

A LEARNING ORGANIZATION BORN IN THE CRUCIBLE OF COMBAT:
THE 3RD INFANTRY BRIGADE, 2ND DIVISION, IN WORLD WAR I

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
Military History

by

LLOYD B. WOHLSCHEGEL, MAJOR, U.S. ARMY
B.S., Bloomsburg University, Bloomsburg, Pennsylvania, 2005

Fort Leavenworth, Kansas
2016

Approved for public release; distribution is unlimited. Fair use determination or copyright permission has been obtained for the inclusion of pictures, maps, graphics, and any other works incorporated into this manuscript. A work of the United States Government is not subject to copyright, however further publication or sale of copyrighted images is not permissible.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 10-06-2016		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) AUG 2015 – JUNE 2016	
4. TITLE AND SUBTITLE A Learning Organization Born in the Crucible of Combat: The 3rd Infantry Brigade, 2nd Division, in World War I				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Lloyd B. Wohlschlegel, Major				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 ORG REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution is Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT An examination of the 3rd Infantry Brigade, 2nd Division, American Expeditionary Forces, tells a story of a learning organization that emerges from the crucible of combat of World War I in 1918. The model of a learning organization used in this study originated from Dr. Peter M. Senge's seminal work, <i>The Fifth Discipline: The Art and Practice of the Learning Organization</i> . The skillful practice of personal mastery, challenging mental models, creating a shared vision, fostering team learning and developing a systems thinking process are key for a learning organization to be successful in a challenging environment. When all five disciplines are actively practiced, they create an environment for a true learning organization to emerge. Though not initially displaying the traits of a learning organization, the 3rd Infantry Brigade ultimately learns and practices the disciplines during its last three months of warfare in 1918. The attack at Vaux, the Battle of Soissons, the St. Mihiel Offensive and the Meuse-Argonne Offensive highlight the brigade's journey of becoming a true learning organization. In the end, the 3rd Infantry Brigade demonstrated personal mastery of warfighting skills, challenged the status quo of their doctrine, displayed a shared vision for their future, learned as a cohesive team, and ultimately made the necessary system changes to succeed in World War I.					
15. SUBJECT TERMS Learning Organization, American Expeditionary Forces, Vaux, Soissons, St. Mihiel, Meuse-Argonne					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT (U)	b. ABSTRACT (U)	c. THIS PAGE (U)			19b. PHONE NUMBER (include area code)
			(U)	146	

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

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of Candidate: Major Lloyd B. Wohlschlegel

Thesis Title: A Learning Organization Born in the Crucible of Combat: The 3rd Infantry
Brigade, 2nd Division, in World War I

Approved by:

_____, Thesis Committee Chair
Richard S. Faulkner, Ph.D.

_____, Member
LTC Mathew R. McKinley, M.S.

_____, Member
John A. Schatzel, M.S.A.

Accepted this 10th day of June 2016 by:

_____, Director, Graduate Degree Programs
Robert F. Baumann, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

A LEARNING ORGANIZATION BORN IN THE CRUCIBLE OF COMBAT: THE 3RD INFANTRY BRIGADE, 2ND DIVISION, IN WORLD WAR I, by Major Lloyd B. Wohlschlegel, 146 pages.

An examination of the 3rd Infantry Brigade, 2nd Division, American Expeditionary Forces, tells a story of a learning organization that emerges from the crucible of combat of World War I in 1918. The model of a learning organization used in this study originated from Dr. Peter M. Senge's seminal work, *The Fifth Discipline: The Art and Practice of the Learning Organization*. The skillful practice of personal mastery, challenging mental models, creating a shared vision, fostering team learning and developing a systems thinking process are key for a learning organization to be successful in a challenging environment. When all five disciplines are actively practiced, they create an environment for a true learning organization to emerge. Though not initially displaying the traits of a learning organization, the 3rd Infantry Brigade ultimately learns and practices the disciplines during its last three months of warfare in 1918. The attack at Vaux, the Battle of Soissons, the St. Mihiel Offensive and the Meuse-Argonne Offensive highlight the brigade's journey of becoming a true learning organization. In the end, the 3rd Infantry Brigade demonstrated personal mastery of warfighting skills, challenged the status quo of their doctrine, displayed a shared vision for their future, learned as a cohesive team, and ultimately made the necessary system changes to succeed in World War I.

ACKNOWLEDGMENTS

First and foremost, I would like to thank my wife, Emma, for her support, patience, and understanding as I undertook the monumental task of constructing “A Learning Organization in the Crucible of Combat.” Thank you for your meticulous proofreading and acting like you were actually interested in the subject of my writings. Second, I would like to thank Dr. Faulkner, LTC McKinley, and Mr. Schatzel—my thesis committee—for your valuable insights, suggestions, patience, and guidance along the way. Last, I would like to thank the Reference Team at the Combined Arms Research Library for their help on numerous occasions to ensure I had a myriad of sources to complete my project. This thesis was truly a team effort; however, any errors or misinterpretations are my own.

TABLE OF CONTENTS

	Page
MASTER OF MILITARY ART AND SCIENCE THESIS APPROVAL PAGE	iii
ABSTRACT	iv
ACKNOWLEDGMENTS	v
TABLE OF CONTENTS	vi
ACRONYMS	viii
ILLUSTRATIONS	ix
CHAPTER 1 INTRODUCTION	1
Perception of the American Expeditionary Forces	4
Perception of American Expeditionary Forces Doctrine	6
Why the 3rd Infantry Brigade?	8
Learning Organization Disciplines	8
History, Organization, and Training Overview	11
Campaign Overview	13
Conclusion	13
CHAPTER 2 PREPARING FOR WAR	15
Background of American Regulars	15
Regimental Backgrounds	18
Pre-War Doctrine	20
American Expeditionary Forces Organizational Make-up	26
Leadership	29
Training in France	32
The Challenging Beginnings of a Learning Organization at War	38
Conclusion	42
CHAPTER 3 BAPTISM BY FIRE	44
Vaux	45
Enemy Situation	46
Preparation of the 3rd Infantry Brigade	48
The Attack on Vaux	52
Lessons Learned	55

Soissons	61
Enemy Situation.....	63
Preparation of the 3rd Infantry Brigade	64
The Battle of Soissons	69
Lessons Learned.....	75
Conclusion	79
 CHAPTER 4 A LEARNING UNIT RISES	 81
St. Mihiel	82
Enemy Situation.....	84
Preparation of the 3rd Infantry Brigade	85
The St. Mihiel Offensive.....	90
Lessons Learned.....	92
Meuse-Argonne	97
Enemy Situation.....	99
Preparation of the 3rd Infantry Brigade	100
The Meuse-Argonne Offensive.....	104
Lessons Learned.....	109
Conclusion	113
 CHAPTER 5 A LEARNING ORGANIZATION BUILT IN COMBAT	 117
Personal Mastery.....	119
Challenging Mental Models.....	122
Shared Vision.....	124
Team Learning.....	126
Systems Thinking	128
Conclusion	131
 BIBLIOGRAPHY	 133

ACRONYMS

AEF	American Expeditionary Forces
FSR	Field Service Regulations
HQ	Headquarters
IDR	Infantry Drill Regulations
USMC	United States Marine Corps

ILLUSTRATIONS

	Page
Figure 1. 2nd Division Operations in the Vicinity of Belleau Wood and Vaux	45
Figure 2. 2nd Division Operations in the Vicinity of Soissons.....	61
Figure 3. 2nd Division Operations during the St. Mihiel Offensive	82
Figure 4. 2nd Division Operations during the Meuse-Argonne Offensive, 1 through 11 November	97
Figure 5. 2nd Division Operations during 1 and 2 November 1918 (Meuse-Argonne).....	104

CHAPTER 1

INTRODUCTION

Thoughts of World War I conjure up images of million man armies sending waves of soldiers to their deaths with no way to truly breakout of the deadly stalemate of trench warfare. Most combat units in France, from 1914 to 1918, were destined to repeat the mistakes of the units before them, never learning how to change and successfully adapt to the new technologically advanced way of warfare. An examination of the 3rd Infantry Brigade, 2nd Division, American Expeditionary Forces (AEF), consisting of the 9th and 23rd Infantry Regiments, tells a different story of a unit that learned from its mistakes, adapted its doctrine, and changed its tactics to the reality of war on the western front. This thesis will analyze the lessons learned by the 3rd Infantry Brigade in 1918 and how they adjusted their combined arms tactics, training, and doctrine to become a true “learning organization.” The definition of a “learning organization” for this study is an organization where soldiers continually strive for personal mastery of their warfighting skills, challenge the status quo in doctrine and tactics, work towards a common shared vision of the future, master how to continuously learn as one team, and ultimately make the necessary system changes to succeed. The foundation of this definition comes from Dr. Peter M. Senge’s seminal 1990 work, *The Fifth Discipline: The Art and Practice of the Learning Organization*. Dr. Senge, a prominent systems scientist and founder of the Society for Organizational Learning, describes five learning organization disciplines, which are personal mastery, challenging mental models, creating a shared vision, team learning and systems thinking. When all the disciplines are actively being practiced they create an environment for a successful organization to emerge and excel. The argument

of this thesis is that the 3rd Infantry Brigade ultimately learned the disciplines of a learning organization while in combat. The disciplines of personal mastery, challenging mental models, creating a shared vision, team learning and systems thinking were key to their eventual success in World War I.¹

Even with serious obstacles, both in doctrine and in facing a battle hardened enemy, the 3rd Infantry Brigade possessed elements of a learning organization, which according to World War I historian, Mark E. Grotelueschen, led to the 2nd Division being considered one of the more adaptive American divisions to fight in World War I. The ability to learn from their mistakes and change their tactics was a trademark of the 2nd Division (and its subordinate units) and is summed up best in Grotelueschen's book, *The AEF Way of War*:

More clearly than any of the other pioneer divisions, the 2nd went into its first battles seemingly committed to fight in a manner consistent with the official doctrinal pronouncements of senior AEF leaders. Yet, the division's adaptations and innovations made during and after those first bloody battles proved equally apparent. Leaders at all levels within the division soon eschewed any notion of self-reliant infantry and stiff linear formations. They quickly learned to maximize firepower, to coordinate it with the infantry, and to attack with flexible formations and the latest infantry tactics. In some cases, they even employed techniques that deviated not only from the spirit but also from the letter of instructions from senior commanders. These risks paid off and were significant factors in the division's operational successes late in the war.²

¹ Peter M. Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization* (New York: Doubleday/Currency, 1990), 4. In addition to managing the Society for Organizational Learning, Dr. Senge is also a senior lecturer at the MIT Sloan School of Management. He has also co-authored *The Fifth Discipline Fieldbook* and *The Dance of Change*, both exploring learning organizations more in depth.

² Mark E. Grotelueschen, *The AEF Way of War: The American Army and Combat in World War I* (Cambridge: Cambridge University Press, 2007), 200. Dr. Grotelueschen was an officer in the United States Air Force and an Assistant Professor at the United States Air Force Academy. He is the author of *Doctrine Under Trial: American Artillery Employment in World War I* (2001). He holds degrees from the United States Air Force

This is not to say that the 3rd Infantry Brigade did not experience setbacks. Even though the brigade played a major role in 2nd Division's operational success, it had its fair share of losses, which plagued most all the AEF units during the war. In *The Questionable Training of the AEF*, military historian James Rainey writes that "in having to grope its way to victory, the AEF succeeded not because of imaginative operations and tactics or because of qualitative superiority in open warfare, but rather by smothering German machine guns with American flesh."³ The 3rd Infantry Brigade was not immune to this criticism which was true in many cases for the AEF. The 9th and the 23rd Infantry Regiments combined, lost over 100 officers and over 2000 enlisted killed in action (KIA), with thousands of wounded in action (WIA), in nine months of fighting in Europe.⁴ However, the ability to overcome these losses, learn from their mistakes, and incorporate the tactics of firepower and set-piece attacks into their own doctrine show that the 3rd Infantry Brigade, 2nd Division, was truly a learning organization. An

Academy (BS with Academic Distinction, 1991), the University of Calgary (Massachusetts, 1998), and Texas A&M University (Ph.D., 2003). *The AEF Way of War*, back cover.

³ James W. Rainey, "The Questionable Training of the AEF in World War I," *Parameters: Journal of the US Army War College* 22 (Winter 1992-93): 100. Rainey was an Assistant Professor in the Department of History at the US Military Academy, West Point, New York. He received his Ph.D. in the fields of military, diplomatic, and American History at Temple University, Pennsylvania.

⁴ Oliver Lyman Spaulding and John Womack Wright, *The Second Division American Expeditionary Force in France, 1917-1919* (Nashville: The Battery Press, 1989), 379-393; The regiments of the 1st Division saw equivalent losses during the war. The 1st and 2nd Division had the highest losses of all the division during the war for two reasons. First, they both saw the most combat action during the war and second, Pershing more readily reinforced the 1st and 2nd Division due to their combat success, even when it was costly. American Battle Monuments Commission, *American Armies and Battlefields in Europe* (1938; repr., Washington, DC: United States Government Printing Press, 1992), 515-517.

overview of the perception of the AEF and its doctrine will help set the stage for the atmosphere that the 3rd Infantry Brigade and its parent organization, the 2nd Division, found itself in during World War I.

Perception of the American Expeditionary Forces

According to Hew Strachan, a noted World War I historian, the perception of the AEF is that their mere numbers created mainly a psychological effect on both sides of the trenches, which contributed to the Allied success more than their fighting abilities.⁵ The experience of the AEF 2nd Division's 3rd Infantry Brigade, dispute this perception. However, the AEF did have many dilemmas to solve at the outset and during the war. For example, getting all the "mere numbers" into combat as fast as possible was an issue at the time. In *The First World War*, Strachan writes, "The American division consisted of 28,000 men, twice the size of those of its allies, which were being restructured as smaller units with fewer men but greater firepower. It was short of lorries and guns, and it proved cumbersome in manoeuvre and poor in its ability to coordinate infantry and artillery."⁶ It was the belief of many, including the commander of the AEF, General John J. Pershing, that the AEF divisions would not be ready and equipped to fight until 1919.⁷ Problems

⁵ Hew Strachan, *The First World War* (New York: Penguin Books, 2005), 311.

⁶ Ibid.

⁷ Edward G. Lengel, *Thunder and Flames: Americans in the Crucible of Combat, 1917-1918* (Lawrence: University Press of Kansas, 2015), 21. The other issue that was believed to prolong the AEF getting to the front lines was that Pershing would not allow U.S. units to fight under the flag of the British or French. The guidance from the Secretary of War Newton D. Baker was that the AEF must remain "separate and distinct" from their allied counterparts, and Pershing was bound to enforce this guidance.

like these abounded in 1917 and 1918. However, the most controversial issue that is still discussed to this day is the handling of American “open warfare” doctrine and tactics during the war.

General Pershing believed in traditional American views of warfare at the time, cultivated during his time in the Philippines and the U.S. Army’s 1916 expedition against Pancho Villa in Mexico. These engagements focused on Indian-fighting maneuvers and superior manpower. Unfortunately, the doctrine and tactics used by American forces at that time were a far cry from what was happening simultaneously on the western front of Europe. Pershing believed that victory in Europe would only come through the use of open warfare. Pershing’s definition of open warfare was characterized by a reliance on marksmanship, swift maneuvers with support from machine guns and above all else, the spirit of the Infantryman to win the day.⁸ Even in his *Final Report* after the war, Pershing writes, “The long period of trench warfare had so impressed itself upon the French and British that they had almost entirely dispensed with training for open warfare. It is to avoid this result in our Army and to encourage the offensive spirit.”⁹ He published this guidance in October of 1917, in order to ensure that the AEF was committed to training open warfare doctrine and tactics. Pershing went on to write, “The rifle and the bayonet are the principal weapons of the infantry soldier. He will be trained to a high degree of skill as a marksman, both on the target range and in field firing. An aggressive spirit must

⁸ John J. Pershing, *Final Report of General John J Pershing, Commander in Chief, AEF* (Washington, DC: Government Printing Office, 1920), 15.

⁹ *Ibid.*, 14.

be developed until the soldier feels himself, as a bayonet fighter, invincible in battle.”¹⁰ Unfortunately, in 1917, Pershing’s methods of maintaining an “offensive spirit” make no mention of mobile firepower or use of indirect fire to succeed in battle. This initial mindset in training undoubtedly contributed to severe casualties across the American divisions during the war. Grotelueschen writes, “While in Europe hundreds of thousands of infantrymen were massacred by artillery and machine guns every few months, American officers continued to focus on the weapons they knew and loved best.”¹¹ This focus was due to U.S. Army officers’ persistence in following the army’s pre-war doctrine.

Perception of American Expeditionary Forces Doctrine

Much of the criticism that the American officers received during and after the war was due to a reliance on unproven doctrine and in-adequate training. In the *The School of Hard Knocks*, Dr. Richard Faulkner writes:

The systematic problems associated with mass mobilization, poor personnel policies, and incomplete or ill-focused training meant that the AEF’s companies were led by officers and NCOs who did not understand how to employ the new weapons introduced in the war, lacked basic skills such as map reading, and were largely unable to employ basic tactics.¹²

¹⁰ Ibid., 15.

¹¹ Grotelueschen, *The AEF Way of War*, 17.

¹² Richard Shawn Faulkner, *The School of Hard Knocks Combat Leadership in the American Expeditionary Forces* (College Station: Texas A & M University Press, 2012), 9.

All of these factors contribute to the perception that the AEF leadership and AEF units were disorganized and fully unprepared for what they would face on the battlefields of Europe.

A cursory look at the U.S. pre-war tactical doctrine explains why the AEF was utterly unprepared for war in Europe.¹³ In its pre-war doctrine, the U.S. Army makes few changes to its tactics between the years of 1910 and 1917. This was due to Pershing's desire for continual movement through open warfare, which remained untried and provisional at best on the western front at the time. Some would call this ambivalence, which would only serve to confuse most of the lower level AEF leadership throughout the war. This ambivalence was in stark contrast to the German efforts of 1918. The Germans molded their tactics in their last great offensives to the true nature of war at that time, nearly succeeding if it had not been for the exhaustion of its troops and supply lines.¹⁴ However, the Germans had the benefit, or more likely misfortune, of fighting on the Western Front for the past four years. In the end, all AEF units dealt with these contradictions between their doctrine and the doctrine of their allies as best they could, but some would pay dearly for it. The 3rd Infantry Brigade, 2nd Division, was not immune to this ambivalence, yet the unit would work hard to overcome the obstacles of inadequate and problematic doctrine to become a learning organization.

