published three months after America declared war on Germany. [18] In his memoirs, LTC Marshal recalls meeting the 1st Division staff for the first time on board the *Tenadores* en route to Europe.[19] The Army was building its organizational structure on its way to a war of unfamiliar character. The staffs required to manage the AEF were initially sparse, containing only operations, intelligence, and administration sections, which proved inadequate for managing the functions of large combat formations.

In addition to the difficulties in organizing and mobilizing the AEF, the US Army faced the challenges of employing and sustaining its units in combat. For sustainment alone, the GOP projected that Line of Communication and Service of Rear troops would make up about 20% of the 1,000,000 men planned for deployment to France. [20] The number of soldiers dedicated to sustaining the forward elements of the AEF grew to 329,653 soldiers.[21] LTC Marshall's account of the preparations for and execution of the Meuse-Argonne offensive illustrate the issues of managing the movement of men and equipment on the battlefield. The concentration for the

---

[18] US Department of the Army, *United States Army in the World War, 1917-1919: Organization of the American Expeditionary Forces (AEF),* vol. I (Washington, DC: Center of Military History, 1988), 4, accessed March 11, 2018, https://history.army.mil/html/books/023/23-6/index.html.

[19] Marshall, *Memoirs,* 8.

[20] US Army, *US Army in the World War, Organization of the AEF,* 144.

[21] Matheny, *Carrying the War to the Enemy*, 30.

offensive required transportation for 500,000 men, 2,000 guns, and over 900,000 tons of equipment. The movement of one division's worth of infantry alone required 900 trucks to travel over the limited space provided by three available roads. In competition for this space were the division's 72 guns which covered 15 km of road when travelling.[22] The US First Army's plan for the Meuse-Argonne offensive involved four simultaneous corps-sized operations to attack the Germans along a 90-mile front. In the last major offensive of WWI, forty-seven days of modern combat cost 122,000 American casualties.[23] The offensive that finally precipitated the November 11, 1918 armistice stretched the capabilities of commanders and staffs to plan and execute operations with the massive means at their disposal.[24]

Again, post-war doctrine reflected the special problems of organization and command and control for large units, especially the echelons-above Corps. The *1923 FSR* considered the vast potential frontage of an army group, and the difficulty of commanding organizations separated by major terrain features.[25] An additional document, *The Manual for the Commanders of Large Units,* published in 1930, gave guidance to commanders and staffs at the Division and above level. Although sparse in its prescriptive nature for maneuvering large formations, the manual spoke about the role of the commander as a far-sighted leader, combined arms integrator, and synchronizer of the ends, ways, and means. The short manual conveyed the importance of strategic and operational level leaders coordinating the actions of subordinate commanders to achieve strategic purposes.[26] Both manuals showed the imprint of the operational experiences of

---

[22] Marshall, *Memoirs,* 149.

[23] Matheny, *Carrying the War to the Enemy,* 39,42; Marshall, *Memoirs,* 176;

[24] Marshall, *Memoirs,* 149, 178.

[25] US War Department, *FSR* (1923), 2.

[26] US War Department, *Manual for Commanders of Large Units* (Washington, DC: Government Printing Office, 1930), 8, accessed October 30, 2017, http://cgsc.cdmhost.com/cdm/ref/collection/p4013coll9/id/911.

WWI and indicated an awareness of the cognitive challenges of commanding large units in high-intensity combat.[27]

Dramatic increases in complexity and scale defined modern war. Nations mobilized their war-making potential resulting in armies equipped with the most technologically advanced means of destruction. Commanders of opposing armies attempted to integrate these means towards achieving operational and strategic objectives. Success depended on coordination between elements separated by time and space. Upon entry into WWI, the US Army faced the challenge of building the organizational structures that would support the operations of the AEF. The context of modern combat challenged commanders to energize the military machine, with its many parts, towards mission accomplishment. The combined arms maneuver of WWI rarely afforded positions of lasting advantage to either side. Firepower from strong defensive belts made a penetration of the lines a risky endeavor that typically gave way to a counter-attack. This pattern led to the well-known trench warfare for which there was no immediate technological or tactical solution. Despite the high cost of this type of warfare, both sides believed that they could achieve victory through determination, firepower, and maintaining the offensive.[28] Each nation poured enormous energy into bringing the first modern war to an earlier decision; yet, the relative parity in combat power frustrated these aims and resulted in a long, costly war of attrition with broad social and economic effects.[29]

World War I's Impact on the Army

World War I shaped the global strategic context in the century that followed, breaking apart European empires and shifting the global balance of power. While Europe had ground itself

---

[27] Robert M. Citino, *Blitzkrieg to Desert Storm: The Evolution of Operational Warfare* (Lawrence: The University of Kansas Press, 2004), 100.

[28] Millett, "Cantigny," in *America's First Battles,* 152.

[29] Barbara Tuchman, *The Guns of August: The Outbreak of World War I* (New York: Random House Trade Paperbacks, 1962), location 8149-8238, Kindle.

to destruction in the war, the United States emerged as a global military power supported by an expanding economy and scientific preeminence. During the war, the United States contributed significant financial and materiel support to the allies. By 1920, the military expenditures of the United States would account for nearly one-third of the great power total. Despite her advantageous post-war position, many were wary of the new burdens associated with America's emergent position of world leadership.[30] The staggering costs of the Great War contributed to this feeling. These included the death of 8 million soldiers, 50,280 Americans. The US would field 1.3 million men in "two armies, ten corps, and twenty-six divisions" in order to aid in the defeat of Germany and the restoration of temporary peace in Europe.[31] A general revulsion to war followed these sacrifices. Fears of a resumption of hostilities in Europe created a spirit of isolation in the United States**,** bringing with it reduced defense budgets and force end strengths.[32] While America's leadership balanced these international and domestic concerns, the Army's leaders faced the challenge of learning the correct lessons of World War I.

America's new role as a global power required updated defense policies to answer the problems of building, training, equipping, deploying, and sustaining the military in a foreign theater. Based on the premise that victory in future war would require the rapid mobilization of large armies, the 1920 NDA was the decisive policy response to America's military challenges.[33] The NDA's revision's created structures and processes that would better prepare the United

---

[30] G. John Ikenberry, *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order After Major Wars* (Princeton: Princeton University Press. 2001), 120-121; David Kennedy, *Over Here: The First World War and American Society* (New York: Oxford University Press, 1980), 378-380.

[31] Allan R. Millett and Peter Maslowski, *For the Common Defense: A Military History of the United States of America* (New York: The Free Press, 1984), 357-358*;* Schifferle, *America's School for War,* 15.

[32] Schifferle, *America's School for War,* 14; Harry Ball, *Of Responsible Command: A History of the US Army War College* (Carlisle Barracks, PA: The Alumni Association of the US Army War College, 1994), 81.

[33] Ball, *Of Responsible Command,* 168.

States to conduct a future war. Among the many elements of the NDA, the changes most relevant to this study involved strategic planning, the mobilization of industry, and the expansion of the army.

To prepare the United States a future war, the NDA charged the War Department General Staff (GS) with "the preparation of plans for the national defense and for the mobilization of the land forces of the United States." This change gave explicit responsibility to the GS for thinking in depth about the scenarios of a future war and devising feasible options that could inform detailed planning. This was an evolution of the pre-WWI War Department who dealt with many debacles of organization in the deployment of the AEF. To facilitate national-level planning, the Chief of Staff of the Army (CSA), General Pershing, added the War Plans Division (WPD) to the GS organization in 1921. The responsibilities of the WPD included strategic deployment and planning for operations in specific theaters of war. Although the GS had existed since 1903, WWI had revealed that the scope and complexity of modern war demanded a more robust and specially trained staff.[34]

Additionally, the NDA changed the processes for industrial mobilization and equipment procurement, assigning the responsibility to the Assistant Secretary of War. The NDA also authorized the Secretary of War to send a small number of officers to gain intimate knowledge of the capabilities of certain industrial sectors.[35] This initiative would lead to the institution of the Army Industrial College (AIC) in 1924, a small institution that produced only a few high-quality graduates.[36] Although the AIC did not gain primacy among the organizations who grappled with

[34] An Act for Making Further and More Effectual Provision for the National Defense and Other Purposes, 66th Cong., 2d sess., chapter 227., 1920, accessed September 30, 2017, https://www.loc.gov/law/help/statutes-at-large/66th-congress/session-2/c66s2ch227.pdf; Ball, *Of Responsible Command*, 176-177; Mark Watson, *United States Army in World War II, Chief of Staff: Prewar Plans and Preparations* (Washington, DC: Center of Military History, 1950), 63.