¹³ American pre-war army doctrine will be examined more in-depth in chapter 2.

¹⁴ Rainey, "Questionable Training," 91.

Why the 3rd Infantry Brigade?

The army maneuver units of the 2nd Division faced a hardened German enemy throughout nine months of fighting. Even with serious obstacles, the 3rd Infantry Brigade possessed the elements of a learning organization that helped turn inexperienced soldiers into combat veterans. From their initial engagement at Vaux until their final assault during the Meuse-Argonne Offensive, they consistently learned from their mistakes and setbacks as best they could. While much of the American military leadership were stressing the use of open warfare tactics and ordering advances without the direct support of artillery and machine guns, the 3rd Infantry Brigade adopted combined arms tactics and doctrine they learned from the French Army. The brigade was adaptive in changing training, tactics and doctrine to meet the challenges of warfare on the western front. Now, in order to understand the successes, and yes, even the failures of the 3rd Infantry Brigade, a deeper understanding of Peter Senge's disciplines of a learning organization is needed.

Learning Organization Disciplines

Although the 3rd Infantry Brigade, along with its sister brigade, helped the 2nd Division take more prisoners, artillery pieces, and capture more ground than any other AEF division, this does not automatically mean that it was a learning organization.¹⁵ The following disciplines of personal mastery, challenging mental models, creating a shared

¹⁵ American Battle Monuments Commission, *American Armies and Battlefields in Europe*, 515-517; The 2nd Division captured 12,026 German soldiers and 343 German artillery pieces. The next closest division in prisoners captured was the 1st Division, with 6,469. John A. Lejeune, *The Reminiscences of a Marine* (Philadelphia: Dorrance and Co., 1930), 445.

vision, team learning, and systems thinking will be used to evaluate the brigade's performance throughout the war, and ultimately determine if they were a learning organization. Therefore, it is important to explain the definition of each discipline.

First, "personal mastery is the discipline of constantly clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively."¹⁶ Organizations that allow individuals to be committed to personal mastery take the initial step towards becoming a learning organization. In regards to this study, the development of soldiers' individual skills in the 3rd Infantry Brigade will be examined to see if personal mastery is being practiced. In addition, the decisions and abilities of the leaders will be examined at the individual level, discovering if they displayed the traits of personal mastery which allowed their units to be successful during the war.

The next discipline is challenging mental models. "Mental models are deeply ingrained assumptions, generalizations, or even pictures or images that influence how we understand the world and how we take action."¹⁷ Organizations that challenge the traditional views and assumptions routinely find better ways to accomplish their objectives. Challenging mental models keep organizations from becoming complacent. By exploring the mental models of the 3rd Infantry Brigade, this study will see if the brigade challenged their own American tactics and doctrine, ultimately adopting the tactics and doctrine that worked best for the type of war being fought in Europe.

¹⁶ Senge, *The Fifth Discipline*, 7.

¹⁷ Ibid., 8.

Third, is the discipline of building a shared vision. Senge writes, “One is hard-pressed to think of any organization that has sustained some measure of greatness in the absence of goals, values, and missions that become deeply shared throughout the organization.”¹⁸ The key word in this discipline is “shared.” Organizational leaders must ensure that their vision is understood down to the lowest levels. A shared vision ensures that everybody is on the same page, and in the absence of leadership oversight, subordinates know and do what is right to accomplish their objectives. The shared vision of the 3rd Infantry Brigade will mainly be examined by looking at how effective their planning efforts for combat operations and their communications lines were before and during their battles.

The fourth discipline, team learning: “is the process of aligning and developing the capacity of a team to create the results its members truly desire.”¹⁹ Team learning is the ability not only to put the shared vision into action, but to train and learn as an organization and not continually make the same mistakes. Studying the discipline of team learning will show if the 3rd Infantry Brigade learned from its previous mistakes, trained as a team, and changed the way they conducted warfare to become a learning organization on the western front in 1918.

The first four disciplines of a learning organization all contribute to the fifth discipline, systems thinking. Systems thinking occurs when all the disciplines are interwoven together and create a body of knowledge that create patterns, which will either help, or hinder an organization from changing their behaviors and actions in order

¹⁸ Ibid., 9.

¹⁹ Ibid., 218.

to become an effective organization.²⁰ By examining all the disciplines through the lens of systems thinking, organizations will see patterns and successfully react to the challenges they face, ultimately becoming a learning organization. An examination of the fifth discipline, systems thinking, will show how well the 3rd Infantry Brigade reacted to the challenges of the battlefield and how they adjusted their tactics and doctrine to overcome those challenges.

In the end, by using Senge's model of systems thinking and its disciplines, this study will describe how the 3rd Infantry Brigade was able to build a shared vision which created commitment to long term success, develop mental models that dealt with the weaknesses of their doctrine, utilize team learning to develop its soldiers, and cultivate personal mastery of their individual fighting skills to contribute ultimately the defeat of Germany in 1918.

History, Organization, and Training Overview

Chapter 2 will discuss the history and composition of the regiments of the 3rd Infantry Brigade, 2nd Division. It is important to understand that the 2nd Division was the only composite unit of both soldiers and Marines during the war. The 4th Marine Brigade will only be discussed in this study when they are directly involved with or influence the actions of the 3rd Infantry Brigade. However, it is interesting to note, that in the public eye, the Marines claimed most of the accolades of the 2nd Division during World War I, but that is not a concern of this thesis.²¹

²⁰ Ibid., 7.

²¹ The reason why it is perceived that the Marines received more accolades than their army brethren is perhaps because they received far more coverage than the regular

Next, in the analysis of the 3rd Infantry Brigade's organization and composition it is important to understand that the 2nd Division, unlike the 1st Division, was molded together on foreign soil. Grotelueschen writes, "Whereas all the other divisions were created in part in the United States and sent abroad, the 2nd Division was created in France in September 1917."²² Creating an entire division overseas, and on top of that a joint-division, was a colossal task. How this affected the 3rd Infantry Brigade's progress to become a learning organization will be examined further in the next chapter.

Last, as part of the groundwork for the 3rd Infantry Brigade, the doctrinal basis at the unit level and the training conducted prior to their first major engagement must be studied in depth. This examination will help show the U.S. Army's baseline in doctrine, training, and their understanding of modern warfare in 1917 and early 1918. General Pershing's open warfare training regimen and the French training regimen for the 3rd Infantry Brigade would play a major role in their first battlefield successes and shortfalls. The historical, organizational, doctrinal and training foundations are all integral parts of the type of learning organization that the 3rd Infantry Brigade would eventually become.

Army infantry units during the war, or in some cases, that the Marines were viewed as a better trained unit. George Clark in his book, *The Second Infantry Division in World War I*, paints the Marines in a much brighter light than soldiers at the start of the AEF's involvement in the war: "Unlike the infantry, the U.S. Marines were having little problem with their men in France. Even relative newcomers . . . had been exposed to Marine discipline and esprit, and that had effectively eliminated much of the difficulty. . . . But it was not so with the infantry. Many, even those in the so-called regulars, had little discipline instilled in their basic training." George B. Clark, *The Second Infantry Division in World War I: A History of the American Expeditionary Force Regulars, 1917-1919* (Jefferson, NC: McFarland, 2007), 19.

²² Grotelueschen, *The AEF Way of War*, 201.

Campaign Overview

Chapters 3 and 4 will track the 3rd Infantry Brigade through all their major battles and campaigns on the western front. This thesis will focus mainly on the attack at Vaux, the battle of Soissons, the St. Mihiel Offensive, and finally, the Meuse-Argonne Offensive. During each of these engagements this thesis will examine how well the brigade measured up against the five learning organization disciplines. In some cases, the Army units of the 2nd Division did take heavy casualties. These cases will be studied to see if failures in practicing the disciplines were a direct result from heavy personnel change overs, bad operational orders from higher, or a failure to learn from past lessons at the brigade level and lower. This thesis will then ultimately examine the successes of the 3rd Infantry Brigade during these combat engagements and show how they exemplified the disciplines of a learning organization.

Conclusion

In conclusion, the 2nd Division and their subordinate elements provide an excellent example of a learning organization during World War I. Though the Army units started out conducting open warfare techniques, they quickly transitioned their tactics to best be able fight the German forces in Europe. Grotelueschen sums it up best:

The 2nd Division did all it could to fight according to its own doctrine, even at the extent of employing unauthorized artillery tactics, resisting the orders from superior commanders to make continued attacks, and asking for early relief from the battlefield. In the end, such methods helped produce the great irony in which the AEF's most productive division deviated the most from official AEF doctrine.²³

²³ Ibid., 279.

This thesis will explore the 3rd Infantry Brigade's contribution to the 2nd Division efforts and what made them an adaptive and thinking unit during World War I. A detailed analysis of their history, organization, doctrine, tactics and training will set the foundation for the 3rd Infantry Brigade becoming a learning organization. However, as any foundation built unevenly, their training and organization were not without cracks.

CHAPTER 2

PREPARING FOR WAR

From October 1917 to May 1918, the 3rd Infantry Brigade, 2nd Division, attempted to set a firm foundation of becoming a learning organization through its past history, doctrine, unit organization, leadership, and training. However, this foundation was not without its faults, which contributed to a rough start for the brigade and the division in June and July of 1918. This chapter will examine the 3rd Infantry Brigade's preparation for war and the issues that it had going into its first significant combat action. First, to understand the 3rd Infantry Brigade's foundation, the origin of its soldiers and units must be discussed.

Background of American Regulars

The 3rd Infantry Brigade, as part of the 2nd Division, had the challenge of forming a cohesive combined arms fighting unit within an expedited timeline. To make matters more difficult, the 2nd Division was the first division to be created entirely on French soil. The division and the brigade did not exist before World War I, but the 9th and 23rd Infantry Regiment had a history spanning back almost sixty years, helping designate the 2nd Division as an "American regular" unit. Although the 3rd Infantry Brigade consisted of up to ninety percent of men who had been in the army for a year or less, the leadership of its regiments and battalions were American regulars.²⁴

²⁴ Spaulding and Wright, *The Second Division American Expeditionary Force in France*, 1; Grotelueschen, *The AEF Way of War*, 201.

The term American regulars, refers to soldiers who are full time professional officers and enlisted, in contrast to war time volunteers and draftees. From the end of the Civil War to the turn of the century, the United States Army only consisted of 28,000 regular soldiers. In *The Regulars: The American Army, 1898-1941*, Edward Coffman writes that during this time period, “Army thinkers considered their future in terms of becoming an urban constabulary to deal with the strikes and riots or, more to their liking, of creating a larger and more modern army capable of defending against a European invader.”²⁵ However, by the Spanish-American War in 1898, no drastic changes to organizations had been made for the better part of three decades, minus the movement of frontier soldiers to larger garrisons once the American west had been tamed.²⁶ Less than two decades later in 1916, with the prospect of involvement in World War I mounting, the American regular army still lacked significant manpower compared to its European counterparts’ pre-war numbers. “Before the mobilization for World War I in 1914, Germany increased its army to 620,000; France fielded 560,000 men; Britain still maintained some 250,000 in its army; and Japan had 230,000 regulars, while the American army numbered less than 98,000.”²⁷ There is little blame to spread on the leaders of the United States Army or government for these low regular army numbers since America was still extremely isolated from the rest of the modernizing world.

²⁵ Edward M. Coffman, *The Regulars: The American Army, 1898-1941* (Cambridge: Belknap Press of Harvard University Press, 2004), 1.

²⁶ Ibid.

²⁷ Ibid., 27.

Coupled with President Woodrow Wilson's insistence on sitting out of World War I, there seemed to be no need to build a larger army in order to get involved in European affairs. The United States' neutrality in the war changed in 1917 when Wilson finally intervened on the side of France and Britain. By this time, however, only ten percent of the AEF would consist of American regulars. This fact, combined with the American peacetime policy, contributed to the military as a whole being woefully unprepared for war:

The difficulty was insufficient military and naval strength. The USA was unprepared for a major conflict because Wilson did not anticipate belligerency. . . . By 1916 he recognized that his failure to force meditation stemmed from the lack of powerful armed forces. . . . Congressional legislation in 1916 provided for 'a navy second to none' and much-improved land forces, but the intervention came before this dramatic change in national security policy could have an effect.²⁸

The learning curve for the AEF becoming an adaptive and learning organization was steep, due to their relative isolation from the European armies' mass mobilizations of 1914. Regardless, the AEF eventually numbered over two million soldiers in France. The small percentage of regulars in the 3rd Infantry Brigade shared most of the burden of creating an effective fighting organization in a short period of time during 1917 and 1918. These officers and non-commissioned officers had the monumental and almost impossible task of training and preparing their men for combat. The small amount of time to integrate and train large number of conscripts undoubtedly contributed to the 3rd Infantry Brigade's costly lessons learned during its initial combat experiences. Becoming a learning organization would not be easy for the regular soldiers, volunteers and draftees

²⁸ Hew Strachan, *The Oxford Illustrated History of the First World War* (Oxford: Oxford University Press, 2014), 240.

alike. Now, a closer look at the history of infantry regiments that made up the 3rd Infantry Brigade prior to World War I must be conducted.

Regimental Backgrounds

In 1917, the 3rd Infantry Brigade consisted of two storied units; the 9th Infantry Regiment and the 23rd Infantry Regiment with names which dated back to earlier organizations around 1800. The modern 9th Infantry Regiment was formed in 1855. Apart from participating in the Civil War, the regiment served out in the American West in dozens of Indian campaigns up until 1892. Around the turn of the nineteenth century the 9th Infantry deployed to Cuba and then to China during the Boxer Rebellion, where it saw significant combat in 1900. Just a year later the regiment again participated in guerilla warfare during the Philippines Insurrection. Once complete in the Philippines the regiment was garrisoned in Texas until it was sent to France in 1917.²⁹

The modern 23rd Infantry Regiment was created at the outset of the American Civil War in 1861 and was a part of the Army of the Potomac. Although it was named the 2nd Battalion, 14th Infantry during the war, it was eventually chosen to be re-designated as the 23rd Infantry Regiment in 1866 with no relation to any of the future 14th Infantry Regiment units.³⁰ Like the 9th Infantry Regiment, after the Civil War, most of the 23rd Infantry's companies were spread across the North American west during the Indian Wars until it, too, was deployed to the Philippines. Parts of the regiment participated in

²⁹ Spaulding and Wright, *The Second Division American Expeditionary Force in France*, 1-2. "On July 13th it took part in the attack upon Tientsin, where it lost 95 men out of 700 engaged, but won its regimental motto 'Keep up the fire'—the last words of Colonel Liscum as he fell mortally wounded." Ibid., 2.

³⁰ Ibid., 2.

the subsequent capture of Manila and the entire regiment gained experience in guerilla warfare throughout the time period of 1899 to 1902. Though the regiment was deployed a few more times between 1903 and 1917, it saw no significant combat, and was eventually stationed in Texas with the 9th Infantry Regiment in 1917.³¹

During their history prior to World War I, the 9th and the 23rd Infantry Regiments earned battle and campaign streamers in the Indian Wars, the Civil War, the Spanish-American War, and the Philippine Insurrection. Even though by 1917 these “regular” regiments had few veterans of foreign wars still in their ranks, they were proud American combat units in name, and were dedicated to prove their mettle during World War I.

More than just showing chronological timeline of the infantry regiments of the 3rd Infantry Brigade, the history shows that besides the four years of the Civil War, the regiments primarily participated in Indian and guerrilla warfare tactics during their sixty years of existence. In 1917 and 1918, the 3rd Infantry Brigade would be challenged to look beyond the limited combat experience of the AEF in the last couple decades prior to World War I. This limited experience left the brigade with a difficult task of becoming a learning organization during the few short months in France, before they saw combat. Regardless, the campaigns and tactics conducted during their regimental histories played a significant part in the creation of the pre-war doctrine of the United States Army as a whole.

³¹ Ibid., 3.

Pre-War Doctrine

The American pre-war doctrine stood in stark contrast to the doctrine that was being taught on the western front in 1917 and 1918. Douglas Johnson and Rolfe Hillman sum up AEF pre-war doctrine and pre-war leadership experience best in their book, *Soissons, 1918*:

Combat leadership experience was thin in the American army prior to World War I. Most of the men who became the senior officers of the AEF had seen some combat either in Cuba, the Philippines, or in Mexico. Those with combat experience in Cuba had seen operations approximating what was taught in the service schools and described in textbooks. Those with Philippines experience participated in a different version of Indian fighting in a totally foreign environment. . . . Then there was the Punitive Expedition to Mexico. But it, too, was little more than a replay of frontier Indian fighting with a rather different political twist. In short, no one in the American army in 1917 had anything like the experience of European combat. They had to learn fast, and from foreigners.³²

Clearly, with these types of combat experiences, American pre-war doctrine looked nothing like the set piece battle doctrine of European armies of 1917. The origins of the U.S. Army's pre-war doctrine date back to the early 1900s.

General Pershing, a product of the United States Army since 1886, believed in the spirit and audacity of the individual infantrymen. He believed that ultimate success would be through the use of the infantry and the firepower that their rifles provided.³³ This is where the roots of the American open warfare doctrine found its life. Pershing viewed open warfare as a "brand of combat that would see maneuver, rifle marksmanship, and

³² Douglas V. Johnson and Rolfe L. Hillman, *Soissons, 1918* (College Station: Texas A & M University Press, 1999), XVI.

³³ Grotelueschen, *The AEF Way of War*, 31.

rapid advance.”³⁴ Pershing’s views on doctrine were not drastically different from the views of the French and German generals before World War I. However, Pershing had been on the sidelines, undoubtedly observing what was playing out in Europe and did not alter his views, even three years into the European bloodbath. Pershing’s belief in how the AEF were going to fight in France formed the initial mental models of the leaders of the 2nd Division and the 3rd Infantry Brigade.

Additionally, the army doctrine that Pershing grew up studying led him to be extremely persistent on the use of the ambiguous open warfare tactics and made him generally loath the defense. In the US Army’s *Field Service Regulations* of 1910, the very first paragraph on combat states, “Decisive results are obtained only by the offense. The defensive is therefore adopted, ordinarily, as a temporary or local expedient only.”³⁵ Obviously, at this point in the history of warfare nothing like the carnage of World War I had ever been imagined, albeit, the American Civil War being a distant second. In hindsight, and to Pershing’s credit, the AEF in World War I would be on the offense more than the defense. However, because of the confusing nature of open warfare doctrine, the 3rd Infantry Brigade struggled with challenging mental models during the first half of 1918.