[35] "National Defense Act," 1920.

[36] Schifferle, *America's School for War,* 78.

the problem of mobilization, the formation of the College demonstrated the military's larger efforts to develop a body of professionals who could mobilize US war-making potential. These changes demonstrated the recognition that effective transitions to war demanded deliberate structures, careful planning, and integrated efforts from military and civilian authorities.[37]

Finally, the NDA established the Army of the United States, which consisted of the Regular Army, the National Guard, and the Reserve. The Act codified the organization of the Army into echelons from Brigade to Field Army, providing the theoretical command structure to support the growth of the force.[38] The selective service operations for WWI had expanded the military by 2,810,296 men between 18 May 1917 and 11 November 1918.[39] The GOP that studied the AEF organization for WWI concluded that a one-million man army was the smallest force in modern war that would be a "complete, well-balanced, and independent fighting organization."[40] The study added that an army was the smallest subdivision that could act as a balanced force, possessing the essential weapons and services of modern war.[41] The organizational revision of the 1920 NDA provided the structure for building armies without the maintenance of a large standing regular force.

The US Army also considered the lessons from its experiences in Europe. Prior to the Great War, the major preoccupation of the Army had been in performing constabulary functions on the American frontier.[42] When the United States declared war on Germany on April 6, 1917,

---

[37] US Department of the Army, *History of Military Mobilization in the United States Army: 1776-1945* (Washington, DC: Center of Military History, 2006), 381.

[38] Ball, *Of Responsible Command,* 168.

[39] US Army, *History of Military Mobilization,* 277.

[40] US Army, *US Army in the World War: Organization of the AEF,* 93.

[41] US Army, *US Army in the World War: Organization of the AEF,* 93

[42] Olsen and Creveld, *The Evolution of Operational Art,* 139. Echevarria notes that, prior to WWI, the US Army was a small force of 100,000 who had some experience fighting rebels in the Philippines and bandits in Mexico.

the Army had yet to develop a complete concept for employment of its armed forces. Commanders and staffs lacked the experience planning for and executing large-scale, joint, combat operations. As the AEF made the transition to Europe and prepared to join the allies in combat, the Army found itself facing novel problems for which it was unprepared.[43] In combat, American units encountered chronic tactical and operational problems of integrating combined arms to produce a penetration of the enemy's defenses.[44] Attempts at technical and tactical innovation failed to deliver decisive results or significantly alter the character of the war. These conditions presented significant cognitive challenges for commanders and staffs. In his memoirs, LTC George Marshall reflected on the difficulty of planning for the concentration of the First Army in the Meuse-Argonne sector while the force was still engaged in the reduction of the St. Mihiel salient. Marshall referred to the operational planning for the First Army's subsequent movement and concentration as the most mentally trying task of his WWI experience.[45] When the Great War ended, the AEF had only begun to work through the essential problems of modern war.[46]

In 1919, General Pershing directed the AEF Superior Board on Organization and Tactics to compile the conclusions from twenty subordinate boards' findings on the war.[47] The two-hundred-page study covered a broad range of topics and makes specific recommendations for

---

[43] Schifferle, *America's School for War,* 9; Matheny, *Carrying the War to the Enemy,* 28.

[44] Matheny, *Carrying the War to the Enemy*, 43.

[45] Marshall, *Memoirs,* 138.

[46] Matheny, *Carrying the War to the Enemy,* 44; Marshall, *Memoirs,* 7; Millett, "Cantigny," in *America's First Battles,* 154; Dwight D. Eisenhower, *Crusade in Europe* (Kingswood, Surrey: Windmill Press, 1949), 6. Allan Millett notes in "Cantigny" that of the AEF's generals, only one, General Pershing, had commanded a brigade in action.

[47] Matheny, *Carrying the War to the Enemy*, 46; United States Department of the Army, American Expeditionary Force, *Superior Board on Organization and Tactics* (Washington, DC: US Army Military History Institute, 1925), 4-15, 105-125, accessed March 08, 2018, https://www.scribd.com/doc/13810100/organization-and-tactics-aef-superior-board-report-1919.

future operations. According to the Board, unity of command was the most important lesson from the war. The study envisioned the commander, supported by a large staff, coordinating the many arms and agencies of the force. It saw the infantry commander as a combined arms integrator rather than simply responsible for ground troops. In addition to making considerations for the future integration of a large air service and the creation of air defense organizations, the study recommended the general elimination of horse-drawn weapons and vehicles from the battlefield.[48] The Superior Board's report represented the Army's first post-war effort at synthesizing the lessons of WWI in order to drive institutional change and better prepare commanders, staffs, and soldiers for the future of combat.[49]

In addition to impacting US policy in significant ways, WWI had a profound impact on the officer corps of the US Army. The isolationism of the United States during the interwar period led to drastic reductions in the size of the force; however, the NDA created a framework that would enable the military-industrial complex to mobilize for a future war. The Army studied the lessons of WWI and initiated the changes that would enable the force to fight and win in the next war. Part of the Army's response to these lessons involved changes to the officer education system (OES). The next section discusses the history and evolution of the AWC, a key component of the OES.

---

[48] US Army, *Superior Board on Organization and Tactics,* 4-15, 105-125.

[49] Harold W. Nelson, "The Origins of Operational Art," in *Historical Perspectives of the Operational Art,* eds., Michael D. Krause and R. Cody Phillips (Washington, DC: Center of Military History, 2007), 339. Nelson cites an early AWC Manual, the *Provisional Manual for Commanders of Large Units (MCLU).* The draft manual was not published and was not incorporated into future doctrinal publications. The manual stated, "the modern battle is characterized by its great length and the rapid exhaustion of the troops engaged. The length of the battle is the result of various elements but most of all the power of the armament and the solidity of the organization of the ground. The wastage of troops is brought about by exhaustion of morale, losses sustained, and hardship suffered… [T]he offensive battle takes the form of successive violent actions preceded by periods of preparation and movement, both of variable length." Dr. Schifferle provides additional analysis of the *MCLU* in *America's School for War.* He assessed the document, although verbose, to be a poor product that failed to serve the purpose of providing useful doctrine for operations at the echelons above division. Although the *MCLU* was a combined arms maneuver manual, the discussion in the manual is mostly limited to field artillery support of infantry.

The US Army War College

As early as the 1840s, the intellectual leadership of the US Army recognized the strategic importance of maintaining a body of professionals who were devoted to thinking broadly about war.[50] In his *Elements of Military Art and Science,* then First Lieutenant (1LT) Henry Halleck wrote of the importance of progressive military education for officers, selected and promoted by merit, for advancing the security of the nation. By surveying successful military leaders of the past, he showed the importance of developing the knowledge and judgment that allowed commanders to "see, and decide, and act, all in the same instant."[51] To support the decision-making of the commander, 1LT Halleck, who would later become General-in-Chief of the Union Armies during the American Civil War, also argued for the maintenance of a well-trained and competent General Staff (GS) who would be more reliable than the genius of any one individual.[52]

After General Halleck, a series of leaders in the following decades carried forward and implemented the idea of a GS, styled after the Prussian model, that would aid in the conduct of military matters at the national level.[53] To provide the special education for these officers in high positions, Elihu Root, Secretary of War from 1899-1904, recommended to Congress the creation of a War College. At its inception in 1902, the AWC was at once an educational venue and a prototype General Staff. The War College Board later delineated the duties of the GS and the AWC, but the chief role of the college would be to train officers for subsequent duty on the GS.[54]

---

[50] Henry Halleck, *Elements of Military Art and Science* (New York: D. Appleton and Company, 1862), 387, accessed March 11, 2018 https://archive.org/details/elementsofmilita00hall. First Lieutenant Henry Halleck authored his *Elements* after first providing the content as a series of lectures. Those who served with General Halleck considered him an intellectual leader.

[51] Halleck, *Elements of the Military Art and Science,* 387.

[52] Halleck, *Elements of the Military Art and Science,* 242-245..

[53] Emory Upton, *The Armies of Asia and Europe* (New York: D. Appleton and Company, 1878), iv, accessed March 4, 2018, https://archive.org/details/armiesofasiaeuro00uptouoft.

[54] Ball, *Of Responsible Command,* 69-79.