Next, the *Field Service Regulation (FSR)* of 1910 emphasized the physiological effect that assaulting infantrymen would have over the defenders. “The defenders, shaken by superiority of [rifle] fire and seeing the steady advance of the enemy, foresee the

³⁴ Rod Paschall, *The Defeat of Imperial Germany, 1917-1918* (New York: Da Capo Press, 1989), 168.

³⁵ United States Army, *Field Service Regulation, United States Army, 1910* (Washington, DC: Government Printing Office, 1910), 157.

effect of impending contact . . . seldom wait for the final onslaught. The defender's whole line generally gives way as soon as it is turned or penetrated."³⁶ It is clear here that the leaders of the American army put much more weight on the abilities of their men to win battles than through any use of technologically advanced fire power methods in their doctrine of 1910.

Little changed in American rhetoric regarding the superiority of the infantryman by 1917, even after hundreds of thousands of European infantrymen had been slaughtered at the Marne, Somme and Verdun. However, by the U.S. Army's *FSR* of 1917, the definition of open warfare becomes clearer. As described in *The Defeat of Imperial Germany* by Rod Paschall:

The manual specified that the attack should be conducted under the conditions of fire superiority, with advance achieved by infantry rushes. Fire superiority was to be gained by accurate rifle fire. . . . Machine guns were to be treated as obstacles, weapons to be destroyed by concentrated rifle fire. To be sure, artillery would assist the infantry, but the soul of an American assault was the rifleman.³⁷

The *Infantry Drill Regulation (IDR)* of 1918 continued to stress the importance of the rifle and bayonet, asserting that they were the primary components that achieved victory in battle. The *IDR* stated, "In spite of the addition of numerous auxiliary weapons to infantry units, the rifle is by far the most formidable weapon of the infantry soldier."³⁸ The other auxiliary weapons that the 1918 *IDR* manual describes are automatic rifles, machine guns, grenades, the one-pounder gun, and light mortars. The regulation

³⁶ Ibid.

³⁷ Paschall, *The Defeat of Imperial Germany*, 168.

³⁸ United States Army, *Infantry Drill Regulations (Provisional) American Expeditionary Forces, Part I* (Paris: E. Desfossés, 1918), 78.

describes the circumstances for the use of each of these weapons, but without the pomp and fanfare of the infantry rifle and bayonet. The machine gun was viewed as a primarily defensive weapon and was inferior to the rifle and automatic rifle due to its lack of mobility at the time.

At least the description of the machine gun in the 1918 *IDR* is far better than the 1914 *FSR*, which was corrected and updated in the spring of 1917. This most up-to-date *FSR*, redistributed a few months before AEF leadership and soldiers started showing up in France in 1917, describes machine guns as “emergency weapons.”³⁹ The *FSR* goes on to state, “They [machine guns] are best used when their fire is in the nature of a surprise to the enemy at the crisis of combat. Their effective use will be for short periods of time—at the most a few minutes—until silenced by the enemy.”⁴⁰

The last crucial part of American Army’s pre-war doctrine is the use of field artillery. Although this is a study that could be its own thesis, it must be discussed briefly here to describe how the 3rd Infantry Brigade, 2nd Division, was expected to utilize its fires according to US doctrine. The AEF was not completely ignorant of the use of artillery and the importance it played in “position warfare.” In fact, the 1918 *IDR* has its own section on position warfare which states:

The attack of a carefully prepared trench system is characterized by a powerful artillery preparation and the simultaneous launching in assault at a prescribed hour of large masses of infantry, widely deployed and organized in depth, the assaulting waves being preceded by a rolling barrage. For an attack of

³⁹ United States Army, *Field Service Regulation, United States Army, 1914: corrected to April 15, 1917* (Washington, DC: Government Printing Office, 1917), 79.

⁴⁰ *Ibid.*

this kind, all action is regulated down to the minutest details of time and space by superior authority.⁴¹

In addition, the AEF headquarters even translated the 1917 French *Instruction on the Offensive Action of Large Units in Battle* and distributed copies to its unit in January 1918. The instructions state that the infantry will only proceed after artillery had cleared the way and that the infantry must ensure that they are in unison with artillery during battle.⁴² Even with this recognition of the importance of artillery, the leaders of the AEF still thought they could win the war through open warfare, and that positional warfare or the “set-piece battle” of European armies was the reason why the war was entering its fourth year.

In short, the American 1917 *FSR* and 1918 *IDR* are ambiguous at best when it comes to describing the use of field artillery during open warfare. The use of artillery during open warfare is depicted as supplemental in nature. The “support by fire” section of offensive combat in the 1917 *FSR* states, “As soon as the decision to assault is made, all the fire that can be brought to bear by artillery, machine guns, fire of position, and from other parts of the firing line will be directed upon that part of the enemy’s lines selected for assault.”⁴³ It is presumed that the AEF leadership favored this type of artillery support as opposed to set-piece battle attacks because they believed that in order

⁴¹ United States Army, *Infantry Drill Regulations (Provisional) American Expeditionary Forces, Part I*, 97.

⁴² France and United States, *Instruction on the Offensive Action Large Units in Battle* (France: General Headquarters, American Expeditionary Forces, 1918), 27. The French had nearly perfected the art of field artillery with the first true field artillery gun, the French 75.

⁴³ United States Army, *Field Service Regulation, US Army, 1914: corrected to April 15, 1917*, 95.

to achieve victory using open warfare tactics, their lower level infantry leadership must be free to seize the initiative at any point in time, regardless of the fire support assisting them. This is not in and of itself a bad idea. However, the shortfall in the U.S. pre-war doctrine is that the coordination and liaison between the infantry and artillery units is severely underestimated. Unfortunately, in the confusion of battle, thousands of AEF soldiers would pay the price in blood for the lack of detailed artillery support planning during many of the AEF's so-called open warfare battles.

Comparatively, it should be remembered that European military doctrine before World War I did not take into account the destructiveness of new technology which favored the defense. Geoffrey Parker writes as much in the *Cambridge Illustrated History of Warfare*:

The weapons developed over the previous decades—bolt-action rifles, machine guns, modern howitzers—provided firepower in unprecedented measure and presented insoluble problems to western military organizations. Modern weapons allowed armies to set up impregnable defensive positions, and neither the officer corps nor the general staffs worked out how to use modern technology, or evolved tactical concepts to break through such defenses, until 1918.⁴⁴

In 1917, American military doctrine writers were dealing with the issues that the European military doctrines writers had been struggling with since 1914. If anything, the American military was looking for something new and innovative, but without the practical experiences of warfare in Europe. The U.S. Army's untested doctrine was bound to take some hard knocks when put into action.

This section has described the doctrinal foundation of the 3rd Infantry Brigade, 2nd Division, as they arrived in France in 1917 and early 1918. Many of the brigade's

⁴⁴ Geoffrey Parker, *The Cambridge Illustrated History of Warfare* (Cambridge: Cambridge University Press, 1995), 266.

challenges of becoming a learning organization were directly tied to the seemingly incoherent AEF doctrinal foundation and the ability of their leadership to interpret the doctrine. Time would eventually tell if the 3rd Infantry Brigade could successfully challenge the status quo of the AEF doctrine and effectively adapt to the reality of fighting on the western front.

American Expeditionary Forces Organizational Make-up

Many considerations went into the formation of the AEF divisions and brigades during its formative months in 1917. For one, there were no fully formed and organized American divisions, corps, or armies at the outset of war.⁴⁵ The United States Army was building their formations as they were shipping soldiers overseas. This fact, along with the American desire to fight under its own command, the procurement of European warfighting equipment, and the urgent need of American troops on the front line to stem the tide of the upcoming German offensives, were all factors that went into building AEF organizations.⁴⁶

First and foremost, the American army at the beginning of 1917 was small and scattered throughout the United States, Latin America, and the Philippines. Pershing knew that the army needed to be reorganized and strengthened if it had any chance of surviving in Europe. In his *Final Report*, Pershing writes:

⁴⁵ United States Army, *United States Army in the World War, 1917-1919: Volume 1, Organization of the American Expeditionary Forces* (Washington, DC: Government Printing Office, 1948), 3.

⁴⁶ Ibid.

To meet the new conditions of warfare an entirely new organization was adopted in which our Infantry divisions were to consist of 4 regiments of Infantry of about treble their original size, 3 regiments of Artillery, 14 machine-gun companies, 1 Engineer regiment, 1 Signal battalion, 1 troop of Cavalry, and other auxiliary units, making a total strength of about 28,000 men.⁴⁷

The reason behind these mammoth square divisions is never explicitly stated by Pershing himself. However, the future commander of the 2nd Division, Major General James G. Harbord, offered an explanation on why the War Department and Pershing favored the larger divisions:

With the deep and very powerful defense developed in the World War, no decisive stroke could be secured in battle without a penetration necessitating several days of steady fighting. It was thus reasoned that the infantry of the division must be of such strength as to permit it to continue in combat for such a number of days that the continuity of battle would not be interrupted before decision was reached.⁴⁸

The undertone of this reasoning is undoubtedly accounting for the number of casualties that the AEF divisions expected to take in order to break the stalemate that had plagued the armies of Europe for the past three to four years.

Therefore, the war strength of the 2nd Division was over 27,000 enlisted personnel and over 900 officers.⁴⁹ This was 6,000 more men than previously allotted to a division in the updated *FSR* of 1917.⁵⁰ The 3rd Infantry Brigade consisted of over 6,000

⁴⁷ Pershing, *Final Report*, 5.

⁴⁸ James G. Harbord, *The American Army in France, 1917-1919* (Boston: Little, Brown, and Company, 1936), 103.

⁴⁹ United States Army, *US Army in the World War, 1917-1919: Volume 1, Organization of the AEF*, 183.

⁵⁰ United States Army, *Field Service Regulation, US Army, 1914: corrected to April 15, 1917*, 188.

soldiers and 172 officers.⁵¹ This was a further increase of approximately 1,200 soldiers from the American military doctrine.⁵² It should be noted that these numbers fluctuated drastically as the 3rd Infantry Brigade started participating in battles and campaigns in Europe. By August of 1918 the 3rd Infantry Brigade had ballooned up to almost 9,000 men in anticipation of upcoming battle losses.⁵³

In the end, American brigades during World War I were primarily made up of infantrymen, with a minimal amount of support personnel, ensuring that Pershing and his subordinate commanders could maximize the effect of his infantry centric doctrine during the war. The 3rd Infantry Brigade continually dealt with training and integrating new soldiers into its expanded ranks during the war. This challenged the brigade's ability to maintain a shared vision and conduct team learning. The abilities and skills of the leaders in the 3rd Infantry Brigade to deal with the new and fluctuating size of their units proved to be one of the determining factors in what made the 3rd Infantry Brigade a learning organization.

⁵¹ United States Army, *US Army in the World War, 1917-1919: Volume 1, Organization of the AEF*, 183. I used the totals of Table 23, Infantry Division Maximum Strength to come up with the brigade personnel numbers. The numbers for the brigade showed numbers for three brigades in each division, so I had to divide the number by three.

⁵² United States Army, *Field Service Regulation, US Army, 1914: corrected to April 15, 1917*, 188. Even though this study is primarily focused on the 9th Infantry Regiment and 23rd Infantry Regiment during the war, the other unit in the 3rd Infantry Brigade was the 5th Machine-Gun Battalion. The 5th Machine-Gun Battalion consisted of another 1,500 personnel at the beginning of the war. American Battle Monuments Commission, *2d Division Summary of Operations in the World War* (Washington, DC: Government Printing Office, 1944), 99.

⁵³ American Battle Monuments Commission, *2d Division Summary of Operations in the World War*, 100.

Leadership

Starting at the top, Major General Omar Bundy, Major General James G. Harbord, and Marine Major General John A. Lejeune were the three commanders of the 2nd Division throughout the unit's time in France. Bundy commanded the division from 8 November 1917 until 15 July 1918 with mixed reviews as the division commander. He commanded the division during the first major AEF engagements during the war. During Bundy's command time, the 3rd Infantry Brigade was overshadowed by the 4th Marine Brigade during Belleau Wood. However, Bundy soon proved to be an ineffective division commander and was moved to an administrative command of the VI Corps where he started planning for the Saint-Mihiel offensive.⁵⁴

Major General Bundy was replaced by Major General Harbord, a favorite of Pershing, who was then in command of the 4th Marine Brigade as an army officer. In *Soissons, 1918*, Douglas V. Johnson and Rolfe L. Hillman state that Harbord "was an officer who had been on the AEF's fast track from the beginning. Fifteen months before he was a major attending the Army War College when Pershing selected him for the key position of AEF chief of staff."⁵⁵ He was a more capable combat commander than Bundy, which he proved during his command of the Marine brigade. But Harbord's selection as the division commander was to be short lived, due to him taking over the poorly running AEF Services of Supply upon Pershing's request on 28 July 1918.⁵⁶

⁵⁴ Lengel, *Thunder and Flames*, 246. Bundy commanded the 2nd Division during Belleau Wood and the attack on Vaux.

⁵⁵ Johnson and Hillman, *Soissons*, 58.

⁵⁶ Clark, *The Second Infantry Division in World War I*, 113.

The undeniably most capable of the 2nd Division commanders was its last commander during the war, Marine Major General John Lejeune. Lejeune proved to be one of the finest wartime leaders during World War I and was regarded highly by all who knew him. As aptly stated in *The AEF Way of War*:

Lejeune knew many prominent Army officers, including a number of division and brigade commanders, and was close to some senior officers at GHQ. When Harbord announced to the division staff that Lejeune was to be his replacement, Ely [Commander of the 3rd Infantry Brigade at the time] knew Lejeune well enough to say, “I have known General Lejeune for years and I know of no one I would rather have succeed General Harbord.”⁵⁷

Grotelueschen then sums up all of the AEF 2nd Division commanders and their contributions to the war effort:

Omar Bundy, James G. Harbord, and John A. Lejeune, were all distinguished officers. Although Bundy exerted little influence on operations before leaving the division, Harbord and Lejeune were both strong commanders who nevertheless showed different doctrinal and operational tendencies. Harbord, Pershing’s protégé and former chief of staff, proved thoroughly committed to official AEF doctrine, while Lejeune demonstrated an impressive ability to adjust preconceived ideas and methods to the reality of the battlefield.⁵⁸

Overall, Lejeune’s impact on the division and the 3rd Infantry Brigade’s success as a learning organization was the most profound of all of the 2nd Division’s commanders during the war. His command style and ability to utilize the tactics and doctrine that worked best, often contradicting official AEF doctrine, allowed the division to become a learning organization during the war. Likewise, Lejeune’s actions had a profound effect on the 3rd Infantry Brigade ability to become a learning organization.

⁵⁷ Grotelueschen, *The AEF Way of War*, 236; Lejeune, *Reminiscences*, 286.

⁵⁸ Grotelueschen, *The AEF Way of War*, 201.

The two commanding officers of 3rd Infantry Brigade during the majority of the war were Brigadier General Edward M. Lewis and Brigadier General Hanson E. Ely. Lewis commanded the brigade during the first two months at Belleau Wood and Vaux, but had little impact on the 3rd Infantry Brigade during his time in command, leaving in mid-July 1918.⁵⁹ Ely took command of the brigade after Vaux from July till late October, eventually taking command of the 5th Division during the last twenty-one days of hostilities. He was awarded the Distinguished Service Cross for his actions as the brigade commander on 18 July 1918 during the battle of Soissons.⁶⁰ Ely led the brigade in a consistent manner throughout the war, and gave it stability that many other units lacked due to the constant change out of commanders. It is also a credit to his staying power, when many other leaders were being relieved of command and reassigned during the same time period.

The last leaders that had a significant impact on the 3rd Infantry Brigade's capabilities as a learning organization for this study were the commanders of the 9th and 23rd Infantry Regiments during the war. The three commanders of note for the 9th Infantry Regiment during the war were Colonel Leroy Upton, Colonel George Stuart and Colonel Robert O. Van Horn. Upton commanded the regiment until 29 July 1918, where upon his promotion to brigadier general, he handed the colors over to Stuart. Stuart would

⁵⁹ Lengel, *Thunder and Flames*, 77.

⁶⁰ American Battle Monuments Commission, *American Armies and Battlefields in Europe*, 499-500; Grotelueschen, *The AEF Way of War*, 348. Under fire, Ely personally led an assault which resulted in the capture of the town of Vierzy. General Orders No. 15, W.D., 1923.

command the 9th Infantry at St. Mihiel and Mont Blanc, after which he handed over the reins to Van Horn for the Meuse-Argonne Offensive.⁶¹

As for the 23rd Infantry Regiment, it would be commanded by Colonel Paul Malone and Colonel Edward Stone. Malone and Stone's change of command occurred at the same time that the 9th Infantry commanders, Upton and Stuart were switched out. It is interesting to note that the division change of command from Harbord to Lejeune also occurred within this same two-week period in July 1918.⁶² Fortunately for the division, the brigade, and the regiments, these superb officers took command at a critical time for their units. All of these regimental officers of both the 9th and 23rd Infantry Regiment undoubtedly influenced the culture of these regular army units. The regimental officers showed the "infantry spirit" that Pershing was keen on. These men were professional soldiers, and during the war, almost all of the regimental commanders would be promoted to command brigades. With few exceptions, the leaders of the 2nd Division on down played a significant role in making the 3rd Infantry Brigade a learning organization.

Training in France

The last pre-combat subject to be explored is how the 3rd Infantry Brigade's training in France proceeded before its first major engagement at Vaux. The backbone of the brigade, the 9th and 23rd Infantry Regiments, arrived in France around September of 1917. The *Program of Training for 2nd Division*, from AEF Headquarters, was

⁶¹ Clark, *The Second Infantry Division in World War I*, 113.

⁶² Ibid.

immediately issued to the units outlining a five-month training timeline (14 October 1917 to 25 February 1918), divided into eight periods of training.

1st Period: Individual, section, and platoon training for three weeks. During this time, rifle companies conducted individual weapon training, bayonet training, in-trenching techniques, 1-pounder mortar training, and platoon close order drills.

2nd Period: Company collective training for three weeks. During this time, rifle companies section and platoons conducted range live fires, trench warfare techniques of company attacks, and company open warfare attacks and defense.