The Secretary of War charged the AWC with studying strategic issues, devising plans for mobilization and execution, and advising the relevant parties on the findings of wargames, plans, and studies.[55] The educational focus of the college evolved in the years between 1904 and 1940; however, Secretary Root's vision for the War College as a training venue for strategic and operational level thinking and planning generally stood fast.[56] As a part of the US Army's professional military education system, the purpose of the AWC was to prepare senior officers for the challenges of war.[57] When the United States entered WWII, graduates of the AWC populated numerous leadership roles as part of the broad American war effort to defeat the Axis powers. A brief survey of the AWC and its curriculum can give insight on the institution's contribution to Allied victory in 1945.

The inaugural AWC class consisted of only nine officers, one of which was future General of the Armies, John Pershing. The first AWC president, General Tasker Howard bliss, presumed students had learned the basics of military theory and tactics, and thus aimed to provide a graduate level practicum that did not repeat any previous educational experience. He envisioned the AWC students conducting detailed studies of the particular military problems facing the United States followed by the production of operational plans and the conduct of war games.[58] Rather than lectures and presentations, General Bliss favored the applicatory method which

---

[55] US War Department, *Five Years of the War Department: Following the War with Spain, 1899-1904* (Washington, DC: Government Printing Office, 1904), 63, accessed October 31, 2017, https://babel.hathitrust.org/cgi/pt?id=coo.31924095656405;view=1up;seq=71.

[56] Henry Gole, *The Road to Rainbow: Army Planning for Global War, 1934-1940* (Annapolis: Naval Institute Press, 2003), 20.

[57] The other primary education vehicles for US Army officers were the United States Military Academy, the Command and General Staff School, and the branch schools.

[58] Frederick Palmer, *Bliss, Peacemaker: The Life and Letters of General Tasker Howard Bliss* (New York: Dodd, Mead, and Company, 1934), 107, accessed March 11, 2018 https://archive.org/details/in.ernet.dli.2015.59605.

emphasized learning by doing.[59] Bliss believed that active engagement with real-world scenarios would cultivate habits of systematic reasoning and patterned inquiry. These skills would then guide officers in their approach to military problems.[60] By this method, the early AWC studied war with potential adversaries of the United States, including Germany, Japan, and Italy.[61] General Bliss intended that the studies would accurately account for present conditions, and provide the CSA with the basis for an initial response to threats.[62] In the early years of the college, students studied and revised an existing operational plan, and then submitted the plan for testing in a war game.[63] The war games were a version of the German Kriegspiel Method, in which cadre members presented students with an initial scenario and orders, and then judged the students' subsequent decision-making. Early war games simulated the defense of the Philippine Islands, Guam, Hawaii, and the Canal Zone.[64]

In the early 1900s, the AWC dedicated special attention to the Caribbean nations. With the Spanish-American War in recent memory, students examined the United States' preparedness for war, studying recruiting systems for expanding the force. After the chaotic entry into war the war with Spain, the AWC gave greater attention to expeditionary war, and coordinated with the

---

[59] Ball, *Of Responsible Command,* 85.

[60] Chief of the Second Section, US War Department General Staff to the Chief of Staff, US Army, letter, August 31, 1910, quoted in George Pappas, *Prudens Futuri,* 68.

[61] Palmer, *Bliss, Peacemaker,* 107.

[62] Pappas, *Prudens Futuri,* 75.

[63] Ball, *Of Responsible Command,* 94. After completing both plans, students would carry each through a war game. They issued the appropriate orders to maneuver and sustainment elements. The 1907 class was required to draw up plans and orders for the 1862 Battle of Antietam using the current formations, methods, equipment, and weapons.

[64] Pappas, *Prudens Futuri,* 48-49. 55-57; Robert Citino, *The German Way of War: From the Thirty Years War to the Third Reich* (Lawrence: University Press of Kansas, 2005), 150. The German wargames were designed to teach both tactics and operations. They were played on large sand tables with senior staff members serving as umpires. Students in the war game were given an initial scenario, a set of orders, and were judged based upon actions and decision.

Naval War College to devise plans for troop transport in Naval Convoys.[65] Students also collaborated on committee projects, a mainstay of the AWC curriculum. For these reports, General Bliss organized the class into groups of three or four officers who would produce a strategic plan based on a specified area of the world. Other committees focused on answering a question germane to modern military and technical developments at the time.[66]

These early classes understood their role of thinking critically for the Army, taking into account the strategic and tactical situation while also making consideration for coordinating with the other branches to reduce friction in joint operations.[67] As the likelihood of US entry into WWI grew, the Secretary of War tasked the AWC with formulating a military policy for the United States with respect to the European situation.[68] Additionally, the college modified its curriculum to include analysis of the personnel, tactics, arms, and logistics of the Allied and German forces.[69] Although the NDA of 1916 prohibited the War College from developing official plans, they continued to develop plans that reflected the concerns of the War Department.[70] When the United States declared war on Germany in April of 1917, the War College suspended classes.

---

[65] US Army, *History of Military Mobilization,* 150. In the period before the outbreak of war, no plans were prepared for mobilization, and no organization existed within the War Department that could readily prepare such plans.

[66] Ball, *Of Responsible Command,* 95-96. Ball gives several examples of committee studies. One committee studied the military resources of the US and Canada. Another looked at home defense and defense of the Philippines. Other special studies included the impacts of technological developments like machine guns and motor vehicles.

[67] Elihu Root, *The Military and Colonial Policy of the United States: Addresses and Reports,* eds., Robert Bacon and James Brown Scott (Cambridge: Harvard University Press, 1916), 127, quoted in Pappas, *Prudens Futuri,* 62.

[68] Secretary of War to the President of the US Army War College, letter, April 17, quoted in Pappas, *Prudens Futuri,* 80.

[69] US Army War College, *Lectures, 1914-1915*, quoted in Pappas, *Prudens Futuri,* 77. Assistant Secretary of War Henry S. Breckinridge delivered a lecture to the AWC after his return from serving with the American Relief Expedition which evacuated US citizens from the conflict area. Pappas judged Breckinridge's report to be an outstanding example of an intelligence report.

[70] US War Department, Bulletin No. 16, June 22, 1916, quoted in Pappas, *Prudens Futuri,* 82.

World War I stretched the capabilities of the Army on all fronts. The monumental task of expanding the force from 133,000 to 4 million, moving soldiers and equipment to France, and sustaining the force in combat for 200 days, demanded outstanding staff work. The war required officers to coordinate and plan joint operations, accounting for the capabilities of the US Navy to move forces, which they did at a rate of 10,000 per day.[71] Holding 45% of the Division and higher command positions, AWC graduates performed these tasks admirably, gaining praise from General Pershing and from CSA General Hugh Scott. General Scott commended the fine work and accomplishments of the AWC graduates, noting the increased demand for their education in the force. However, the war also revealed great inadequacies in the OES. The 1919 *Annual Report of the Secretary of War* found shortcomings in the Army's preparation for war and called for immediate revisions to the education system. The comments on the AWC reflected a need for officers with a broader understanding of war that included all the elements of national power. Additionally, the Great War showed that the Army's leaders needed more education at the strategic and operational levels of war. [72] In the pre-war years, the College had given inordinate focus to tactical problems of terrain, troop movements, and logistics. WWI forced the AWC to recalibrate its focus, and this marked a turning point in the college's educational design.

During the interwar years, only a small body of professionals considered in depth the possibilities for future war.[73] When the AWC reopened in 1919, the first commandant, MG James McAndrew instituted a greater focus on the broader issues of war and better preparation for duty on the GS and high command. MG McAndrew's changes led to the division of the academic year into two large blocks, Preparation for War and Conduct of War, the two essential and interrelated

---

[71] US War Department, *Annual Report of the Secretary of War* (Washington, DC: Government Printing Office, 1919), 28, accessed February 18, 2018 https://babel.hathitrust.org/cgi/pt?id=uc1.31158002281821;view=1up;seq=40.

[72] US War Department, *Annual Report of the Secretary of War* (1919), 30.

[73] Eisenhower, *Crusade in Europe*, 4.

activities of war. This broad course structure, which stood until WWII, included the creation of strategic intelligence estimates, development of war plans with supporting operational and sustainment plans, and subsequent war games to simulate execution and decision-making.[74] The Preparation for War Course, which accounted for five months of the ten-month academic year, involved the comparative estimation of national war-making potential based on industrial, economic, and population-based considerations. The students examined the relationships between nations and sought to determine the probability and character of war based on present relations and the expected trajectory of future relations.[75]

In 1919, Secretary of War Newton Baker called for the OES to adjust to meet the unique requirements of modern war.[76] For the AWC, these adjustments included an increased focus on the unique command and staff challenges of conducting operations at the field Army and higher echelons.[77] For this, the War College conducted both training and education. The training emphasized the implementation of doctrine in the conduct of war games. The greater educational goal of the AWC was to develop the critical thinking and analytical skills that would allow students to gain true insights from historical campaigns and account for the complexity in which military operations occurred. These skills demanded the development of the intellect and judgement and would enable AWC graduates to perform well in a variety of roles.[78]

---

[74] Pappas, *Prudens Futuri,* 85-93, 105; Troup Miller to Assistant Commandant, US Army War College, letter, February 20, 1928, File 1-82A; W.C. Sweeney to Assistant Commandant, US Army War College, letter, February 27, 1928, quoted in Ball, *Of Responsible Command,* 212.