3rd Period: Battalion range and communication training for two weeks. The main focus of training during this period was on battalions seizing areas of resistance, relief of other units, preparations for enemy bombardments, counterattacks, and gas attacks.

4th Period: Battalion collective training in open warfare and trench warfare for five weeks. Here units would conduct battalion on battalion open warfare attacks and then transition to trench warfare attacks. In addition, battalion night advances and night attacks would be trained during this period.

5th Period: Regimental collective training in open warfare and trench warfare for two weeks. Here units would conduct regiment on regiment open warfare attacks focusing on the offense, defense, outposts, patrols, and advance and rear guards. Trench warfare would focus on the coordination between the infantry and the artillery while conducting attacks with flanks both open and closed. The first demonstrations of artillery barrages and machine gun barrages were also planned to be conducted during this period.

6th Period: Brigade collective training in open warfare and trench warfare for two weeks. This period is almost identical to the 5th period, but it was to be conducted at the brigade level. This is the first period where the employment of aeroplanes and the ambulance company would be added to the maneuvers.

7th Period: Division collective training in open warfare and trench warfare for two weeks. This period was meant for the division to train as a whole, with the same training objectives as the last two time periods.

8th Period: Division Inspection for the final week.⁶³

⁶³ American Expeditionary Forces Headquarters, *Program of Training for the 2nd Division* (France: Records of the AEF, 1917), 5.

This was a highly ambitious training program that went well enough for some units of the 3rd Infantry Brigade. However, it is reasonable to believe that the weeks dedicated to anything higher than brigade collective training did not occur in full, since much of the 4th Marine Brigade was away completing menial tasks until March of 1918.⁶⁴ This impacted the 3rd Infantry Brigade's ability to train offensive maneuvers with larger sized units on their right and left them as they advanced. Initial communication problems in June and July 1918 resulted from this lack of joint training with the Marine Brigade.

Another point to note about the *Program of Training for the 2nd Division* was that it dedicated almost the same amount of time to trench warfare as it did for open warfare. Even for American military leaders who wanted to put open warfare into execution, trench warfare was still the reality on the ground, and could not be overlooked. Starting during the company training period two, all the way through division training in period seven, units were supposed to complete 130 hours of trench warfare training and 142 hours of open warfare training.⁶⁵ This training plan was undoubtedly influenced by French military leaders who stressed the importance of training for trench warfare. The French also provided trainers to the 3rd Infantry Brigade, who were most experienced in trench warfare at this time. As Grotelueschen explains, "Even the training that was supposed to focus on open warfare skills tended to deal more with marching and deploying units for battle than with offensive tactics or attack techniques."⁶⁶

⁶⁴ Clark, *The Second Infantry Division in World War I*, 14.

⁶⁵ American Expeditionary Forces Headquarters, *Program of Training*, 10-13.

⁶⁶ Grotelueschen, *The AEF Way of War*, 203; Chief of Staff, I Army Corps to C.G., 2nd Division, Subject: Exercises of February 20th, 1918, 28 February 1918, Folder 56.2, Box 33, 2nd Division Historical File, RG 120, NA.

Unfortunately for units of the 3rd Infantry Brigade, the second round of training that was scheduled to last from February to June 1918 was cut short by the third German Spring offensive on 27 May 1918. The brigade had mainly conducted trench warfare training up through the end of May. On 17 May 1918, Corporal Frank W. Andersen, a soldier in the 23rd Infantry Regiment, described his firsthand account of the trench warfare training they were doing at the time:

In the meanwhile my company was not loafing on the job. Every night we started out towards the front loaded, not with packs and guns, but with picks and shovels. When we arrived two miles from the front lines we set to work digging what were called 'outline trenches.' Army engineers had mapped out beforehand the location of these. It was our work to follow the maps, drive stakes, lay out lines, and dig.⁶⁷

Regrettably for Andersen and other soldiers of the 3rd Infantry Brigade, the part of the training plan that was to focus solely on open warfare was left for the last four weeks of training. One week into their open warfare training, the German Spring Offensive commenced and the brigade was ordered to move towards Chateau-Thierry, where it would see its first major combat in vicinity of Vaux, France.⁶⁸ In the end, the 3rd Infantry Brigade was never entirely consolidated for training and no unit above company level completed the *Program of Training for the 2nd Division*. However, even with all the disjointed training and non-combat related missions that the 3rd Infantry Brigade received throughout late 1917 and early 1918, Grotelueschen asserts in the *AEF Way of War* that "some of them [infantry companies] became among the best trained in the

⁶⁷ Quoted in Spaulding and Wright, *The Second Division American Expeditionary Force in France*, 245.

⁶⁸ Grotelueschen, *The AEF Way of War*, 206.

AEF.”⁶⁹ Regardless, if the units of 2nd Division were the best trained overall or not, it is a fact that their fifty-eight days of training conducted was more than any other unit in World War I.⁷⁰

Finally, in regards to the 3rd Infantry Brigade’s train up time in France, it should be noted that elements of the brigade did see small amounts of combat in between bouts of training. These smaller engagements had a positive effect on some of the brigade’s subordinate elements to learn as a cohesive team. These learning experiences in dealing with trench warfare occurred from March till May 1918. For instance, the first entry in the 23rd Infantry’s *War Diary* describes Company B’s repulse of a silent German attack. A small unit of German soldiers had cut the wire in front of the American trenches and moved through it, but due to an American patrol failing to come back on time, the soldiers of Company B were reluctant to fire upon the suspected enemy, not wanting to inadvertently hit their own men. 1st Lieutenant J. J. Sheeran of 1st Platoon reported that eventually the German soldiers were fired upon and that the “gallant and continuous watch” of the American sentinels kept the Germans out of their trenches. However, the further success was hampered by command and control issues. The 23rd Infantry did not even call for artillery to kill the retreating German element because they still did not

⁶⁹ Ibid., 202. The historian George Clark writes that it was the 23rd Infantry Regiment that was able to complete most of the program of training while the 9th Infantry Regiment was away on guard duty and railroad construction details during some of the time periods. Clark, *The Second Infantry Division in World War I*, 15.

⁷⁰ American Battle Monuments Commission, *American Armies and Battlefields in Europe*, 517. The next closest units were those of the 1st Division with 47 days of training.

know where their own patrol was located.⁷¹ The big take away lesson here is that Company B lost contact with one of their own patrols, which could have ended badly if a larger German force had breached the wire or if Americans in the trenches fired upon their own men. Here, junior leaders in the 23rd Infantry learned the importance of communication, especially when a friendly element is maneuvering. Practicing Senge's team learning discipline at battalion, regiment and brigade levels would be crucial for future attack where large units would be moving in conjunction with artillery support.

Another learning moment occurred for the brigade on 13 April 1918. The 9th Infantry on the front line in the Rouvrois Sector experienced a German rolling barrage followed by a Storm troop attack. The 9th Infantry killed sixty-one Germans while only suffering seven American killed.⁷² Here they quickly learned the methods of the German trench attacks and how to repel them as the 3rd Brigade's *War Diary* states, "It is shown that a stubborn resistance, even though individual, will break up the play [of the Germans] not only from front to rear, but on the flanks, is clearly shown."⁷³ As in any successful first encounter with an experienced enemy, soldiers' morale of the untried 9th Infantry would have been high after their first real combat test. Again team learning was at play here, but seeing if the 3rd Infantry Brigade could go on the attack and then successfully repulse a German counterattack had yet to be seen.

⁷¹ Second Division Historical Section, *Records of the Second Division (Regular), Volumes 1-10* (Washington, DC: Army War College, 1927), vol. 7, 1st Platoon B. Co., 23d Inf., 14 March 1918.

⁷² Second Division Historical Section, *Records of the Second Division*, vol. 6, "Synopsis of Company Reports on Raid on Marie-Louise," 3rd Bn. 9th Inf., 13-14 April 1918.

⁷³ *Ibid.*

Therefore, when larger combat operations began in June and July of 1918, it is fair to say that the 3rd Infantry Brigade was trained better in trench warfare than in its own doctrine of open warfare. On a lighter side, the time spent in trenches also taught them to hate the smallest of enemies, lice. Captain Roy C. Hilton, of the 9th Infantry Regiment, writes, “Nearly all the dugouts were infested with lice, better known to Americans as ‘cooties.’ The soldiers’ opinion of these little creatures expressed mathematically was, ‘They added to the soldier’s troubles, subtracted from his pleasures, divided his attention and multiplied like hell.’”⁷⁴ However their days in the trenches were numbered. Within a short period of time the soldiers of the 3rd Infantry Brigade would be on the offensive, facing a much bigger enemy that would bite with lead and steel.

The Challenging Beginnings of a Learning Organization at War

Creating a war time organization is never an easy task. Coupled with the fact that the United States Army grew twenty-fold between 1916 and 1918, the 2nd Division and its 3rd Infantry Brigade had monumental challenges to overcome in becoming a learning organization. Though the learning organization disciplines laid out by Peter Senge in *The Fifth Discipline* were not around in 1917, their underlining premises hold true for any organization of any time period.

First, the discipline of personal mastery in one’s profession on a large scale within the 3rd Infantry Brigade would have been difficult to achieve given the circumstances. The pre-war percentages of regular soldiers that had served four years or more was five

⁷⁴ Spaulding and Wright, *The Second Division American Expeditionary Force in France*, 241.

percent in the 9th Infantry and seven percent in the 23rd Infantry.⁷⁵ This small percentage of men was most likely the senior officer and non-commissioned officers within the regiments. Even for them, to master the skills needed to effectively wage war on the western front was an extremely difficult task. To be proficient at one's profession, leaders need adequate time to train themselves and their subordinates. Although they did do some training, the leaders were continually dealing with other problems rather than solely developing their own warfighting skills. Forming their units, conducting non-combat related missions, and occupying the trenches with French forces starting in March 1918, were all distractions keeping the leaders of the 3rd Infantry Brigade from being able to personally master the skills of leading soldiers into combat. In addition, simultaneously training the somewhat incoherent doctrine of the AEF and the doctrine of trench warfare during the same training periods would have also added to the confusion. According to Senge, this would have only dimmed, or given the leaders an inaccurate view of what they were really supposed to be learning during their training time.⁷⁶

On the positive side, a major part of personal mastery is being willing to learn. There are no writings to suggest at the 3rd Infantry Brigade level and lower that leaders and soldiers were not willing to gain the knowledge that the French military held in trench warfare. Even when there was tension that could be attributed to American arrogance. At the soldier level these disputes were handled fairly quickly by the junior

⁷⁵ Ibid., 5. In comparison to the 4th Marine Brigade, the 5th Marines Regiment had 12 percent and the 6th Marine Brigade had 3 percent of their Marines in the service for four years or more. The 6th Machine Gun Battalion in the Marine Brigade had the highest percentage of any one unit in the 2nd Division with 13 percent.

⁷⁶ Senge, *The Fifth Discipline*, 131.

NCOs and officers.⁷⁷ However, having a willingness to learn does not make up for the tough conditions that the 3rd Infantry Brigade had to deal with at the outset of becoming a learning organization. Therefore, true personal mastery of the individual soldiers and leaders of the brigade had to come through actual combat experiences, which was going to be costly on the front lines.

Next, the discipline of challenging mental models within the 3rd Infantry Brigade and the 2nd Division was not being practiced at the outset of the war. This discipline eventually become the trademark of the division under Major General Lejeune, but the newly formed 2nd Division and its 3rd Infantry Brigade did not have adequate time to reflect on its training before it was sent into combat. In order to challenge the mental models of open warfare to observe if it was going to work or not in actual execution, the leaders of the brigade needed to have time to reflect on the “distinctions between espoused theories and theories-in-use.”⁷⁸ In other words, even at the highest levels of the AEF, no time was spent on looking at the distinctions between the theory and reality of open warfare. If the open warfare mental model had been challenged, the extreme difficulty of maintaining accurate and effective artillery fire as the infantry advanced may have been further examined before thousands of American soldiers paid for this lack of reflection in blood. The leaders of the 3rd Infantry Brigade started out not challenging mental models, but this discipline, like personal mastery, would start to be practiced after their first couple offensive actions.

⁷⁷ Lengel, *Thunder and Flames*, 23.

⁷⁸ Senge, *The Fifth Discipline*, 176.

The third discipline, building a shared vision within the 3rd Infantry Brigade, started two-fold, one idealistic and the other operational. First, the leaders in the 3rd Infantry Brigade, as most of the AEF leaders did, believed in the cause of why they were in Europe in the first place, which was to defeat the Germans and bring peace. Brigadier General Ely, the 3rd Infantry Brigade commander, writes of this vision after the war, “American soldier desires most of all peace, a quick, economical, humane, efficient means of ending a particular conflict—a means at once idealistic and practical.”⁷⁹ This vision from Ely, helped inspire the shared vision of his brigade throughout some of the hardest months of the war. Second, the operational shared vision of the 3rd Infantry Brigade took some time to be cultivated within the units. Here the brigade leadership struggled, sometimes being thrown into battle with little to no planning, reconnaissance, or firepower support. In these occasions, casualties were heavy. Unfortunately, the training that the 3rd Infantry Brigade received could not replicate the real battlefield conditions that they would face. As will be seen, their operational shared vision would be practiced successfully during their first brigade mission only to be thrown by the wayside during their next mission. Building an operational shared vision would not be easy; again, the 3rd Infantry Brigade would learn how to do this through experience.

Next, the development of team learning within the 3rd Infantry Brigade before its first major combat engagement was occurring mainly at the regiment level and below. The *Program of Training for the 2nd Division* provided a detailed list of tasks to be trained, and which units tried to abide by when not conducting front line defense and

⁷⁹ Dale Van Every, *The A. E. F. in Battle* (New York: D. Appleton and Company, 1928), ix.

other non-combat related missions. The same issues that effected soldiers' personal mastery of their skills would also affect their unit's team learning ability. However, on a positive note, the subordinate units of the 2nd Division did have more training days than any other division before their first major enemy engagement.⁸⁰ But even this may be more of an indictment on the AEF lack of training then on the 3rd Infantry Brigade's ability to train and learn as a team. Again, the 3rd Infantry Brigade would have to develop the discipline of team learning by learning from their experiences in battle.

Last, systems thinking, which are all the disciplines woven together, had a rough start due to the aforementioned difficulty of practicing the learning organization disciplines during the 3rd Infantry Brigade's creation and subsequent training in France. If the brigade was to become a true learning organization, its leaders and soldiers would have to learn from their own personal experiences. Systems thinking would develop through learning from mistakes in both judgement and execution, and would be driven by the imperative to learn, and not to die on the western front.⁸¹

Conclusion

It becomes abundantly clear that the creation of the 3rd Infantry Brigade and the 2nd Division were not an easy task to complete in late 1917. However, the senior leadership of the brigade and its regiments were made up of American regulars who believed that they could handle anything the Germans threw at them. The storied histories of the 9th and 23th Infantry Regiments also played a minor part in maintaining esprit de

⁸⁰ Spaulding and Wright, *The Second Division American Expeditionary Force Force in France, 1917-1919*, 5.

⁸¹ Senge, *The Fifth Discipline*, 314.

corps within the brigade, even if their units were primarily made up of soldiers who had been in the army for less than a year. The AEF pre-war doctrine, although not closely balanced to what was happening on the western front, was a new way of doing warfare, something that had been largely void in Europe for the past three years. However, the inability to train open warfare tactics and its lack of integration with field artillery support would show that it left something to be desired on the battlefield of World War I. The 3rd Infantry Brigade's preparation was inconsistent at best and they still had some developing to do to become a true learning organization. Positive changes were soon to come through lessons learned in actual combat.

In the end, the leadership of the 3rd Infantry Brigade were professional soldiers committed to winning. Although, at first they were tied to Pershing's open warfare doctrine, they eventually learned to convert to the warfare taught by their French counterparts with greater success during later engagements in the war. Even though the 3rd Infantry Brigade's preparation was not ideal, the brigade worked hard to overcome obstacles in organization, doctrine, and training to set the foundation of a learning organization in the crucible of combat. The 3rd Infantry Brigade would learn by doing. As Lengel writes in *Thunder and Flames*, "In terms of potential . . . the 2nd Division was second to none. Soldiers [of the 3rd Infantry Brigade] and Marines had received uneven training, but were as enthusiastic as any men in the AEF and better led than most."⁸² The soldiers of the 3rd Infantry Brigade soon had the opportunity to prove themselves during the attack on Vaux and the Aisne-Marne Offensive during the summer of 1918.

⁸² Lengel, *Thunder and Flames*, 74.

CHAPTER 3

BAPTISM BY FIRE

The 2nd Division first participated in major combat operations during the third German Spring Offensive of 1918. At Vaux the 3rd Infantry Brigade demonstrated an evolution towards a learning organization, while at Soissons the brigade faced many challenges that it seemed to regress despite the victory. In each of these battles the enemy situation, friendly preparation and the combat execution will be examined. Then, the battles will be analyzed by using Senge's five disciplines to determine if the brigade was becoming a learning organization during its baptism by fire. Only time would tell the importance of these initial engagements. Due to lessons learned during the summer of 1918, the 3rd Infantry Brigade, 2nd Division, showed noteworthy progress in planning, execution, and use of firepower during the later St. Mihiel and Meuse-Argonne Offensive. These hard fought and sometimes bloody lessons learned, especially at the battle of Soissons, forced the 3rd Infantry Brigade to make changes and start to become a true learning organization.

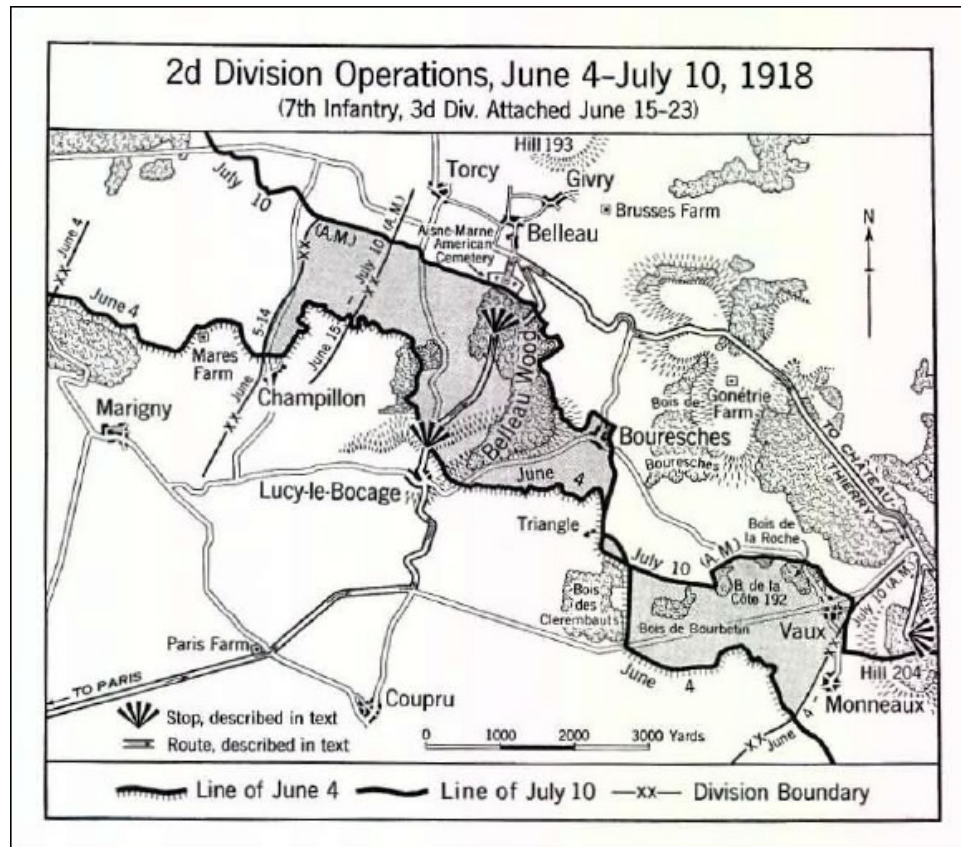


Figure 1. 2nd Division Operations in the Vicinity of Belleau Wood and Vaux

Source: American Battle Monuments Commission, *American Armies and Battlefields in Europe* (1938; repr., Washington, DC: United States Government Printing Press, 1992), 45.

Vaux

The general situation before the 3rd Infantry Brigade's attack on Vaux started with the German Spring Offensive in March 1918. A deep bulge was created in the Allied lines, which necessitated the need for the new American forces to suspend their training in order to fill the gap that had been created by the Germans. The 2nd Division was given to the French command to hold the line between the villages of Belleau and Vaux. The German advance along the Metz-Paris highway ran right into the 2nd Division's Chateau-

Thierry sector. The 4th Marine Brigade, with portions of the 23rd Infantry Regiment, faced some of the fiercest German attacks during June 1918, with the mission of stopping the Germans from reaching Paris. The 3rd Infantry Brigade's attack on Vaux on 1 and 2 July played a role in stopping the final credible German surge of the war towards the French capitol.⁸³

According to Grotelueschen, the engagement at Vaux was a “well-orchestrated combined arms attack that annihilated enemy garrisons with relatively little cost in American life.”⁸⁴ However, it must be stated that this initial combat success for the 3rd Infantry Brigade came during a much smaller battle than their next combat operation at Soissons. Was the attack on Vaux an anomaly or were they truly becoming a learning organization? The answer to this question supports both arguments and will be discussed in the lessons learned section. However, before the preparation, execution, and lessons learned can be examined for the 3rd Infantry Brigade's first major combat test, the disposition and condition of German forces must be studied. An understanding of the enemy situation before each engagement will help highlight the key insights that the 3rd Infantry Brigade gained in becoming a learning organization.

Enemy Situation

On 15 June 1918, the German 201st Infantry Division received orders to replace the 231st Infantry Division in the Chateau-Thierry sector. As part of this relief, the 402nd Infantry Regiment, 201st Division was given the area of operation surrounding the

⁸³ Pershing, *Final Report*, 25-30.

⁸⁴ Grotelueschen, *The AEF Way of War*, 207.

village of Vaux. This relief effort was completed by the night of 19 June.⁸⁵ However, the 201st Infantry Division as whole experienced some difficulties as they moved into sector.

This was summed up best by the German 201st Division Commander, Lieutenant

General Bachelin, on 30 June 1918:

After relief from the sector near St. Mihiel the division during the first half of the month was constantly on the go, due to five changes of billets. This inured the troops marching and to the hardships which are a part of bivouac life. Beginning on June 17 the division took over the Combat Sector Chateau-Thierry from the 231st Infantry Division. The relieved division had moved into this position while attacking and therefore practically no trenches or other defensive installations had been constructed. The last two weeks were therefore given over to the most strenuous kind of work. The entrenching of the positions was made very difficult by the very active enemy and the very lively enemy artillery fire which fell on constructed trench sections and rear area. On average the daily casualties amounted to 30 men killed and wounded. In spite of all this the morale of men and their physical condition . . . is good.⁸⁶

This passage by General Bachelin paints an accurate picture of his regiments' physical and mental state. He understood that his men had covered an extreme amount of ground and had worked hard to build up their protection around their inadequate fighting positions, while constantly under stress from enemy artillery. U.S. Army Lieutenant Harry W. Caygill also commented on the conditions of the Germans in vicinity of Vaux. Writing of his own personal experience as a platoon leader in the 23rd Infantry Regiment,

⁸⁵ Second Division Historical Section, *Translations: War Diaries of German Units Opposed to the Second Division (Regular), 1918, Volumes 1-9* (Washington, DC: Army War College, 1932), vol. 3, Doc. 49, No. 887, 15 June, 19 June.

⁸⁶ Second Division Historical Section, *Translations*, vol. 3, Doc. 49, No. 887, 30 June 1918. It is interesting to note in this same passage of the German war diaries that in reference to his men's physical condition, the division commander also states specifically that some soldiers of the 401st Infantry Regiment had come down with influenza when they had been forced to stay inside a tunnel which could not be ventilated during their last sector assignment. Having the flu would have undoubtedly effective the morale of the enemy unit that the 3rd Infantry Brigade would be fighting in Vaux.

Caygill described the subpar conditions that one of the companies of the 402nd Regiment, 201st Division, had to deal with while organizing their defense:

While consolidation of the [German] 8th Company's positions had been undertaken, the project was by no means completed when the [German] division commander rendered his report. . . . The construction of substantial dugouts had been started, but as yet shelter from the incessant artillery fire of the enemy was inadequate. The members of the 8th Company occupied little more than covered holes in the ground near their firing positions.⁸⁷

Even with these difficulties, the soldiers of the German 402nd Infantry Regiment were experienced combat veterans. It would take detailed planning and a concerted effort from the green American 3rd Infantry Brigade to defeat them. The 2nd Division's intelligence reports from 28 and 29 June accurately depicted the enemy situation described by Caygill, which greatly contributed to the brigade's ability to prepare for the attack on Vaux.⁸⁸

Preparation of the 3rd Infantry Brigade

Up until the attack at Vaux, only the 23rd Infantry Regiment had seen limited offensive combat during the battle of Belleau Wood. The results of this limited offensive action must be discussed to show if one of the 3rd Infantry Brigade's regiments learned any significant lessons before Vaux, thus displaying the traits of a learning organization. In the book *Thunder and Flames*, Edward G. Lengel asserts that, "Officers and men in the 3d Brigade were eager for the [Vaux] operation to begin. Malone's 23d Regiment . . .

⁸⁷ Harry W. Caygill, *Operations of Company M 23d Infantry in the Attack on Vaux, July 1-2, 1918: Personal Experience of a Platoon Leader* (Fort Benning, GA: The Infantry School, 1933), 2-3; Second Division Historical Section, *Translations*, vol. 3, Doc. 59, 201st War Diary, 30 June 1918.

⁸⁸ Second Division Historical Section, *Records of the Second Division*, vol. 9, 2nd Div. Intel. Bulletin, "Summary of Intelligence," 28-29 June 1918.

had been embarrassed on June 6 and had participated in the defense of Bouresches after the relief of the Marine Brigade [vicinity Belleau Wood], but had few accomplishments to its credit.”⁸⁹ Though the 23rd Infantry was not publicly rebuked, their leaders’ presumed embarrassment stemmed from a lack of command and control at the brigade and battalion levels. The 23rd Infantry participated in this unfortunate affair while attempting to protect the 4th Marine Brigade’s flank during the battle of Belleau Wood. On 6 June, miscommunication between Colonel Paul Malone, the 23rd Infantry Regimental Commander, and one of his battalion commanders resulted in needless casualties. The 3/23rd Infantry Battalion, although given the order to hold its position alongside the other two battalions of the 23rd Infantry, advanced forward of the rest of division towards its objective, Hill 192. The resulting enemy machine gun fire during this fiasco ultimately wiped out two companies of the 3/23rd Infantry. This clearly had been a communication breakdown between the units of the 23rd Infantry. During this engagement, the regiment was still struggling to learn how to fight as one team. Senge’s team learning discipline proved to be hard to put into practice. Although Malone was never blamed for the incident, it undoubtedly left a stain on his unit that he wanted to remedy as soon as possible during his unit’s next combat engagement.⁹⁰

Lieutenant Caygill believed that even after their ranks had suffered losses during these June incidents, morale was still high and only combat experience was needed for most of their replacements to become proficient warfighters.⁹¹ The 9th Infantry was

⁸⁹ Lengel, *Thunder and Flames*, 195.

⁹⁰ Ibid., 119-122.

⁹¹ Caygill, *Operations of Company M 23d Infantry in the Attack on Vaux*, 8.

equally as eager as the 23rd Infantry for the next combat operations, but for different reasons. As Colonel Upton, the 9th Infantry commander, stated in his unit's war diary, the 9th "had seen no action at all and was anxious to prove its worth."⁹² At Vaux the 9th and 23rd Infantry, fighting as the 3rd Infantry Brigade, finally received their wish.

The preparation of the 3rd Infantry Brigade leading up to the 1 July attack on Vaux was thorough, partly due to the brigade not engaging in active combat since 6 June.⁹³ Historian George B. Clark writes, "fortunately during this period the many patrols and regular daily observation gave many clues as to what the problems would be and the 9th and 23rd were primed and ready."⁹⁴ Here, the problems that Clark references allude to the terrain the brigade had to advance along and the enemy positions that they faced for the operation. On 30 June, the detailed *Field Order No. 9* was issued by Major General Omar Bundy, the commander of the 2nd Division:

The 2nd Division, on the left of the 39th Division, will attack, with two battalions of Infantry reinforced by artillery and special troops, the line: Railroad crossing PARIS-CHATEAU THIERRY road, eastern exit of VAUX; Northeastern and northern edges of BOIS-de-la-ROCHE; northern and northwestern edges of woods northeast of HILL 192.⁹⁵

Ultimately, this attack was planned to push back the German tide, and crush their hopes of capturing Paris and forcing an end to the war in Germany's favor.

⁹² Lengel, *Thunder and Flames*, 195.

⁹³ The 3rd Infantry Brigade was occupying front line trenches in the Chateau Thierry sector during the month of June 1918.

⁹⁴ Clark, *The Second Infantry Division in World War I*, 87.

⁹⁵ Second Division Historical Section, *Records of the Second Division*, vol. 1, 2d Div. Field Order No. 9, 30 June 1918.

The attack plan called for the 9th Infantry to be on the right side of the line and the 23rd Infantry on the left. The objectives for this mission were to seize the village of Vaux, clear the nearby woods and establish advance posts on Hill 192.⁹⁶ Upon receipt of the mission, both regimental headquarters issued their own detailed field orders. Last, in preparation for the attack on Vaux, robust support from artillery fire was planned. Over 20,000 rounds were reserved to assist in prepping the objectives and covering the advancing infantry in a rolling barrage.⁹⁷ Caygill's firsthand account describes this artillery plan for the brigade which would start on the evening of 1 July:

The artillery plan for the engagement called for several hours of fire of destruction on the German positions and neutralization by gas, followed by a raking of the barrage zone from 5:00 PM to 5:57 PM, with high explosive and shrapnel. Then for three minutes a barrage would be laid down 200 meters in front of the line of departure. Thereafter it would advance 100 meters every two minutes until the assaulting troops had entered the southern edges of the woods.⁹⁸

The advancement of artillery in conjunction with the assaulting infantry troops was planned to continue until the brigade's objectives were reached.

The Marine Brigade and the 23rd Infantry Regiment learned the hard way during the battle of Belleau Wood that advancing in the open without constant artillery support was a recipe for disaster. The U.S. Army's 1917 *IDR* even emphasizes that "The artillery is the close supporting arm of the infantry and its duties are inseparably connected with

⁹⁶ Ibid.

⁹⁷ Ibid. "Note: Destructive fire on observation points and demolition on Vaux and all strong points will be carried on during the Day J or J-1." This accounted for almost 7000 rounds while the other 14,000 were used to assist the infantry as they moved.

⁹⁸ Caygill, *Operations of Company M 23d Infantry in the Attack on Vaux*, 10.

those of the infantry.”⁹⁹ This was much easier said than done for AEF units fighting during the early months of 1918. The 2nd Division and its subordinate units were still struggling with how to best implement AEF doctrine in actual offensive combat, driving them to adopt doctrine more akin to trench warfare to achieve success. The leaders of the 3rd Infantry Brigade soon received their next opportunity during the attack on Vaux in July 1918.

The Attack on Vaux

From the outset of the attack, the soldiers of the 3rd Infantry Brigade had the advantage. The attack caught the Germans by surprise before they could complete their defenses. A great amount of the damage to the German defensive lines was due to the artillery barrage prior to the infantry leaving their line of departure. As previously mentioned in the enemy situation section, the Germans were poorly dug in, thus allowing the artillery to inflict greater casualties than normal. As for the assault of the 3rd Infantry Brigade, the official German 201st Division war diary states:

At 7:00 PM an enemy infantry attack was started in force along the entire division front, exclusive of Chateau-Thierry, with the main effort against Vaux and Hill 204. While the attack was repulsed conclusively by the front line battalions . . . the enemy succeeded in pushing back the front of the 402d Inf as far as the Vaux railroad. . . . The recapture of the remainder of the old line and of the Village of Vaux was abandoned.¹⁰⁰

⁹⁹ United States Army, *Field Service Regulation, US Army, 1914: corrected to April 15, 1917*, 74.

¹⁰⁰ Second Division Historical Section, *Translations*, vol. 3, Doc. 50, 201st Div. War Diary, 1 July 1918.

The German war diary's highly optimistic view of their successful repulsion of the 3rd Infantry Brigade does not bear much weight, the speed of the Americans attack coupled with the number of German casualties and prisoners tell a different story.

Overall, the attack on Vaux and the surrounding objectives was a success for the 3rd Infantry Brigade. The attack was conducted nearly flawlessly, many Germans surrendered on the spot and the ones that did not were flushed out by the efficient clearing techniques of the 3rd Infantry Brigade.¹⁰¹ Caygill accounts for the speed with which they captured their objectives and started preparing for the German counterattack:

Less than twenty-five minutes after the zero hour, the commander of the assault platoons found himself on the final objective at the station of the signal lamp. Ten minutes later all three assault platoons had reached the northern edge of the woods, and the company's lieutenant was in conference with the sergeant commanders of the right and left assault platoons.¹⁰²

The 2nd Division's "Journal of Operations" on 1 July also confirms Caygill's statement. The journal states, "The infantry moved forward at 6 P.M. The village of Vaux was taken by the 2nd Bn. 9th Inf. With little opposition, the consolidation of [the] position being underway by 6:40 P.M."¹⁰³ These statements prove that the leaders of the 3rd Infantry Brigade were capable of executing limited set-piece attacks.

All in all, the assault on the village of Vaux and the surrounding areas had taken less than an hour. The soldiers of the 3rd Infantry Brigade quickly prepared for a German counterattack. However, a strong German counterattack did not materialize but there was

¹⁰¹ Lengel, *Thunder and Flames*, 196.

¹⁰² Caygill, *Operations of Company M 23d Infantry in the Attack on Vaux*, 16.

¹⁰³ Second Division Historical Section, *Records of the Second Division*, vol. 6, War Dairies, 2nd Div. Journal of Operations, 1 July 1918.

a retaliatory mustard gas shelling. The soldiers of the 23rd Infantry Regiment were prepared for this gas shelling, due to previous bad experiences with mustard gas in June.¹⁰⁴

Although by some reports the German 402nd Infantry Regiment had simply fallen apart during the attack, all in all, it was a morale booster for the men of the 3rd Infantry Brigade. Grotelueschen sums up the evidence of the 3rd Infantry Brigade's successful operation the best in terms of casualties:

When the casualty reports were finalized, the magnitude of the victory became even more clear. The 2nd Division suffered 328 casualties, with just 47 deaths and a high percentage of slightly wound; the opposing German division reported that it lost 254 killed, 162 wounded, and 510 missing (nearly all were captured)—a total of 926 casualties.¹⁰⁵

Even though this was a small battle, it was the first where the 3rd Infantry Brigade fought as a single unit. Captain Withers A. Burress, a 23rd Infantry Regimental operations officer, writes a glowing summary of cooperation between the units:

In the regiment there was the finest spirit of loyalty, team work, and eagerness to play their part. During the engagement there was not a single officer relieved from command. The cooperation of the supporting artillery and machine guns was excellent. The best relationship and spirit existed between the marines, the 9th Infantry, and the regiment.¹⁰⁶

¹⁰⁴ Rexmond C. Cochrane, *Gas Warfare at Belleau Wood, June 1918* (Army Chemical Center, MD: US Army Chemical Corps Historical Office, 1957), 59.

¹⁰⁵ Grotelueschen, *The AEF Way of War*, 223; Spaulding and Wright, *The Second Division American Expeditionary Force in France*, 78.

¹⁰⁶ Withers A. Burress, *The 23d Infantry Southwest of Chateau-Thierry: Personal Experience of a Regimental Operations Officer, May 30 to July 9, 1918* (Fort Benning, GA: The Infantry School, 1929), 36.

The 3/23rd Battalion Commander echoed this sentiment, stating that “the officers and men of the battalion conducted themselves in a highly creditable manner” during their actions at Vaux.¹⁰⁷

On the surface the 3rd Infantry Brigade was successful, even after their train-up time was cut short by the German Spring Offensive. The lessons learned section examines the reasons behind their initial success and what lessons were still to be learned for them to be considered a true learning organization.