[75] James W. McAndrew (lecture at the US Naval War College, Newport, October 22, 1919), quoted in Pappas, *Prudens Futuri,* 94.

[76] US War Department, *Annual Report of the Secretary of War* (1919), 28.

[77] Adjutant General to the Commandant, US Army War College, letter, December 22, 1927, quoted in Pappas, *Prudens Futuri,* 123.

[78] Ball, *Of Responsible Command,* 211; Gole, *The Road to Rainbow,* 158. Henry Gole believed that the training at the AWC enabled officers with little experience at high levels of command to step into key strategic and operational positions and perform their duties with skill.

In 1921, a new commandant, BG Edward McGlachlin, emphasized the role of the commander as the key decision-maker in war. Captain McLean, a Navy liaison officer to the War College, reported that the idea of command ran through the entire course, which focused on actual operational problems. Captain McLean also noted the focus on war in its broadest context, the persistence of joint-mindedness, the unrivaled ability to study the global situation, and the close personal relations between students, which he viewed as a guarantor of cooperation.[79]

Planning at the War College focused on preparing for situations that most concerned the United States. From 1934 onward, the War College planned for a two-ocean coalition war with Germany and Japan as the most likely adversaries.[80] As the prospect of future war materialized, the class of 1937 saw the reintroduction of a course specifically on mobilization. In previous years, the students had attempted to develop their own mobilization plans, but the efforts failed to produce a valuable product.[81] The pre-WWII years also saw an increased focus on the command of large units. With the class of 1937, the college placed a greater emphasis on "those aspects of the organization, functions, operations, and tactics of the field army and group of armies."[82] To support this, the AWC staff revised the Command course, which entailed 4.5 weeks of study on Field Army and Army Group HQ operations. The practical portion of this course of study consisted of map maneuvers for armies and army groups. [83]

---

[79] Pappas, *Prudens Futuri,* 109, 116; Captain Ridley McLean to the Secretary of the Navy, letter, June 01, 1924, quoted in Pappas, *Prudens Futuri,* 116.

[80] Gole, *The Road to Rainbow,* 152.

[81] AWC Course 1938-39, vol. III: "Mobilization," Docs. 1, 2, quoted in Ball, *Of Responsible Command,* 237; Pappas, *Prudens Futuri,* 117, 121.

[82] Ball, *Of Responsible Command,* 235.

[83] Ball, *Of Responsible Command,* 236. To make time for the expanded Command course, the college conducted one theater-of-operations map problem, and removed the time allotted for the completion of the Individual General Staff Memorandum which took two weeks.

As Hitler's Germany drove towards the English Channel, AWC students prepared a plan entitled *Rainbow X* which they delivered as an oral presentation to the entire college on 21 May 1940.[84] This product was a refinement of the *Rainbow Plans*, which covered variations of US involvement in WWII. The *Rainbow Plans* considered a US war against a coalition of nations while the *Color Plans*, developed in the 1920s, examined the possibility of a US war with a single nation.[85] Although the Joint Planning Committee of the War Department held the official responsibility for devising the *Rainbow Plans*, the delineation between official and AWC planning was a "distinction without a difference."[86]

The student briefing of *Rainbow X* to the AWC faculty and staff in 1940 showed a clear understanding of the problems the United States faced as it prepared for a possible entry into WWII. The class of 1940 considered a total war aimed at the complete defeat of Japan and Germany. They had decided upon a Europe first policy consisting of an initial invasion into North Africa followed by a decisive blow into the heart of Germany. They also planned for the economic strangulation of Germany aided by an intense bombing campaign. In the Pacific theater, the students envisioned an island-hopping campaign culminating in an invasion of mainland Japan. *Rainbow X* also spoke to the issue of mobilization and the time required to reinforce the European theater. Students understood that the opportunity to strike decisively at Germany would come after the build-up of forces and a peripheral approach through a separate theater. Of the one hundred War College students who were present for duty during the *Rainbow*

[84] R. Ernest Dupuy and Trevor N. Dupuy, *The Harper Encyclopedia of Military History* (New York: Harper Collins, 1993), 1161. In May of 1940, the German army had driven to the coast of France, precipitating the evacuations of the British Expeditionary Force at Dunkirk.

[85] Maurice Matloff and Edwin M. Snell, *Strategic Planning for Coalition Warfare, 1941-1942,* ed. Kent Roberts Greenfield (Washington, DC: US Government Printing Office, 1953), 6.

[86] Gole, *The Road to Rainbow,* 121.

X briefing, nearly half found themselves serving in the War Department in 1941 when the United States entered the war.[87]

From 1903 to 1940, the AWC educated the Army's senior leaders. From the outset, the AWC functioned as a venue for carefully selected officers to consider war at the highest levels of strategy and operations. In the College's early years, the curriculum tended to focus on large-scale tactical issues of terrain and movement. While the graduates who served in WWI performed the hard work of mobilizing and deploying the Army, the Great War demonstrated a need for officers who could think more broadly about war and incorporate new means in dynamic environments. During the interwar years, the AWC adjusted to the lessons of the Great War, and to the guiding influence of civilian and military leaders. The College increased its focus on understanding the global strategic context and its implications on military operations. War College students built and wargamed plans based on the most likely wars and the expected character of potential conflict. These exercises focused on the command of large units and considered the defining characteristics of such as joint and multi-national cooperation, combined arms maneuver, and logistics. As WWII drew near, AWC students developed plans that broadly outlined expectations of the type of war the United States would face in a contest with Japan and Germany. The next section will assess the value of that preparation in light of World War II.[88]

The Test: World War II

The United States' entry into WWII after the bombing of Pearl Harbor put the training of officers to the ultimate test. In WWI, the AEF faced novel challenges of expansion, mobilization,

[87] US Army Military History Institute (USAMHI), "Rainbow X", 5-1940-9/1, oral presentation, US Army War College, May 21, 1940, quoted in Gole, *The Road to Rainbow,* 114, 164.

[88] Nelson, "The Origins of Operational Art," 341-342. Nelson argue that the "Preparation for War" phase taught at the AWC gave students a grounding in national security policy, strategy, and management. The second phase, "Conduct of War," taught campaign considerations. They believe this approach provided each graduate with a firm understanding of the operational level of war. During campaign analysis, students studied objectives of campaigns in pursuit of national aims, the means for combat, command at the theater level, plans development, and joint operations.

and deployment. However, a relatively small front in Europe contained the greatest density of combat operations. Although considered the first modern war, the character of combat in WWI, writ large, involved the combination of artillery barrage and infantry assault, with the other combat arms playing supporting roles. Tanks were far from reliable and aircraft, although numerous, provided meager close air support.[89] If the First World War presented a great challenge to the officers of that day, the second global war of the 20th century was a significant progression along the spectrum of modern war. WWII would pit enormous modern forces in the land, sea, and air domains against one another in high-intensity combat. For the United States, the war would demand expeditionary operations over vast stretches of desert, ocean, and in the island chains of the South Pacific. The special challenges of this evolution of modern war offer a lens through which to view the contributions of the War College.

During the interwar period, the War College focused on the preparation for and conduct of war at the strategic and operational level. *Preparation for War* involved understanding the strategic context of war and building plans within that context. *Conduct of War* examined the conduct of joint, combined arms maneuver in the pursuit of national objectives. Examples of preparation and conduct in World War II can inform a value judgement of the War College's preparation of officers for the war. For perspective, more than half of the 1660 interwar graduates of the AWC attained general officer rank, filling high-level staff positions and commanding at every echelon from the division to the theater.[90] These officers served in every major action from North Africa to Okinawa and exerted influence from the strategic to the tactical level of war. Of the 34 Corps commanders of WWII, 29 graduated from the AWC.[91] By 1945, AWC graduates

[89] Richard R. Muller, "Close Air Support: The German, British, and American experiences, 1918-1941," in *Military Innovation in the Interwar Period,* eds. Williamson Murray and Allan R. Millett (Cambridge: Cambridge University Press, 1996), 145.

[90] Gole, *The Road to Rainbow,* 164.