Lessons Learned

The review of the 3rd Infantry Brigade’s attack on the village of Vaux sheds light on some clear lessons learned from by the brigade and the 2nd Division as a whole. The lessons learned will be evaluated using Senge’s learning organization disciplines. First, for the discipline of personal mastery, both the 3rd Infantry Brigade Commander and the 23rd Infantry Regiment commander reported about the highly effective and efficient individual rifle and machine gun fire from their units which resulted from their marksmanship training.¹⁰⁸ The ability to keep a high offensive tempo while utilizing their own direct fire weapons in conjunction with artillery fire contributed to the brigade’s success. Conducting range fires and perfecting their marksmanship was at least one event during the train up of the brigade and the division that had not been neglected. Personal

¹⁰⁷ Second Division Historical Section, *Records of the Second Division*, vol. 7, “3/23rd Report of Operations,” 1-2 July 1918.

¹⁰⁸ Second Division Historical Section, *Records of the Second Division*, vol. 7, “3/23rd Report of Operations,” 1-2 July 1918; Second Division Historical Section, *Records of the Second Division*, vol. 6, “3rd Infantry Brigade Daily Operations Report,” H. E. Ely, 1 July 1918.

mastery played a role in the brigade's success at Vaux. However, for Senge's next discipline, challenging mental models, the question that must be asked is was the 3rd Infantry Brigade truly challenging the status quo of the AEF's open warfare doctrine? The first part of challenging mental models is; understanding why you are taking certain actions, and seeing if those actions are having the intended results.

This was an admittedly small attack, but it showed that the 3rd Infantry Brigade had the ability to conduct set-piece attacks with rolling barrages more akin to the European armies' doctrine. General Sir John Monash, an Australian Army division Commander in World War I, best described set-piece battle as follows:

In a well-planned battle of this nature [set-piece], fully organized, powerfully covered by Artillery and Machine Gun barrages, given a resolute Infantry and that the enemy's guns are kept successfully silenced by our own counter battery Artillery, nothing happens, nothing can happen, except the regular progress of the advance according to the plan arranged. The whole battle sweeps relentlessly and methodically across the ground until it reaches the line laid down as the final objective.¹⁰⁹

The leaders of the 2nd Division and its 3rd Brigade kept an open mind and were willing to incorporate set-piece battle warfare after only one month of fighting on the front. The 3rd Brigade Commander, Brigadier General Edward M. Lewis, and the 23rd Infantry Regiment Commander, Colonel Malone, had learned from the previous mistakes made by the Marines at Belleau Wood and the 23rd Infantry's infamous failed assault on 6 June. As stated earlier, during this assault, soldiers of 23rd Infantry advanced in the open with no support from artillery or heavy machine gun fire, suffering many casualties. However, at Vaux the brigade and regiment commanders ensured that there was heavy

¹⁰⁹ Sir John Monash, *The Australian Victories in France in 1918* (New York: E. P. Dutton and Company, 1920), 227.

fire support planned as the troops advanced towards the town and the surrounding woods, ensuring a repeat of the 6 June assault did not occur again.

The brigade's leaders conformed to the doctrine and tactics that best helped them accomplish their missions during the attack on Vaux. In the *AEF Way of War*, Grotelueschen writes:

In the 3rd Brigade's assault of Vaux, the 2nd Division displayed two important improvements. First, the division proved capable of planning and executing the kind of limited, firepower-based, set-piece attacks for which most of its training had prepared it. Second, and of equal importance, the division [3rd Brigade included] demonstrated a willingness . . . to adapt its methods to the realities of the modern battlefield. By the end of June, the division had dismissed any notion of self-reliant infantry and open warfare and implemented the much maligned Allied doctrine so closely associated with trench warfare.¹¹⁰

However, if the division had fully dismissed the idea of "self-reliant infantry" after Vaux, the following battle of Soissons may have been less costly. According to Senge, there needs to be an established understanding of an organization's mental models, without this foundation, organizations can not improve, or effectively change their mental models.¹¹¹ It is this authors assertion that even though Vaux was successful, the brigade failed to see the true advantage of conducting set-piece battle compared to conducting the AEF's unpublished open warfare document. Hence, why the 3rd Infantry Brigade was still willing to try some semblance of open warfare tactics in the future at Soissons, and not completely change to only executing set-piece battle tactics. In the end, Vaux at least showed that the leadership of the 3rd Infantry Brigade was willing to abide by the European mental models on a smaller scale to be successful. Though not fully

¹¹⁰ Grotelueschen, *The AEF Way of War*, 223; Spaulding and Wright, *The Second Division American Expeditionary Force in France*, 225.

¹¹¹ Senge, *The Fifth Discipline*, 189.

challenging their own doctrine during the attack on Vaux, there was a clear shared vision across the brigade.

The attack on Vaux was successful because even down to the platoon level, soldiers understood their objectives and what they needed to do to accomplish them. According to the *Fifth Discipline Fieldbook*, for a vision “to be genuinely shared, such visions must emerge from many people reflecting on the organization’s purpose.”¹¹² This cannot be understated. Even smaller combat operations have turned out for the worse when lower level leaders and soldiers are not operating under the same shared vision. For example, Caygill had seen what happened on 6 June where the 23rd Infantry Battalion commanders were not operating under the same vision of their regimental and brigade commanders. Soldiers paid for these mistakes in blood. However, during the attack on Vaux, Caygill knew exactly what was expected of his platoon during the battle and the 3rd Infantry Brigade’s vision was shared across all of its units.¹¹³ This is confirmed by the experience of the 2/9th Infantry Battalion Commander, Major A. E. Bouton. He states, “The attack was executed in an excellent manner and strictly according to orders. Officers and men all executed their parts with perfect attention to detail and with a courage and dash that could not well be excelled.”¹¹⁴ Without a shared vision of the operations, the attack could not have been conducted in the manner it was executed.

¹¹² Peter Senge et al., *The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization* (New York: Doubleday, 1994), 299.

¹¹³ Caygill, *Operations of Company M 23d Infantry in the Attack on Vaux*, 21.

¹¹⁴ Second Division Historical Section, *Records of the Second Division*, vol. 7, “2/9th Inf. Attack on Vaux and La Roche Woods,” 3 July 1918.

Having a shared vision also allowed the 3rd Infantry Brigade to incorporate team learning, stemming from some adverse past events that occurred in June.

True team learning occurs when organizations learn from past mistakes and create results that will benefit the entire organization.¹¹⁵ During several earlier enemy bombardments in June 1918, the 3rd Infantry Brigade had suffered heavily from German mustard gas shelling. However, immediately after capturing the village of Vaux, Malone ordered his troops to ‘keep masks on all night if necessary.’¹¹⁶ Mustard gas attack casualties that previously were in the thousands for the 3rd Infantry Brigade, drastically fell to less than one hundred during the enemy gas attacks on 1 and 2 July.¹¹⁷ The leaders and soldiers of the brigade had learned by experience that the Germans often retaliated with gas attacks after American assaults in vicinity of Belleau Wood. The importance of practicing team learning during even small battles like Vaux should not be discounted.

Even military historian Edward G. Lengel, who is highly critical of the soldiers and marines’ actions during their first month in battle, showers a little praise on the soldiers of the 3rd Infantry Brigade after a rough start to fighting in June 1918. “Army officers and soldiers did not make a good showing at first, from the 23rd Regiment’s premature advance and subsequent drubbing on June 6. . . . But they too fought bravely [like the marines], and the attack on Vaux was a model of military efficiency.”¹¹⁸ The

¹¹⁵ Senge, *The Fifth Discipline*, 218.

¹¹⁶ Cochrane, *Gas Warfare*, 59.

¹¹⁷ Ibid., 59-66. The 3rd Infantry Brigade’s mustard gas casualties numbered 68 officers and 3,184 men during the month of June alone.

¹¹⁸ Lengel, *Thunder and Flames*, 206.

leaders and soldiers of the 3rd Infantry Brigade proved that when given time to plan and with proper support, they could execute limited set-piece attacks, adopting the mental models of their European counterpart's trench warfare doctrine. Burress, a platoon leader in the 23rd Infantry states the Vaux attack "stands out on account of the thorough preparation and arrangement of every detail."¹¹⁹ Caygill seconds this opinion, commenting on how the time to plan with accurate intelligence reports positively affected his unit's operation during the attack on Vaux:

At no time after 6:00 PM, on July 1 were the assault platoons of Company M encompassed in the 'fog of war.' They knew where to go, how to get there, and what to expect when they arrived. It is realized, of course, that seldom will opportunity be afforded for the accumulation of detailed information concerning the enemy.¹²⁰

Caygill was right in his assertion that detailed planning and accurate intelligence played a major role in his unit's success at Vaux. But he also grasped that they "would seldom have the opportunity" to do so in the future, as the beginning of the Aisne-Marne Offensive soon demonstrated.

Senge's fifth discipline, systems thinking, which combines all the other disciplines had yet to be fully practiced by the 3rd Infantry Brigade. Even though the attack on Vaux was successful, it did not stress the brigade's systems of communication, and command and control, which would play a bigger role in the brigade's next engagements. Though seemingly progressive and positive at Vaux, the learning organization disciplines were about to be put to a much larger test at the battle of

¹¹⁹ Burress, *The 23d Infantry Southwest of Chateau-Thierry*, 26.

¹²⁰ Caygill, *Operations of Company M 23d Infantry in the Attack on Vaux*, 21.

Soissons. Unfortunately for the 3rd Infantry Brigade, there would be mixed results on how their early combat experiences contributed to their next major enemy engagement.

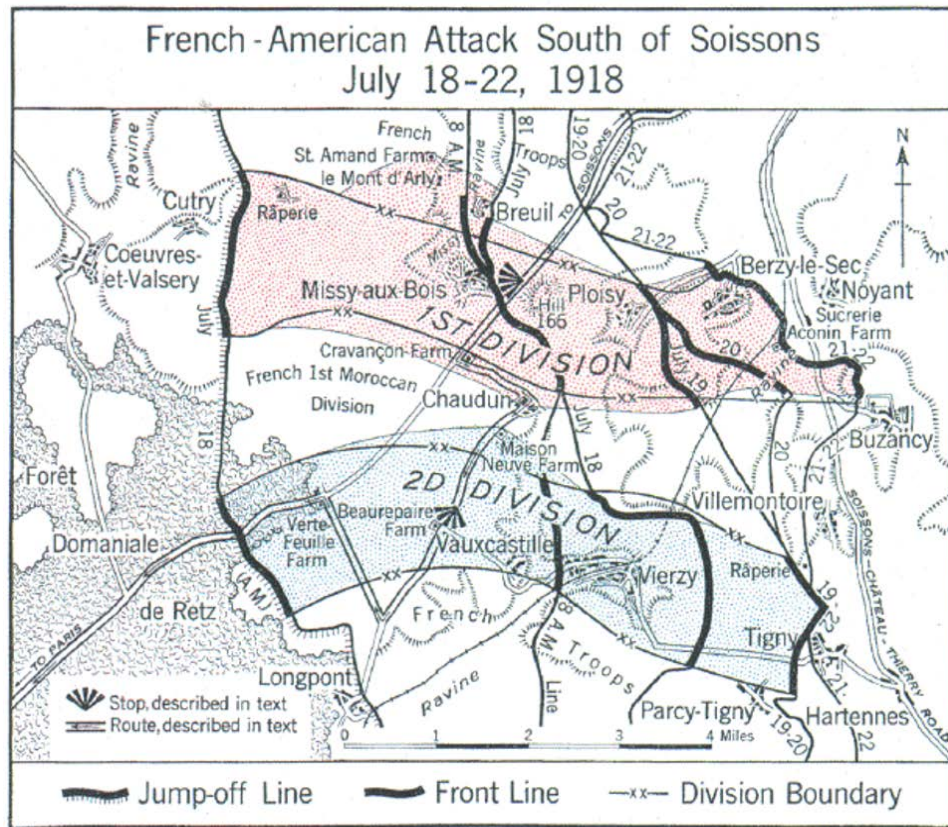


Figure 2. 2nd Division Operations in the Vicinity of Soissons

Source: American Battle Monuments Commission, *American Armies and Battlefields in Europe* (1938; repr., Washington, DC: United States Government Printing Press, 1992), 83.

Soissons

The last German offensive of the war started on 15 July 1918, thus spurring the Allied Aisne-Marne Offensive into action. General Pershing wrote that “the enemy encouraged his soldiers to believe that the July 15 attack would conclude the war with a

German peace.”¹²¹ The Germans were able to reach a depth of eight kilometers beyond the Marne River, but by 18 July the German advance had stopped and no peace was to be had in their favor. The battle of Soissons on 18 and 19 July was a turning point in the war, after which the Germans were solely committed to the defense until the Armistice on 11 November 1918.¹²²

The battle of Soissons for the soldiers of the 3rd Infantry Brigade was viewed as “both a success and a missed opportunity.”¹²³ On one hand the battle of Soissons helped stop the final German offensive of World War I. On the other, as Johnson writes in *Soissons, 1918*, “It was not a neat and orderly maneuver, nor was it an exemplary exercise of generalship. It was, in fact, a confused mess.”¹²⁴ However, Johnson also observed:

Soissons stands at a distinct point of transition—a transition in operations and tactics, a transition in the mechanics of warfare, and, particularly for the two divisions [AEF 1st and 2nd Division] representing the long-awaited presence of the American Expeditionary Forces, a transition in leadership, with its terrible tests of command and control. The battle demonstrated how much the Americans had yet to learn, but it also provided hints of just how quickly some of them could learn and how long it would take others to do so.¹²⁵

Unfortunately for the 3rd Infantry Brigade, their role in the Aisne-Marne Offensive was greatly hampered by these “terrible tests in command and control.” This section will examine the reasons for the lack of command and control and the doctrinal lessons that

¹²¹ Pershing, *Final Report*, 34.

¹²² *Ibid.*, 34, 36.

¹²³ Lengel, *Thunder and Flames*, 297.

¹²⁴ Johnson and Hillman, *Soissons*, 144.

¹²⁵ *Ibid.*

the 3rd Infantry Brigade learned from the engagement. Despite challenges at Soissons in July 1918, the brigade ultimately learned some valuable lessons to take into their future battles. Before the preparation, or lack thereof, of the 3rd Infantry Brigade is discussed, the enemy situation at Soissons must be examined to understand the battle in context, thus better deriving the key lessons learned by the brigade.

Enemy Situation

The German objective of their last offensive was to force peace on Europe. The Germans launched their attack on Reims on 15 July 1918. One of the German thrusts to the east of Reims was blocked immediately by the French Fourth Army while the other was able to penetrate six miles, crossing the Marne River, into the French Fifth and Sixth Armies area of operations. However, the Germans made no further progress by 17 July. The stiff defense of the Allied forces had found its footing.¹²⁶ Once the last German offensive had ground to a halt, the German forces remaining in the newly created salient were left in a vulnerable position. The *2d Division Summary of Operations in the World War* best sums up their situation in the middle of July 1918:

The German troops in the Marne salient were in an unfavorable situation. Their only rail communication was the railroad through Soissons, which lay close to the west face of the salient, and would be cut by an Allied penetration in this area . . . they made plans to improve their situation by widening the salient to the east . . . if successful, [converging attacks] would turn the Allied positions about Reims on both flanks.¹²⁷

¹²⁶ American Battle Monuments Commission, *2d Division Summary of Operations in the World War*, 25.

¹²⁷ *Ibid.*, 24.

The last German offensive led to the hurried Allied orders that launched the Aisne-Marne Offensive and the 3rd Infantry Brigade into the battle of Soissons. The overall objective of the Allied forces operation was to push the Germans back across the Marne for good.

Preparation of the 3rd Infantry Brigade

The German attack on the Marne Salient gave the 2nd Division and its subordinate units very little time to fully recover from the previous month of hard fighting and trench life. In addition, the 3rd Infantry Brigade did not have sufficient time to reflect and internalize the lessons they learned at Vaux. With no time for any substantial training after Vaux, the learning process for the brigade was at a severe disadvantage compared to their future offensives. Three other major factors did not help the 3rd Infantry Brigade and the 2nd Division's preparation for the Aisne-Marne Offensive. These factors were key leadership changes within the 2nd Division organization, communication technology shortfalls and the secrecy of the combat plans by the French command.

First, key leadership changes were made at the division and brigade level only days before the offensive was planned to take place. Major General James Harbord replaced Major General Bundy as the division commander. Harbord was a career army officer and had been in charge of the 4th Marine Brigade during the Belleau Wood attacks. Bundy had received much of the criticism for the 2nd Division setbacks early on in June. As military historian, Grotelueschen points out, "Pershing had grown increasingly dissatisfied with Bundy, who provided little leadership during the fighting at Belleau Wood. Pershing wrote in his diary, 'Gen Bundy disappoints me. He lacks the

grasp. I shall relieve him at the first opportunity.’’¹²⁸ And so Pershing did, giving Harbord the command, even though interestingly enough much of the setback that the marines experienced during Belleau Wood were directly related to Harbord’s lack of detail during planning. It is the opinion of this author that a lack of detail in planning is not necessarily wrong when it comes to giving your subordinate leeway in seizing the initiative. However, in World War I where the heavily planned and coordinated set-piece battle attacks usually won the day, a lack of detail in planning meant the infantry was destined to take heavy casualties. Regardless, Harbord had previously been Pershing’s AEF chief of staff, so Pershing was much more comfortable with him in command of the 2nd Division than he had been with Bundy.¹²⁹ This matters because the costly lessons that the 4th Marine Brigade learned at Belleau Wood under Harbord, were about to be learned by the 3rd Infantry Brigade at Soissons.

Along with the division commander changing out, the 3rd Infantry Brigade commander, Brigadier General Edward M. Lewis was promoted and given the AEF 30th Division. Brigadier General Hanson Ely, who had previously served as a regimental commander in the 1st Division, was given the brigade. The only saving grace for 9th and the 23rd Infantry Regiments is that Colonel Upton and Colonel Malone stayed in command of each of their respective units. Overall, it is hard to believe that these leadership changes, only a few days before the 3rd Infantry Brigade rushed into battle, benefitted the brigade’s command and control issues.

¹²⁸ Grotelueschen, *The AEF Way of War*, 223; Entry for 9 June 1918, Pershing Diary, LOC.

¹²⁹ Lengel, *Thunder and Flames*, 264; Johnson and Hillman, *Soissons*, 58.

Another factor that hindered the 3rd Infantry Brigade's preparation, and the rest of the AEF as well, was the lack of technological systems for coordinating artillery fires. In *Soissons, 1918*, Douglas and Johnson write "communication between the infantry and artillery was largely beyond the technical capability of the communications systems of the day."¹³⁰ Basically once a rolling barrage was lost, it was nearly impossible for artillery units to give accurate artillery support for fear of accidentally hitting their own men. This was the case for all armies in Europe at the time. Regardless, the brigade's under developed communication systems were utilized on a much grander scale than had been the case at Vaux, making the shared vision of the 3rd Infantry Brigade much harder to accomplish.

The third factor that hampered the preparation of the 3rd Infantry Brigade was the secrecy of the mission by the French XX Corps, under command of Major General Berdoulat. This is important because Pershing authorized the French high command to have the 2nd Division lead the offensive, starting on 18 July 1918.¹³¹ As shall be seen, in the French attempts to keep the mission a surprise to the Germans, they also failed to give the American forces under them enough time to digest the plan. Overall, communication with their higher commands leading up to the battle of Soissons was less than ideal for the 3rd Infantry Brigade.

Most of the difficulty at the end of the 3rd Infantry Brigade's preparation phase was getting to their start position for the assault. Many of the infantry units did not start moving into position until the evening of 16 July, less than a day and a half before the

¹³⁰ Johnson and Hillman, *Soissons*, 31; Lengel, *Thunder and Flames*, 246.

¹³¹ Lengel, *Thunder and Flames*, 227.

offensive was supposed to kick off. This was due to the fact that there were not enough trucks to move the infantry units, which had received the order to move on 14 July, but had to wait two full days for trucks to arrive to pick them up.¹³² It did not get any easier for the soldiers of the 3rd Infantry Brigade once the trucks dropped them off well behind the front lines on 17 July. Captain Burress, the 23rd Infantry operations officer, describes the march for the soldiers once they debarked from the trucks:

After a few hours the hot July sun became most effective. . . . The march became more and more trying on these men who had been in the trenches for more than a month. Quite naturally it should. They lacked sleep, food, and water. They were marching on a slippery, muddy road on the hottest kind of a July day.¹³³

The 23rd Infantry, as the same for the 9th Infantry, did not even receive their orders to attack until noon on 17 July. Burress, in the same location as Colonel Malone goes on to write, “The regiment halted by the road for a rest. It was here that news was received that an attack was to be made. Nothing had been known before. Little was known now except that an attack was to be made at daybreak the next day from the eastern edge of the forest.”¹³⁴ Secrecy at higher levels led to this lack of information and intelligence.

The French command was behind this secrecy for the mission. It also did not give 3rd Infantry Brigade sufficient maps to reconnoiter their starting points or their objectives. Johnson writes in *Soissons, 1918*, that “it is a minor miracle that the 5th Marines and 23d Infantry made it into the line at all. At every halt, commanders at every

¹³² American Battle Monuments Commission, *2d Division Summary of Operations in the World War*, 26.

¹³³ Withers A. Burress, *The Operations of the 23d Infantry in the Soissons Offensive, July 16-25, 1918* (Fort Benning, GA: The Infantry School, 1929), 10.

¹³⁴ Ibid.

level had to exert great effort to restart forward movement.”¹³⁵ Again Burress, the 23rd operations officer, paints a vivid picture of the night march into their start positions:

The terrific electrical storm accompanied by driving rain added to the confusion and what seemed insurmountable difficulties. The imagination can hardly be stretched enough to conceive of the situation. Nothing was visible at a pace. . . . It was next to impossible to find one’s direction. . . . The battalion commanders were the only ones who knew the way. . . . Noncommissioned officers were stationed along the way as guides to help as best they could to give the troops the proper direction.¹³⁶

The 9th Infantry Regiment and their commander, Colonel Upton experienced much the same confusion as the 23rd Infantry, but managed to get into position with at least some time to spare.¹³⁷ Overall, the rush to get into place left no time for the 3rd Infantry Brigade’s shared vision of the operation to get down to the lowest levels of the organization. Without a shared vision, a coherent detailed plan for the brigade was not fully understood.

As previously stated, given detailed orders was never a skill of Harbord while in command in France. Captain Burress of the 23rd Infantry sums up the plan, or lack thereof: “There was no plan of maneuver, with the exception of the attack being carried out in three phases, the capture of each objective being one phase. . . . Briefly the division orders assigned a zone of action to each brigade, told the location of the enemy, and stated the time of attack.”¹³⁸ With this short description of the operation and the lack of

¹³⁵ Johnson and Hillman, *Soissons*, 62.

¹³⁶ Burress, *The Operations of the 23d Infantry in the Soissons Offensive*, 16-17.

¹³⁷ Second Division Historical Section, *Records of the Second Division*, vol. 7, Report Co. I, 9th Inf., “Operations Soissons Sector,” 16-20 July 1918.

¹³⁸ Burress, *The Operations of the 23d Infantry in the Soissons Offensive*, 11.

time to issue and go over individual plans at the battalion level and lower, the 3rd Infantry Brigade was expected to spearhead an early morning attack for the 2nd Division during the battle of Soissons.

In addition to the lack of planning, in the 9th Infantry's *War Dairy*, Colonel Upton writes, "Due to the haste of the preparation for the attack . . . the regiment arrived with no supplies except what could be carried on the person and there was no time to secure some."¹³⁹ Here though, Upton and other leaders in the brigade should share some of the blame. War is unpredictable, and in many cases military leaders do not dictate the time and place of battle. In hindsight, the leaders of the 3rd Infantry Brigade should have done more to procure supplies before 16 June. This matters because part of being a learning organization is being prepared for future events. If the leaders of the 3rd Infantry Brigade had a true shared vision for the future, the lack of supplies may not have been an issue. So, with soldiers that were tired from their lack of sleep over the past two days, under supplied, and not yet fully recovered from the previous month of fighting, the 3rd Infantry Brigade was about to face its toughest test yet.

The Battle of Soissons

This lack of clear intelligence from the division level and above made the 3rd Infantry Brigade's fight during the battle of Soissons much more difficult than it was originally thought to be. The 3rd Infantry Brigade was arrayed on a thousand-yard front, with some units of the 23rd arriving only a few minutes before the designated start time at 0435. The 23rd Infantry was arrayed on the right of the line while the 9th was on the

¹³⁹ Second Division Historical Section, *Records of the Second Division*, vol. 7, C.O 9th Inf., "Report on Battle of Beaurepaire Farm," 18 July 1918.

left. Captain George A. Davis, a member of the 9th Infantry, stated that although contact with the 23rd Infantry had been made, they still did not have contact with the 5th Marine Regiment that was supposed to be to the left of the 9th. The Marines were still struggling to get to their start line, much less make liaison with the units on their right and left.¹⁴⁰

Grotelueschen also writes about the frenzied start to the battle in *The AEF Way of War*, “Although the 9th Infantry arrived at its attack positions with a few minutes to spare, the 23rd Infantry had to run the final kilometers to get to its jump-off line by 0435, the 5th Marines reached theirs only after the rolling barrage had started.”¹⁴¹ So, with breaks in contact across several points of the line, the 3rd Infantry Brigade’s offensive started.

Brigadier General Ely, commander of the 3rd Infantry Brigade, describes the start of the offensive and the ensuing issues:

The attack was made at 4:35 A.M. June 18th, as ordered. Troops went forward in good shape, carrying the first objective and normal objective. A second attack was ordered for 6:00 P.M. . . . Information had been received that two cavalry divisions had passed over the positions . . . and that the French on our right and left had passed us; that the attack would be nothing more than a march forward. This information was in error.¹⁴²

This lack of clear intelligence from the division level and above made the 3rd Infantry Brigade’s fight during the battle of Soissons much more difficult than it was originally thought to be. However, as Ely stated, the first objectives of the units were attained easily

¹⁴⁰ George A. Davis, *Operations of the 9th Infantry, 2d Division in the Aisne-Marne Offensive, 17-20 July 1918* (Fort Leavenworth, KS: Command and General Staff School, 1933), 3.

¹⁴¹ Grotelueschen, *The AEF Way of War*, 229; Johnson and Hillman, *Soissons*, 58-71.

¹⁴² Second Division Historical Section, *Records of the Second Division*, vol. 6, 3rd Inf. Bde., “Report of Action of 3rd Brigade,” 15-21 July 1918.

enough. Both the 9th and the 23rd moved the first two miles with little resistance. Here they were assisted by a rolling barrage and tanks.¹⁴³ Davis, of the 9th Infantry, writes of the initial success:

The Germans were taken completely by surprise. The initial advance was rapid. The resistance encountered was mostly from machine guns operated by small groups well concealed by the tall wheat. During this period of the advance our men used marching fire and when a target was presented either fired from the shoulder standing or outflanked the position by crawling through the high wheat.¹⁴⁴

Up to this point in the battle, the 3rd Infantry Brigade's maneuvers had been relatively straightforward, not differing from what they had been taught while in training during the Spring of 1918. The first part of the battle was more akin to set-piece battle doctrine, allowing the soldiers to move and concentrate their accurate rifle fire on enemy positions after the rolling artillery barrages passed over the enemy.

The problems with command and control started when the infantry companies were supposed to change direction once they hit their intermediate objectives. With the lack of maps and detailed understanding of the location of all their objectives, younger officers and NCOs missed the point upon which they were supposed to reorient their forces. Therefore, some companies stayed right on course or veered too far, leading to advancing units being mixed up together.¹⁴⁵ It is a wonder that the company commanders in the 3rd Infantry Brigade were able to keep any semblance of formation at all during this moving. Even with all these movement issues, the units made it to their main

¹⁴³ Second Division Historical Section, *Records of the Second Division*, vol. 6, 3rd Inf. Bde., War Dairies, H. E. Ely, 27 July 1918.

¹⁴⁴ Davis, *Operations of the 9th Infantry*, 3-4.

¹⁴⁵ *Ibid.*, 4.

objective by 1200 on the 18 July. The 9th Regiment bared the brunt of the fighting up to this point.¹⁴⁶ Davis' first-hand account actually contributes some of the 9th Regiment's initial success at this time to some of their units not changing course as ordered:

It so happened that the failure of the 1st Battalion and Company L to change direction worked out very well with the way the situation actually developed. Our left was entirely up in the air. The 1st Moroccan Division [French] had not advanced as rapidly and the 5th Marines were held up at Verte Fuille Farm. Maison Neuve Farm, which was in the Moroccan zone of action was well organized with a battery of [German] artillery and a number of machine guns.¹⁴⁷

Davis asserted that if 3/9th Infantry Battalion had made the right movement corrections, the 9th Infantry would have taken far more casualties as their poorly planned march put them more in line with the enemy reinforced Maison Neuve Farm. Since the Moroccans had failed to advance as planned, the 9th Infantry would have been caught in the enemy machine gun fire from the farm, without support from the adjacent units.¹⁴⁸ The 9th Infantry was very fortunate that unintentionally failing to follow higher orders actually benefitted them in this instance. All in all, the first half of the day went as well as could be expected for the 3rd Infantry Brigade, as it was able to overcome the difficulties of getting on line and managed to take the defending German forces by surprise. The second attack order at 1800 did not go as well for the brigade.

The biggest issue with the 2nd Division leadership during Soissons was that its leaders failed to have artillery support the advance of the infantry during this second attack. It is evident that the division leadership was stressing to Ely that he must start the

¹⁴⁶ Grotelueschen, *The AEF Way of War*, 230.

¹⁴⁷ Davis, *Operations of the 9th Infantry*, 4.

¹⁴⁸ Ibid.

attack promptly at 1800, no matter what.¹⁴⁹ This made Ely impatient, not even wanting to wait for the tank support to arrive:

Both Regimental Commanders stated that it was impossible to attack before 6:00 PM. The officer in charge of the tanks stated that he could not have his tanks on hand until 7: PM. It was imperative that the attack be made as soon as possible, and the order was given. The individual regiments were given instructions to make attack as soon as possible, but not later than 6:00 PM.¹⁵⁰

It is clear here that Ely wanted the operation to kick off early, even when his subordinate commanders told him it was not possible, due to the condition of their men and the lack of artillery support. Therefore, Ely admits in his official report that “the second attack was launched in a rather ragged manner” and well over an hour after he originally ordered the attack to take place.¹⁵¹ During this second attack, it is evident that the brigade commander and the regimental commanders were not portioning under the same shared vision. In addition to this, though the first attack was characterized by set-piece battle tactics, the second attack was more characterized by open warfare theory. It is evident from the 3rd Infantry Brigade’s field reports that there was no systems thinking process (driven by challenging mental models) conducted to justify the change in the tactics. Regardless of these issues, the men of the 3rd Infantry Brigade continued to carry the fight to the enemy.

Captain Burress, the 23rd Infantry operations officer, writes of the condition of the men attacking at this time. “They were exhausted from continuous marching and

¹⁴⁹ Second Division Historical Section, *Records of the Second Division*, vol. 6, “Report of Action of 3rd Brigade,” 15-21 July 1918.

¹⁵⁰ Second Division Historical Section, *Records of the Second Division*, vol. 6, 3rd Inf. Bde. War Dairies, H. E. Ely, 27 July 1918.

¹⁵¹ Ibid.

fighting over a month. They had not had food or sleep for forty-eight hours. The canteens of the Bosche soldiers were the only supply of water which had been secured up to this time.”¹⁵² Again these issues were due to the short notice of the mission and the lack of supplies secured before the battle. However, even with these limitations and after having sustained heavy casualties, the soldiers of the 3rd Infantry Brigade pressed the attack until 2100 on the evening of 18 July. During this last assault they fought through heavy German artillery fire, eventually capturing the village of Vierzy. In the end, the sheer weight of the attacking American forces and courageous efforts won the day at Soissons.¹⁵³

The 3rd Infantry Brigade’s attack and battle were over. After being the tip of the spear for the French XX Corps, they finally could go no further. Colonel Malone, the 23rd commander, sent a message to the 2nd Division HQs stating his men’s situation after the second attack at 2045 on 18 July. Malone’s message stated, “We must have food, water, medical supplies, machine guns, ammunition in large quantities sent to us in trucks at once. Urgent. Please inform me as to whether requests will be complied with Please inform if troops will be relieved tonight, they are utterly exhausted.”¹⁵⁴ Malone spoke the truth for all the men of the 3rd Infantry Brigade. Over the course of the battle of Soissons, the brigade had pushed forward while taking heavy casualties from enemy artillery and machine gun fire. In Ely’s official report a week later, the brigade

¹⁵² Burress, *The Operations of the 23d Infantry in the Soissons Offensive*, 26.

¹⁵³ Lengel, *Thunder and Flames*, 275.

¹⁵⁴ Second Division Historical Section, *Records of the Second Division*, vol. 5, 23rd Inf. Reg., “Malone to Headquarters 2d Division,” 18 July 1918.

had lost 73 officers and 2216 enlisted either KIA, WIA, or captured. Of these numbers the 9th Infantry suffered most heavily, losing 44 officers and 1469 enlisted.¹⁵⁵ Captain Burress of the 9th Infantry states that even one battalion was down to two officers remaining and was subsequently refilled with regimental staff officers.¹⁵⁶ The 3rd Infantry Brigade was taken off the line on 19 July, after repulsing a German counterattack that morning.¹⁵⁷ Even though the brigade was ultimately successful in leading Allied forces during the battle, it came at a heavy price. The 3rd Infantry Brigade learned some somber lessons that it had to internalize and reflect upon if it was going to progress as a learning organization before its next battle.

Lessons Learned

In the immediate aftermath of the battle of Soissons, the 3rd Infantry Brigade's attack on 18 July was viewed as a great success despite so many casualties. Pershing believed that this was the beginning of the end for the German Army in the war. He noted, "In the hard fighting from July 18 to August 6 the Germans were not only halted in their advance but were driven back from the Marne to the Vesle and committed wholly to the defensive. The force of American arms had been brought to bear in time to enable the last offensive of the enemy to be crushed."¹⁵⁸ While the battle of Soissons was hailed as a

¹⁵⁵ Second Division Historical Section, *Records of the Second Division*, vol. 6, 3rd Inf. Bde. War Dairies, H. E. Ely, 27 July 1918.

¹⁵⁶ Burress, *The Operations of the 23d Infantry in the Soissons Offensive*, 35.

¹⁵⁷ Davis, *Operations of the 9th Infantry*, 7.

¹⁵⁸ Pershing, *Final Report*, 36.

victory, some lessons seemed to have been unlearned by the 2nd Division and its 3rd Infantry Brigade.

First, in regards to Senge's personal mastery disciplined, little had changed in developing soldiers' warfighting skills between Vaux and Soissons. The 3rd Infantry Brigade had come off the front line only the week prior to Soissons, and spent most the time integrating new soldiers into the units and resting between intermittent duties. However, in some instances, personal mastery was learned "by doing" in battle. For example, the practice of personal mastery of individual warfighting skills was evident during the first attack when the soldiers of the 9th Infantry utilized fire and maneuver techniques, and flanked the enemy machine gun nests.¹⁵⁹ Unfortunately, learning by doing in combat is never ideal and should be avoided. The short period between coming out of the front line trenches and the battle of Soissons also left little time to challenge the mental models of the AEF doctrine and cultivate team learning within the brigade.

The 3rd Infantry Brigade's inability to stay with the successful mental models and team learning skills of set-piece battle during Soissons led to needless casualties. For example, there was a severe lack of artillery support throughout the entirety of the second half of the battle. As discussed during the lesson learned of the attack at Vaux, the 3rd Infantry Brigade executed a text book set-piece battle attack with few casualties due to support from the artillery. However, by the second attack at Soissons, fire support was lacking for the rest of the battle, with the brigade adopting tactics more identifiable with the AEF's open warfare theory. In *The AEF Way of War*, Grotelueschen sums up this aspect of the battle for the division:

¹⁵⁹ Davis, *Operations of the 9th Infantry*, 3-4.

The related issues of communication within the division and the coordination of artillery support (indeed, of all available fire support) proved to be salient lessons of the battle—as future attack plans and battle management would show. Although the 2nd Division was in many ways hamstrung by the French command's desire to ensure secrecy at all costs, its inability to maintain any reasonably effective method of communication or to provide its infantry with any semblance of adequate fire support after the first few hours of the first morning also reflected the doctrinal leanings of divisional leadership.¹⁶⁰

Here, blame must be laid at the feet of the division commander, Major General Harbord.