[91] Robert Berlin, *US Army World War II Corps Commanders: A Composite Bibliography* (Leavenworth, KS: Combat Studies Institute, Command and General Staff College, 1989), 12.

held 60% of all general officer positions in the US Army.[92] One cannot know with certainty whether the AWC produced outstanding officers from a comparable field or whether they selected the best and contributed only marginally to their success. While they did not fill every general officer billet, the high proportion of AWC graduates in senior leader positions enables an assessment of the AWC's contribution to achieving victory in WWII.[93]

Critical to the Allies' success in WWII was the shared understanding of strategic context that defined pre-war plans and enabled the mobilization of national resources toward the defeat of the Axis powers.[94] Put another way, the Allies understood implicitly the total nature of the war against Germany and Japan.[95] The AWC's work on the *Rainbow Plans* and subsequent development of *Rainbow X* fostered an institutional understanding among a core group of Army senior leaders of the type of war the US would enter in 1941. It also allowed these officers to contemplate the potential course of the war and the major decisions that would create the conditions for victory.[96] While *Rainbow X* was fairly accurate in forecasting the broad character and some of the major decisions of WWII, it is perhaps more important that the plan emerged as a result of the dialectic between the WPD and the AWC. In that important relationship, the ideological foundations of the plan for victory began to crystallize in the minds of the Army's senior leaders.[97] Carl von Clausewitz asserted the importance of having a clear vision of the type

---

[92] US Army War College, *Statistical Analysis, 1920-1940,* quoted in Pappas, *Prudens Futuri,* 136.

[93] While this monograph does not look at non-AWC graduates who attained key leadership positions, more research should be done to provide a comparative analysis of AWC graduates and non-graduates.

[94] Richard Overy, *Why the Allies Won* (New York: W.W. Norton and Company, 1995), 325.

[95] Gole, *The Road to Rainbow,* 156, 158. Although the term "unconditional surrender" was not specifically used in AWC planning, Gole asserts that the AWC plans envisaged the imposition of US will on Germany and Japan, showing mental preparedness for a war of final victory.

[96] Kent Roberts Greenfield, *American Strategy in World War II: A Reconsideration* (Westport, CT: Greenwood Press, 1963), 3-10.

[97] Charles E. Kirkpatrick, *An Unknowable Future and a Doubtful Present: Writing the Victory Plan of 1941* (Washington, DC: Government Printing Office, 1992), 47.

of conflict one is about to enter along with the objectives for that conflict.[98] The AWC's pre-war planning fulfilled this dictum for the Army's senior leaders.

In *American Strategy in World War II: A Reconsideration,* Kent Greenfield draws out the major decisions of the war. These decisions include calculations for strategic priorities, conceptual approaches to the European and Pacific theater, and considerations for the build-up of forces prior to decisive strokes in each theater. Most significant was the decision for the complete defeat of Germany and Japan and the notion that the Allies should be prepared to invade the Japanese mainland if strangulation proved ineffective.[99] Although the final decisions for the Cross-Channel attack and thrust into the heart of Germany only came in 1943, pre-war thinking reveals the conceptual roots that would eventually grow into the detailed plans for the defeat of Germany, Italy, and Japan.[100]

For the Allies, victory was by no means a foregone conclusion. Gaining a position of advantage came only through hard-fought campaigns in Africa and Italy, chance victories in the Pacific theater, and a slow build-up of forces in Europe. Most significantly, Allied success depended on cooperation with the Soviet Union whose decisive victories at Stalingrad and Kursk weakened the Germans significantly.[101] However, by 1944, the strategy to bring about the total defeat of Germany was working, and General Eisenhower hoped to the use the momentum of the

---

[98] Carl von Clausewitz, *On War*, eds. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), 80-81.

[99] Greenfield, *American Strategy in World War II,* 3-10.

[100] USAMHI, "Rainbow X," 1940; Greenfield, *American Strategy in World War II,* 8; Dwight D. Eisenhower, *Crusade in Europe*, 153.

[101] Overy, *Why the Allies Won,* 98. Overy asserted that the Soviet victories at Stalingrad and Kursk marked the turning point in the war and were the major campaigns that determined the outcome of the war.

Cross-Channel attack to precipitate the defeat of the Third Reich.[102] To deliver the decisive blow, General Eisenhower intended that "all plans, both tactical and logistical…would constitute one continuous order of battle."[103] For this vital task of turning strategy into operational plans, Eisenhower felt confident that the OES in the interwar period had provided a surplus of well-prepared officers.[104] After the breakout from Normandy, Montgomery's 21st and Bradley's 12th Army Groups drove east on a broad front. These forces would form a line from the North Sea to the Franco-Swiss border after linking up with General Devers' 6th Army Group, which was attacking up the Rhone Valley.[105]

In developing operational plans, General Eisenhower communicated his thinking in ad hoc personal conversations with his Army Group Commanders.[106] The key decisions that emerged from these conversations formed the unifying framework for combat action along the front. General Bradley credited the staffs at the division, corps, and Army levels for translating strategic plans into operational maneuver, citing shared understanding as a key enabler of mobility, which ultimately defeated von Rundstedt and the Germans in their effort to turn the tide in the west.[107] As Harold Winton stated in his book, *Corps Commanders of the Bulge,* it is the middle level of war that keeps high-level strategy in consonance with tactics, "for it is there,

---

[102] Hugh Cole, *The Ardennes: Battle of the Bulge: United States Army in World War II, European Theater of Operations* (Washington, DC: Office of the Chief of Military History, US Army, 1965), 3, accessed March 19, 2018 https://history.army.mil/books/wwii/7-8/7-8_1.HTM#p3; Eisenhower, *Crusade in Europe,* 321; Overy, *Why the Allies Won,* 179.

[103] Eisenhower, *Crusade in Europe,* 323.

[104] Eisenhower, *Crusade in Europe,* 41.

[105] Harold R. Winton, *Corps Commanders of the Bulge: Six American Generals and Victory in the Ardennes* (Lawrence: University of Kansas Press, 2007), 74; Eisenhower, *Crusade in Europe*, 322.

[106] Omar N. Bradley, *A Soldier's Story* (New York: Random House, 1999), 354. In his memoirs, General Bradley cited General Eisenhower's competence as a field commander, crediting him with making key operational decisions based on his understanding of the front. In Bradley's estimation, General Eisenhower was a better field commander than Field Marshall Montgomery.

[107] Bradley, *A Soldier's Story,* 474.

midway between the conference table and the foxhole, that strategy is translated into battlefield tactics; there the field commander must calculate the costs of rivers, roads, and hills in terms of guns, tanks, tonnage- and most importantly, in terms of the lives and limbs of his soldiers."[108] The challenge of converting Eisenhower's decisions into coordinated operations along the front fell in large proportion on the shoulders of AWC graduates. While the Allies sought to exploit the waning strength of the German army west of the Rhine, the enemy planned to punch a hole in the Allied lines and press the attack to Antwerp.[109] The German offensive, aimed at the lightly defended Ardennes sector, created a salient in the Allied lines and resulted in the Battle of the Bulge. Of the six Corps Commanders who participated in the Bulge campaign, all but one attended the AWC from 1929-1937. The five who attended the War College did so during the period in which Brigadier General McGlachlin revised the War College curriculum to focus on preparation for command. BG McGlachlin envisioned the commander as the animating force behind his unit whose strength of will determined success or failure in combat. Additionally, the commander required the ability to quickly grasp the entirety of a complex situation to make good decisions.[110]

In *Corps Commanders of the Bulge,* Winton analyzed the performance of each commander based on the unique challenges they faced in their portion of the campaign. His analysis finds that all six commanders showed mental flexibility, strength of will and character,

---

[108] Winton, *Corps Commanders of the Bulge,* 338; Bradley, *A Soldier's Story,* xxvii.

[109] Walter Bedell Smith, *Eisenhower's Six Great Decisions: Europe, 1944-1945* (Pickle Partners Publishing, 2013), location 709, Kindle; Gole, *The Road to Rainbow,* 164. Former Chief of Staff of the Allied Expeditionary Force, General Walter Bedell Smith details the genesis of the plan for the Allies to proceed west following the Normandy invasion. He discusses the private dialogue between General Eisenhower and General Bradley that led to the broad front concept and the decision to exploit waning German strength west of the Rhine River.

[110] Pappas, *Prudens Futuri,* 109; Winton, *Corps Commanders of the Bulge*, 21, 26-27, 31-62. BG McGlachlin placed a great emphasis on the challenges of command. As an example, in the 1921-22 course, seventeen lectures, six conferences, four map maneuvers, and three wargames enforced the idea of the commander as the key decision-maker and influencer on the battlefield.

and a readiness to take full responsibility for making tough decisions.[111] In the opening days of the battle, three of the corps commanders faced especially dynamic situations. Examining the actions of these three commanders can give insight into their understanding of the role of the commander and their competence at maneuvering large units in high-intensity combat.

In July of 1944, Hitler determined to wrest the initiative on the western front. On 16 December 1944, twenty divisions would began an attack through the Ardennes forest where the Germans hoped to meet light resistance and achieve the element of surprise.[112] The main effort of the German attack was the Sixth SS Panzer Army, which attempted a penetration along a 12-mile front that stretched from Monschau in the north to Losheim in the south. If the 6th SS succeeded in their penetration, there would be little to stop them from reaching the Meuse river and threatening allied lines of communication.[113]

On 16 December 1944, MG Middleton's VIII Corps faced an attack by five German corps along a 60-mile front. MG Middleton, who enlisted in the Army as a private in 1910, became the youngest American Colonel in World War I. During the interwar period, MAJ Middleton served as a faculty member at the Command and General Staff School (CGSS), and taught students like MAJs Eisenhower, Devers, Hodges, and Gerow. During his tenure at CGSS, he formed a strong relationship with MAJ Eisenhower who would later request Middleton's return to active duty after a break in service. As a division commander, BG Middleton performed superbly in the Sicily, Normandy, and Brest campaigns, earning a promotion and command of VIII Corps.[114] After two days fighting in this final phase of the war, the Germans had opened a

---

[111] Winton, *Corps Commanders of the Bulge*, 341-345.

[112] J.F.C. Fuller, *The Second World War, 1939-1945: A Strategical and Tactical History* (New York: De Capo Press, 1993) 346; Winton, *Corps Commanders of the Bulge*, 74.

[113] Smith, *Eisenhower's Six Great Decisions,* location 1076, Kindle; Winton, *Corps Commanders of the Bulge*, 112.

[114] Atkinson, *The Guns at Last Light, 419;* Winton, *Corps Commanders of the Bulge*, 37.

10-mile gap in the VIII corps' defensive line. The German success threatened Bastogne, a major intersection that would enable the enemy to press the offensive to the west. Under pressure from superior German forces, MG Middleton developed an appreciation of the dire operational situation. Demonstrating strength of will and celerity of mind, MG Middleton issued clear, concise orders, sending piecemeal reinforcements to critical areas of his weakened line. MG Middleton's understanding of the situation and his calm responsiveness to a rapidly deteriorating position averted a potential crisis that may have ruptured the overall Allied defense.[115] In Winton's analysis, he argues that it was MG Middleton who first determined that VIII Corp's 18,000 Americans could hold the approaches to Bastogne against 45,000 Germans. His leadership demonstrated a force of character and an understanding of the larger operational situation, enabling the Allies to hold key terrain and delay the German attack.[116]

When the 6th SS Panzer Army attack began, the unprepared soldiers of MG Gerow's V Corps established hasty defensive positions. MG Gerow, who had also formed a strong relationship with MAJ Eisenhower at CGSS, served in the WPD during the interwar period and subsequently as a planner for the invasion of Normandy. As a Corps commander, he performed well in the D-Day invasion and breakout, but less so in the Battle of the Hurtgen Forest, widely considered an Allied disaster. Facing a disadvantageous position in the opening phase of the Bulge campaign, MG Gerow needed to develop a clear understanding of the situation and establish a strong defense that controlled key pieces of terrain in order to avoid a rout. Upon recognition of the developing German attack, MG Gerow attempted to call back 2nd ID from their attempt to seize dams on the Roer River. With this request denied**,** he repositioned other units to begin forming a defensive line along Elsenborn Ridge. Despite lacking the initiative on the first day of fighting, MG Gerow leveraged and focused his available combat power to put up a

[115] Winton, *Corps Commanders of the Bulge,* 170.

[116] Atkinson, *The Guns at Last Light,* 455; Winton, *Corps Commanders of the Bulge,* 170.

credible defense. MG Gerow used the elevated terrain as a favorable position for artillery, "ringed by infantry, tanks, tank destroyers, and engineers." V Corp's staunch defense effectively stopped the 12th SS Panzer Division from penetrating to the Meuse River. While not a celebrated combat leader, MG Gerow deserves credit for adapting well to an initial position of disadvantage and creating the conditions that allowed V Corps to successfully integrate combined arms into a unified whole and halt the German main effort.[117]

During the interwar period, COL Matthew Ridgway had served in the War Plans Division devising contingencies for war with Germany and Japan. A soldier's soldier, Ridgway only dedicated one sentence in his memoir to his War College experience, simply stating that he had attended. However, he recounted his fascination with planning war at the global level. COL Ridgway sought troop duty and eventually found himself assigned as the first commander of the 82nd Airborne Division. After participating in the D-Day, Sicily, and Market-Garden operations, MG Ridgway assumed command of the newly formed XVIII Airborne Corps. MG Ridgway's Headquarters (HQ) were still located in England when he received orders to move to the vicinity of the Ardennes. Within hours of arriving in France, MG Ridgway organized his headquarters, issued basic orders, and realizing the necessity of restoring the initiative, began to contemplate a counterattack.[118]

The First Army concept for the XVIII Airborne Corps to restore the line from Malmédy to St. Vith threw MG Ridgway's Corps into the fray, expanding their sector on the second day of fighting. After two days of combat, the XVIII Airborne Corps began to stabilize their sector. By aggressive action and quick adaptation, MG Ridgway led the XVIII Airborne Corps in their mission to establish a blocking force on the northern side of the bulge. MG Ridgway would later

---

117 Winton, *Corps Commanders of the Bulge,* 114, 121-126, 136.

118 Matthew B. Ridgway, *Soldier: The Memoirs of Matthew B. Ridgway* (New York, NY: Harper, 1956), 113.

describe in his memoirs the special considerations for commanding large units in combined arms maneuver. He specifically mentioned the flexibility of mind required to comprehend and respond to a dynamic battle zone that may cover an area over a hundred miles wide and sixty miles deep. He spoke of the need for the commander to be able to position himself at the decisive place and time in order to make decisions and give guidance while anticipating the future development of the situation and responding accordingly.[119] According to Winton's analysis, MG Ridgway's actions in the Bulge exemplified this description of command requirements, contributing significantly to the Allied victory.[120] This vignette only represents a small snapshot of command performance in World War II. However, von Rundstedt's perspective was that every US Corps commander performed in superb fashion.[121]

In addition to tactical level leadership, strategic and operational level commanders also contributed to the success of the Bulge campaign. As mentioned above, General Eisenhower's broad front concept and the decision to attrite the Germans west of the Rhine River established the Allies' operational framework. When the enemy attack began on December 16th, General Eisenhower met with General Bradley to formulate an operational plan for stopping the Germans. The plan called for attacking the enemy's flanks in the bulge from both the north and the south, which would require significant repositioning of forces and the commitment of the strategic reserve, the XVIII Airborne Corps.[122] In Bradley's mind, MG Middleton's VIII corps needed to absorb the enemy momentum while the 12th Army Group prepared for an armored attack against von Rundstedt's flanks. To accomplish this, Bradley made the difficult decision to reorient General Patton's 3rd Army in order to attack the German southern flank. In under a week, Patton

---

[119] Ridgway, *Soldier,* 18, 47, 54, 107, 111, 113; Winton, *Corps Commanders of the Bulge,* 172-186.

[120] Winton, *Corps Commanders of the Bulge,* 172-186.

[121] Schifferle, *America's School for War,* 195.

[122] Eisenhower, *Crusade in Europe,* 374, 376, 379.

moved his army over frozen roads to end the siege of Bastogne. Prior to and during the campaign, Generals Eisenhower and Bradley maintained a keen awareness of the situation by circulating the battlefield and gathering information from their subordinate commanders. They devised plans, adopted risk, and made the key decisions that set the conditions for the corps commanders of the Bulge to defeat the final enemy offensive in the west.[123]

Graduates of the Army War College filled leadership roles during WWII. They served as commanders, planners, and staff members at the strategic, operational, and tactical levels of war. These officers shared a common educational background where ideas about winning in future war solidified through the process of thinking critically and creatively about real world problems. These ideas represented a clear visualization of the process by which the Allies would eventually achieve victory in WWII. They considered the requirements for mobilization, building combat power, and striking decisive blows to bring about the total defeat of Germany and Japan. Not only did this educational experience plant the seeds that grew into the plans for victory, it also created a shared understanding among leaders. This understanding enabled the translation of strategic concepts into operational plans for combined arms maneuver on a modern battlefield. These experiences bore their fruit throughout the war and especially at decisive points like the Battle of the Bulge. Strategic thinking translated into good operational plans and executed by bold and agile tactical commanders enabled the decisive blows to the Third Reich.[124] As Henry Gole asserts in *The Road to Rainbow,* the process of continual planning and thinking about war at the strategic level enabled American officers to succeed in positions of high-level command, even though their previous command experience had been at lower levels.[125]

---

[123] Bradley, *A Soldier's Story,* 455, 465, 466, 469, 472-473.

[124] Overy, *Why the Allies Won,* 281.

[125] Gole, *The Road to Rainbow,* 158.

Conclusions and Implications

The US Army War College performed a significant role in preparing officers for modern combat.[126] After WWI, the Army faced a multitude of challenges. Modern war not only placed enormous demands on the nation, it tested the limits of the Army's ability to perform as a body of professionals. The character of warfare evolved rapidly in the 20th century, placing new cognitive demands on officers who had to contemplate larger battlefields and an array of emerging technologies, all moving at a faster pace than in any previous war. In an address to the General Staff, Winston Churchill marveled at the US Army's ability to expand from a small pre-war configuration to a force of millions of men and women. He called it a "prodigy of organization, of improvisation."[127] He concluded that progressive and diligent study in schools and colleges had enabled the officers of the US Army to meet the challenges of WWII, and that future commanders would always rely on the ability of educated soldiers to adapt and win. The War College fulfilled its role in educating and training the Army's most senior officers in the period between the greatest wars of the twentieth century.

The educational process at the AWC contained no magical formula for preparing leaders for global war. On the contrary, the course evolved constantly. Each commandant steered the school in a unique direction. Students sunk time and effort into abortive efforts. However, the War College gave several key opportunities to those officers who attended. First, the War College provided a dedicated venue for thinking about the major preoccupation of the profession of arms in the broadest terms. Second, the educational environment fostered shared understanding among those who would lead. Finally, the War College created a powerful network of relationships.

---

[126] Nelson, "The Origins of Operational Art," in *Historical Perspectives of the Operational Art,* 342. Nelson argues that the War College's focus on the national level of war combined with the operational considerations contributed, at least in part, to the graduates' success in every theater of war.

[127] Winston Churchill, *Address to the General Staff, US Army*, April 19, 1946, quoted in Pappas, *Prudens Futuri,* 138.

These experiences influenced a cohort of leaders who would guide the Allies to victory in 1945. By design, only a small percentage of officers attend the War College each year; however, other institutions and indeed individuals can replicate the processes that prepared the graduates of the AWC to face the complex problems inherent in war.

First, the War College provided officers a dedicated venue and the resources to facilitate thinking critically and creatively about current and future problems. The academic curriculum entailed reflective study combined with hands on experience. The applicatory method was the primary vehicle for the implementation of knowledge and the exercise of decision-making. Rather than allowing thoughts to remain as clever ideas, the applicatory method forced students to put knowledge to use in the construction of plans to solve real, imaginable problems. Through this application of knowledge, students developed the skills of critical and systems thinking.

From the earliest days, the Commandants of the War College envisioned developing in senior officers the habits of mind and patterns of inquiry that accustomed them to approaching military problems. By studying the problems of the past and imagining those of the future, War College graduates would begin to form flexible mental models that would serve to guide future action. However, these officers did not look at problems from a purely military standpoint. As stated in the epigraph on the first page of this monograph, the War College embraced thinking holistically about war. The students considered issues of industry, international relations, and of a nation's total war-making potential. Through lectures from civilian experts, and processes like committee studies and wargames, students gained the implicit skill of thinking about the many interrelated factors that bear on military problems.[128] Throughout the interwar years, the students spent their energies on proposing solutions to many military problems, imagined and real. Until WWII began in Europe, the students of the College could only practice based on such estimates.

[128] Peter M. Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization* (New York: Doubleday, 1990), 6-7.

Rather than amounting to wasted effort, the process of critical and systems thinking produced returns in the second world war. Organizations that wish to develop the skills to solve complex problems should provide a venue and resources that enable the application of critical and systems thinking skills.

The War College also offered an opportunity for peers to develop shared understanding about the problems they faced as an institution. Again, the War College's educational model fostered this development. The year-long process of studying problems together and developing solutions created an understanding of what the select body of officers thought about any given situation. Peter Senge's description of mental models illuminated the idea. He describes mental models as the "deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action."[129] For the students of the AWC, the arduous process of devising plans for solving military problems forged these deeply ingrained, shared ideas about the future of war. The development of the *Rainbow X* plan is a good example of this process. The 1940 plan contained the framework for achieving victory in a future war with Japan and Germany. When the many graduates of the AWC filled their positions as planners, staff members, and commanders, these mental models informed these officers' understanding, not only about the situation they faced but about the road to victory. These mental models really formed believable stories about the process to get from anywhere to some desired version of the future. As Porter Abbot relates in *The Cambridge Introduction to Narrative,* "we don't really believe something is true until we can see it as a story."[130] The war plans developed by the students were the stories that built shared understanding.

[129] Senge, *The Fifth Discipline,* 6-7.

[130] H. Porter Abbot, *The Cambridge Introduction to Narrative* (Cambridge: Cambridge University Press, 2002), 44.

As the likelihood of the United States entering WWII increased, the fidelity of the stories increased until they merged with reality and became the framework for execution. The fundamental strategic principles that directed US action in WWII informed the development of campaign and operational plans. One example illustrates the power of shared understanding. While the US Army fought in Africa, General Eisenhower reflected on a conversation with President Roosevelt. Of the many points of discussion, he recalled that the President's adherence to the US general concept of European strategy, primarily involving an eventual Cross-Channel attack, gave him he greatest comfort.[131] President Roosevelt "was certain that great results would flow from the spring and summer campaigns in the Mediterranean but he properly continued to look upon these as preliminaries to, and in support of, the great venture which had been agreed upon almost a year before as the true line of Allied effort for accomplishing the defeat of Germany."[132] For Eisenhower, shared understanding meant a mutual conception of the future and the support to get there. For the graduates of the AWC, these conceptions formed in the classroom as they worked to solve complex problems. In the war, shared understanding among AWC alumni facilitated planning, decision-making, and execution.

The final requirement involves developing and maintaining the power of the network. General Bradley attributed the defeat of von Rundstedt in the Ardennes to US mobility. Further examination of Bradley's statement reveals the powerful underlying component: the ability to communicate orders effectively and rapidly. The technology of the day enabled instantaneous communication throughout the echelons of command; however, it was the "common language, practices, and techniques" that enabled "the resort to sketchy oral orders with an assurance of perfect understanding."[133] A lack of technology would have hampered coordination and

---

[131] Eisenhower, *Crusade in Europe,* 153.

[132] Eisenhower, *Crusade in Europe,* 153.

[133] Bradley, *A Soldier's Story,* 474.

communication, but technology alone could not create shared understanding. Success in the Ardennes required network connectivity between similarly trained decision-makers. The network of humans enabled rapid, adaptive responses to the German offensive.

The Battle of the Bulge provides a concrete example of the principle. Winning in modern war requires commanders to leverage a broad network comprised of many stakeholders.[134] For the graduates of the AWC, former classmates certainly comprised a fair portion of the professional network. These familiar relationships facilitate dialogue based on trust and shared understanding.[135] The reader will remember General Eisenhower's conversations with his Army Group commanders as they discussed the way ahead for the European Theater of Operations. Many will recognize this picture of the commander conversing over tough decisions with his subordinates. The structure of the military facilitates the commander leveraging this type of network in an efficient way. The commanders in the Battle of the Bulge used their established networks to put forth a successful response to a German offensive. However, the emerging operating environments of the future will require commanders and staffs to leverage wide and complex networks to achieve success.[136] This entails the cultivation of relationships and the development of shared understanding, so that the commander can influence the network in his pursuit of military and policy objectives.

The US Army War College performed superbly in preparing future leaders to face the challenges of global war. The educational experience trained officers to think critically and creatively about future war. Those officers formed ideas in groups to develop shared understanding. The shared understanding among graduates formed the basis for effective action.

---

[134] John P. Kotter, *Power and Influence Beyond Formal Authority* (New York: The Free Press, 1985), 31.

[135] Steven Covey, *The Speed of Trust: The One Thing That Changes Everything* (New York: The Free Press, 2006), 3.

[136] United States Army Training and Doctrine Command, *Multi-Domain Battle: Combined Arms for the 21st Century* (Washington, DC: Department of the Army, February 24, 2017), accessed February 19, 2018, http://www.tradoc.army.mil/multidomainbattle/docs/MDB_WhitePaper.pdf.

Finally, the network of AWC graduates facilitated adaptive responses to the challenges of modern war. Organizations and individuals who wish to succeed when facing complex problems should leverage these capabilities. Just as those officers of the AEF faced novel problems in the war of their time, today's officers face the unique challenges of our own modern wars.

Bibliography

1st Division Museum. "History of the First Division: World War I," Last modified 2018. Accessed March 11, 2018. https://www.fdmuseum.org/about-the-1st-infantry-division/history-of-the-first-division/.

Abbot, H. Porter. *The Cambridge Introduction to Narrative.* New York: Cambridge University Press, 2002.

Army War College Course, 1938-39, Volume III: "Mobilization," Docs. 1, 2.

Atkinson, Rick. *The Guns at Last Light.* New York: Picador, 2014.

Ball, Harry. *Of Responsible Command: A History of the US Army War College*. Carlisle Barracks, PA: The Alumni Association of the US Army War College, 1994.

Bradley, Omar N. *A Soldier's Story*. New York: Random House, 1999.

Center of Military History. *History of Military Mobilization in the United States Army: 1776-1945.* Washington, DC: Government Printing Office, 2006.

Churchill, Winston. Address to the General Staff, US Army. April 19, 1946.

Citino, Robert. *Blitzkrieg to Desert Storm: The Evolution of Operational Warfare.* Lawrence: The University of Kansas Press, 2004.

Citino, Robert. *The German Way of War: From the Thirty Years War to the Third Reich.* Lawrence: University Press of Kansas, 2005.

Cole, Hugh. *The Ardennes: Battle of the Bulge: United States Army in World War II, European Theater of Operations.* Washington, DC: Office of the Chief of Military History, US Army, 1965. Accessed March 19, 2018. https://history.army.mil/books/wwii/7-8/7-8_CONT.HTM.

Covey, Steven. *The Speed of Trust: The One Thing That Changes Everything.* New York: The Free Press, 2006.

Dupuy, R. Ernest and Trevor N. Dupuy. *The Harper Encyclopedia of Military History.* New York: Harper Collins, 1993.

Eisenhower, Dwight D. *Crusade in Europe*. Kingswood, Surrey: Windmill Press, 1949.

Fuller, J.F.C. *The Second World War, 1939-1945: A Strategical and Tactical History.* New York: De Capo Press, 1993.

Gole, Henry. *The Road to Rainbow: Army Planning for Global War, 1934-1940*. Annapolis: Naval Institute Press, 2003.

Halleck, Henry. *Elements of Military Art and Science.* New York: D. Appleton and Company, 1862.

Ikenberry, G. John. *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order After Major Wars*. Princeton: Princeton University Press. 2001.

Kennedy, David. *Over Here: The First World War and American Society.* New York: Oxford University Press, 1980.

Kirkpatrick, Charles. *An Unknowable Future and A Doubtful Present: Writing the Victory Plan of 1941.* Washington, DC: Government Printing Office, 1992.

Kotter, John P. *Power and Influence Beyond Formal Authority.* New York: The Free Press, 1985.

Marshall, George C. *Memoirs of My Services in the World War, 1917-1918.* Boston: Houghton Mifflin, 1976.

Matheny, Michael R. *Carrying the War to the Enemy: American Operational Art to 1945.* Norman: University of Oklahoma Press, 2011.

Matloff, Maurice and Edwin M. Snell. *Strategic Planning for Coalition Warfare, 1941-1942* Edited by Kent Roberts Greenfield. Washington, DC: Government Printing Office, 1953.

McAndrew, James W. Lecture at the US Naval War College, October 22, 1919.

Millett, Allan R. "Cantigny." In *America's First Battles, 1776-1965,* edited by Charles E. Heller and William A. Stofft, 149-185. Lawrence: University of Kansas Press, 1986.

Muller, Richard B. "Close Air Support: The German, British, and American experiences, 1918-1941." In *Military Innovation in the Interwar Period,* eds. Williamson Murray and Allan R. Millett, 144-190. Cambridge: Cambridge University Press, 1996.

Murray, Williamson and Allan R. Millet, eds. *Military Innovation in the Interwar Period.* Cambridge: Cambridge University Press, 1996.

Nelson, Harold. "The Origins of Operational Art." In *Historical Perspectives of the Operational Art,* edited by Michael D. Krause and R. Cody Phillips, 333-345. Washington, DC: Center of Military History, 2007.

Nugent, George A. "The US Naval War College." *The Journal of the US Artillery,* XXVII. March-April 1912.

Olsen, John Andreas and Martin van Creveld eds. *The Evolution of Operational Art, From Napoleon to the Present.* Oxford: Oxford University Press, 2011.

Overy, Richard. *Why the Allies Won.* New York: W.W. Norton and Company Ltd., 1995.

Palmer, Frederick. *Bliss, Peacemaker: The Life and Letters of General Tasker Howard Bliss.* New York: Dodd, Mead, and Company, 1934.

Pappas, George. *Prudens Futuri: The US Army War College 1901-1967.* Carlisle Barracks, PA: The Alumni Association of the US Army War College, 1967.

Ridgway, Matthew B. *Soldier: The Memoirs of Matthew B. Ridgway.* New York: Harper, 1956.

Root, Elihu. *The Military and Colonial Policy of the United States: Addresses and Reports.* Edited by Robert Bacon and James Brown Scott. Cambridge: Harvard University Press, 1916.

Schifferle, Peter J. *America's School for War: Fort Leavenworth, Officer Education, and Victory in World War II*. Lawrence: University of Kansas Press, 2010.

Senge, Peter. *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday, 1990.

Smith, Walter Bedell. *Eisenhower's Six Great Decisions: Europe, 1944-1945.* Pickle Partners Publishing, 2013.

Tuchman, Barbara. *The Guns of August: The Outbreak of World War I.* New York: Random House Trade Paperbacks, 1962.

Upton, Emory. *The Armies of Europe and Asia.* New York: D. Appleton and Company, 1878.

US Army Command and General Staff College (CGSC) Records, Combined Arms Research Library (CARL) Archives, Document Collection, Fort Leavenworth, KS.

US Army. *United States Army in the World War, 1917-1919: Organization of the American Expeditionary Forces,* Volume I. Washington, DC: Center of Military History, 1988.

US Arm Military History Institute, Carlisle Barracks, PA, Army War College Curricular Files, Individual Papers and/or Photograph Collections.

US Army Military History Institute. "Rainbow X." Oral presentation, US Army War College, May 21, 1940.

US Department of the Army, American Expeditionary Force. *Superior Board on Organization and Tactics.* Washington, DC: US Army Military History Institute, 1925. Accessed March 08, 2018. https://www.scribd.com/doc/13810100/organization-and-tactics-aef-superior-board-report-1919.

US Army War College. *Lectures, 1914-1915*.

_____, *Reports of Operations 1920-1940*.

_____. *Statistical Analysis, 1920-1940.*

US War Department. *Annual Report of the Secretary of War, 1919.* Accessed March 25, 2018. https://catalog.hathitrust.org/Record/000078451.

_____. Bulletin Number 16. June 22, 1916.

_____. *Field Service Regulations, United States Army, 1923.* Washington, DC: Government Printing Office, 1924. Accessed October 30, 2017. http://cgsc.cdmhost.com/cdm/ref/collection/p4013coll9/id/126, 30 October 2017.

_____. *Five Years of the War Department: 1899-1904.* Washington, DC, 1904. Accessed October 31, 2017. https://babel.hathitrust.org/cgi/pt?id=coo.31924095656405;view=1up;seq=71.

_____. *Manual for Commanders of Large Units.* Washington, DC: Government Printing Office, 1930. Accessed October 30, 2017. http://cgsc.cdmhost.com/cdm/ref/collection/p4013coll9/id/911.

von Clausewitz, Carl. *On War*. Edited by Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1976.

Watson, Mark. *United States Army in World War II, Chief of Staff: Prewar Plans and Preparations.* Washington, DC: Center of Military History, 1950.

Wheeler, James Scott. *The Big Red One: America's Legendary 1st Infantry Division.* Lawrence, KS: University of Kansas Press, 2017.

Winton, Harold R. *Corps Commanders of the Bulge: Six American Generals and Victory in the Ardennes.* Lawrence, KS: University of Kansas Press, 2007.