As one of Pershing's protégés, Harbord may have been attempting to revert to official AEF open warfare doctrine, still stuck in the mental model of American warfare.¹⁶¹

If it was not clear up until the start of the battle of Soissons, it was painfully clear after, that conducting open warfare attacks would account for needless mass casualties. The brigade commander, Ely, never stressed the importance of supporting fire to the division commander. This is not to say that in theory, open warfare attacks could not be successful. However, the open warfare doctrine of supporting fires and artillery could not be controlled to the degree that would make open warfare successful in Europe at the time. The communication systems of armies were not yet up to the task and did not account for the fluidity of the AEF's doctrine. The technology for communication systems to allow such a free flowing warfare were not developed until after World War I. For this reason, it is obvious that any gains that had been made through Senge's team learning discipline and challenging mental models during Vaux, took a backward step during the battle of Soissons. These shortfalls also contributed to the difficulty of having a common vision across the 2nd Division and its 3rd Infantry Brigade.

¹⁶⁰ Grotelueschen, *The AEF Way of War*, 234-235.

¹⁶¹ Johnson and Hillman, *Soissons*, 58.

The lack of a clear shared vision significantly hampered the command and control of the 3rd Infantry Brigade. Some of the control problems were, unfortunately, a result of the French secrecy before the mission, which was not the fault of the brigade's leadership during the preparation phase. With the lack of time to communicate a detailed order, there was no chance for the 3rd Infantry Brigade to have a shared vision of the operation. In *The Fifth Discipline*, Senge writes that, "visions spread because of a reinforcing process of increasing clarity, enthusiasm, communication and commitment. As people talk, the vision grows clearer."¹⁶² The 3rd Infantry Brigade's shared vision for the operation did not have time to grow due to the rushed circumstances leading up to the start of the battle. Therefore, having a clear vision for the plan was a monumental task and it was near impossible to spread it down to the lowest levels of the brigade before the fight. As Captain Burress writes in his lessons learned from the battle:

Commanders of units being moved should have knowledge of their destinations. . . . Attack orders must be clear, simple, and short. . . . Orders must be in the hands of troops, who are to execute them, in time to allow the troops to make necessary preparations for the execution thereof. . . . Higher and lower commanders should share an equal responsibility in keeping each other informed of the situations at all time.¹⁶³

All of these lessons learned, though simple in appearance, became extremely hard to abide by, when the 3rd Infantry Brigade was preparing for and executing the battle of Soissons. Becoming a learning organization in war is seldom without its setbacks.

Even though the 3rd Infantry Brigade struggled with developing systems thinking, the all-encompassing learning organization discipline, the battle of Soissons was not all

¹⁶² Senge, *The Fifth Discipline*, 211.

¹⁶³ Burress, *The Operations of the 23d Infantry in the Soissons Offensive*, 44-45.

negative for the brigade. The one constant for the soldiers of the 3rd Infantry Brigade was their fighting spirit. In Captain Davis' after action review of the 9th Infantry during the battle, he attributed the ultimate success of the attack to "the aggressiveness and fighting spirit of the troops and the initiative displayed by junior officers and NCO's."¹⁶⁴ Captain Burress' after action review of the 23rd Infantry ends with much the same lesson learned. "The basis of good infantry is the aggressiveness and spirit of its officers and men."¹⁶⁵ Fighting spirit was definitely one thing that Pershing, the 2nd Division, and the 3rd Infantry Brigade did not have to worry about losing. For the brigade, it is possible this spirit came from the 9th and the 23rd Infantry Regiments' desires to live up to their proud combat heritage and maintain their "regulars" reputation. However, a unit can have all the "fighting spirit" in the world, but not be a true learning organization.

Conclusion

The attack on Vaux and the battle of Soissons in July of 1918 provided the 3rd Infantry Brigade with many learning opportunity and experiences. Both successes and setbacks of becoming a learning organization become readily apparent. The early success at Vaux showed a learning organization that adopted European armies' mental models and displayed the skills of team learning. The 3rd Infantry Brigade used set-piece battle to seize Vaux with limited casualties and learned from past enemy mustard gas experiences to limit their casualties. However, during the battle of Soissons, just a short two weeks later, we see a brigade not fully challenging mental model or displaying team

¹⁶⁴ Davis, *Operations of the 9th Infantry*, 8.

¹⁶⁵ Burress, *The Operations of the 23d Infantry in the Soissons Offensive*, 46.

learning. The 23rd Infantry had already learned the hard way at Belleau Wood when they advanced without supporting fires. Yet, at Soissons they did the same and unfortunately for the 9th Infantry, it almost wiped them out completely. In the regiments' defense though, some of the blame must rest on the brigade and division commander for sending them on the second attack with no artillery support.

Last, a shared vision that was understood down to the lowest levels helped the 3rd Infantry Brigade achieve success at Vaux. However, due to the hurried start of the battle of Soissons, no shared vision was evident even at higher levels of command. Fortunately for the brigade and the division, positive changes were coming before their next fight. These changes will be examined in the lead up to the last two major combat engagements for the 3rd Infantry Brigade.

The brigade would get the opportunity to prove that it was a learning organization during Saint Mihiel Offensive and the Meuse-Argonne Offensive in the Fall of 1918. The hard lessons learned at the battle of Soissons would not be in vain. The 3rd Infantry Brigade's ability to overcome setbacks, challenge the status quo, learn as a team, and cultivate a shared vision across the entire unit, were all soon to be trademarks of this learning organization.

CHAPTER 4

A LEARNING UNIT RISES

The 3rd Infantry Brigade's final two tests were the St. Mihiel Offensive, 12 to 16 September 1918, and the Meuse-Argonne Offensive, 1 through 11 November 1918. The brigade's last major combat engagements of World War I show a unit willing to learn from its past mistakes and challenge the foundational doctrine of the AEF, to learn as one team, and demonstrate an ability to create a shared vision across all its elements. The 3rd Infantry Brigade finally consistently practiced the disciplines of a learning organization.

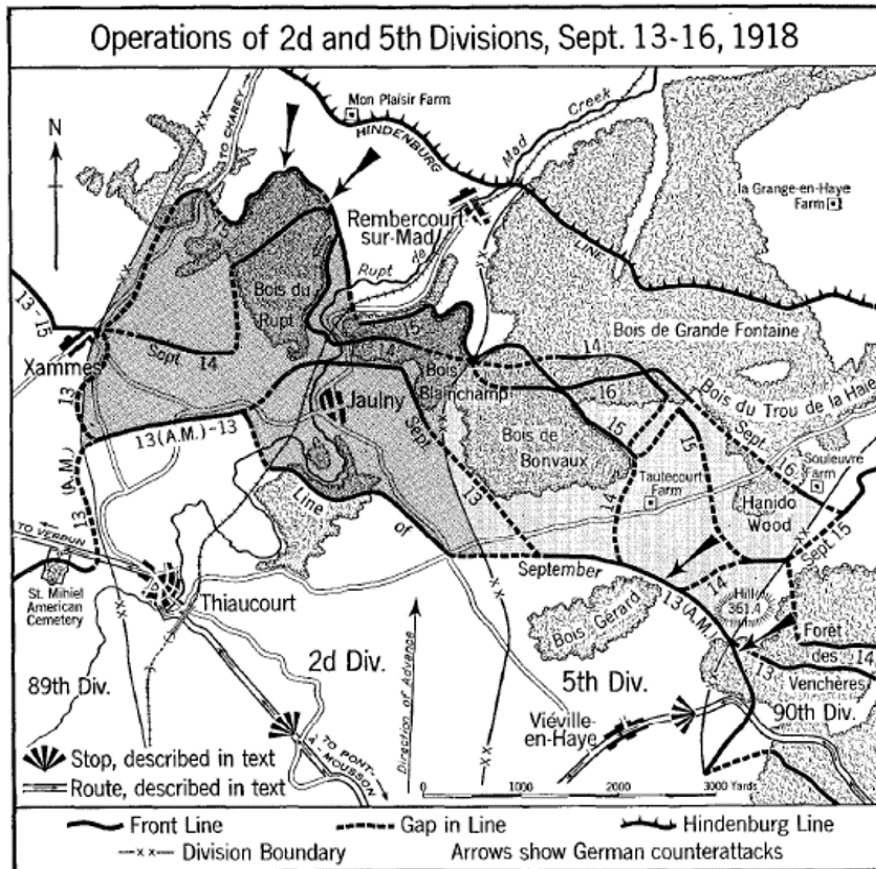


Figure 3. 2nd Division Operations during the St. Mihiel Offensive

Source: American Battle Monuments Commission, *American Armies and Battlefields in Europe* (1938; repr., Washington, DC: United States Government Printing Press, 1992), 142.

St. Mihiel

The St. Mihiel salient located west of the Moselle River and southeast of Verdun had been held by the Germans since 1914. General Pershing believed it covered “the most sensitive section of the enemy’s position” during the beginning of the fall of

1918.¹⁶⁶ The French had previously conducted offensive operations in this area but had continual been beaten back. Major General Lejeune also writes about the issues the salient caused the Allied forces. Lejeune states, “The salient . . . was a thorn in the side of the French throughout the war. It physically interrupted the north and south railway and the highways along the Meuse, and the heavy guns in position within the salient were able with their fire to prevent traffic on the Paris-Nancy railway.”¹⁶⁷

In addition to the strategic importance of the St. Mihiel salient, this would also be the AEF’s first operation as an independent fighting force. Pershing’s vision for the operation called for the “main drive against the southern face of the salient, a secondary blow against the western face, and holding attacks and raids against the tip.”¹⁶⁸ The American I Corps was selected to be the main effort with the mission to reduce the German salient, open up the north-south lines of communications, and give the Allied forces ample space to launch future operations against the reeling German forces. The 2nd Division and the 3rd Infantry Brigade were chosen to help deliver the main attack within I Corps. The newly assigned 2nd Division Commander, United States Marine Corps Major General Lejeune, finally would be able to see what his division and infantry brigades were made of after their extensive refit and training period in the late summer of 1918. However, before this preparation time is examined, the enemy situation leading up to the St. Mihiel Offensive must be discussed.

¹⁶⁶ Pershing, *Final Report*, 41.

¹⁶⁷ Lejeune, *The Reminiscences*, 312-313.

¹⁶⁸ American Battle Monuments Commission, *American Armies and Battlefields in Europe*, 109.

Enemy Situation

The German units defending the salient, German Army Detachment “C,” was readily preparing for the next Allied attack. The Germans even postponed one of their own attacks against Allied forces on the south front of the salient. The objective of this proposed German attack was to force the Allied forces to abandon their plan of a full-scale attack on the St. Mihiel position.¹⁶⁹ However, this plan was soon cancelled as made evident by the German field orders given to HQ Army Detachment “C” on 10 September:

The contemplated attack will not be made. Steps will now be taken to start the systematic occupation of the Michel [Mihiel] position. The work of removing material and equipment will be started with all energy, since a more threatening situation might necessitate cutting short the time for salvaging the stores and force a premature beginning of the Loki movement.¹⁷⁰

In the end, the purpose of the defending the St. Mihiel salient was to protect the Metz and Briey regions which incorporated the strategic iron industry and railway networks for Germany.¹⁷¹

The Germans had the advantage of being able to occupy positions that provided them with excellent observation and fields of fire. Just north of the Raupt de Mad River in the vicinity of Thiaucourt, the terrain rose in elevation, providing views along what

¹⁶⁹ Second Division Historical Section, *Translations*, vol. 6, Doc. 3, Annex 1020c, AGG, 9 September 1918.

¹⁷⁰ Second Division Historical Section, *Translations*, vol. 6, Doc. 5, Annex 1020d, AGG, 10 September 1918. “Loki” is codename for the occupation of the St. Mihiel positions. It is also interesting to note that earlier in the field order the Germans write the “Michel” position but then use the codename for it a few sentences down.

¹⁷¹ American Battle Monuments Commission, *American Armies and Battlefields in Europe*, 106-107.

would be the 3rd Infantry Brigade's line of advance.¹⁷² This line of advance, until it ran into the river, was approximately five to six kilometers long, which afforded the entrenched German forces ample opportunity to call for fire on the advancing Americans. In addition to the having the advantage of the high ground, Captain Lawrence A. Quinn, of the 23rd Infantry, describes the extensive German fortifications:

During the four years the Germans had occupied the salient they had constructed two strong systems of entrenchments. . . . These two systems were characterized by wide and dense belts of barbed wire. The ground as far north as and including the Bois du Beau Vallon showed the effect of four years of warfare and was a torn mass of shell holes, especially was this evident in the vicinity of the two trench systems.¹⁷³

So with these formidable terrain and enemy conditions, the 3rd Infantry Brigade would again spearhead an attack for the 2nd Division. However, unlike Soissons, they were more prepared for the fight at St. Mihiel, displaying the traits of a learning organization.

Preparation of the 3rd Infantry Brigade

Before the preparation for the St. Mihiel Offensive is discussed, key leadership changes within the brigade and the 2nd Division during the end of July, 1918, must be studied to gain understanding of the importance of a cohesive shared vision within a learning organization. Starting with the division commander, Major General Harbord relinquished command to Marine Major General Lejeune. This was not viewed as a demotion for Harbord, since Pershing had selected him to oversee the poorly structured

¹⁷² Lawrence A. Quinn, *A Critical Analysis of the Operations of the 23rd Infantry (2d Division) in the Saint Mihiel Offensive, 12th-13th September, 1918* (Fort Leavenworth, KS: The Command and General Staff School, 1933), 3.

¹⁷³ *Ibid.*, 4.

Service of Supply.¹⁷⁴ Lejeune was a well-liked Marine officer within U.S. Army circles and had attended the Army War College in 1911.¹⁷⁵ Because of this, there was little to no grumblings heard from other army generals about Lejeune, a Marine, getting the coveted 2nd Division during the late summer of 1918. In *The AEF Way of War*, Grotelueschen writes of the changes that were coming with Lejeune in command:

Under his leadership, the 2nd Division worked hard to improve infantry tactics, the ability to provide fire support, and the communication capability necessary to coordinate all elements during the attack. Equally important was the doctrinal shift made by Lejeune and his subordinate commanders . . . that encouraged officers throughout the 2nd Division to do all they could to make future attacks, including those with deep objectives, more like the set-piece attacks that proved so successful, regardless of official AEF policies and practices.¹⁷⁶

Lejeune was one of the key factors in making the 3rd Infantry Brigade, 2nd Division a learning organization during World War I. In *The Fifth Discipline*, Senge's states the importance of having true leaders like Lejeune: "They are vital for spreading new ideas and practices from one working group to another and between organizations, and for connecting innovative line leaders with one another. They build larger networks that diffuse successful innovations and important learning and knowledge."¹⁷⁷

As for the 3rd Infantry Brigade, Brigadier General Ely's leadership during the battle of Soissons had cemented his place as the brigade commander throughout the later

¹⁷⁴ Clark, *The Second Infantry Division in World War I*, 113.

¹⁷⁵ Lejeune, *The Reminiscences*, 194. Brigadier General Ely was particularly happy to have Lejeune in charge of the division and stated that "I have known General Lejeune for years and I know of no one I would rather have succeed General Harbord." Lejeune, *The Reminiscences*, 286.

¹⁷⁶ Grotelueschen, *The AEF Way of War*, 236-237.

¹⁷⁷ Senge, *The Fifth Discipline*, 320.

summer months and the St. Mihiel Offensive in September, 1918. However, his regimental commanders, Colonel Malone and Colonel Upton, were both promoted to brigadier general and given brigades of their own. Malone was replaced by Colonel Edward R. Stone as the commander of the 23rd Infantry Regiment. Meanwhile, Upton was replaced by Colonel George W. Stuart as the commander of the 9th Infantry Regiment.¹⁷⁸ It was not just the commanders that were new to the brigade; replacements during August of 1918 were coming in by the hundreds that needed to be trained before they entered combat.

After the conclusion of the Aisne-Marne Offensive, the 3rd Infantry Brigade immediately started reconstituting and preparing for its next fight. Led by the new division and regimental commanders, the infantry regiments of 3rd Infantry Brigade were soon back to training while simultaneously holding static positions on the front. As Lejeune writes in his book, *Reminiscences of a Marine*, “From daylight to dark, these preparations for battle continued unceasingly.”¹⁷⁹ Lejeune believed that hard and realistic training was the recipe for success. Therefore, training was mandated during the month of August for all soldiers not actively defending in the trenches. No other commander above the brigade level during the war had a bigger effect on the 3rd Infantry Brigade’s ability to learn the disciplines of a learning organization than Lejeune. In addition to Lejeune’s

¹⁷⁸ Clark, *The Second Infantry Division in World War I*, 113; Malone assumed command of the 10th Brigade, 5th Division and Upton assumed command of the 57th Brigade, 29th Division. Malone would eventually come back and command and be the last commander 3rd Infantry Brigade after the armistice in June of 1919. United States Army Military History Institute, *The World War I Survey* (Carlisle Barracks: U.S. Army Military History Institute, 1986), Reel 9, Organization of the 3rd Infantry Brigade, 9.

¹⁷⁹ Lejeune, *The Reminiscences*, 306.

leadership, the brigade had learned from Soissons that insufficient command and control, led to units advancing without adequate fire support, leading to higher casualty rates. These events enabled the 3rd Infantry Brigade to challenge their current mental models of how they conducted attacks and contributed to their team learning at the end of July and August 1918.

A training memorandum was sent out on 9 August, laying out the training plan for the infantry regiments of the 3rd Infantry Brigade. Individual weapons practice was highlighted up front with live fires to be conducted with rifles, machine guns, hand grenades, trench mortars, and 37mm cannons. The Brigade also worked continually on communicating with division, providing fire support during movements and liaison with the artillery regiments during exercises. Eventually during the middle of the month, the 2nd Division and the 3rd Infantry Brigade were pulled off the line completely and started training in earnest, even conducting a brigade and division rehearsal. The brigade participated in a full-division maneuver exercise. These exercises stressed the important of communication with higher and liaison with artillery support during offensive attacks. This realistic training, that looked more like set-piece battle attacks than open warfare attacks, contributed greatly to the brigade's capacity to become a learning organization.¹⁸⁰ True team learning comes through a cycle of execution and practice, and the 3rd Infantry Brigade did not let the lessons learned in the costly battle of Soissons go to waste.

¹⁸⁰ Lejeune, *The Reminiscences*, 306-311; Grotelueschen, *The AEF Way of War*, 239-241; Second Division Historical Section, *Records of the Second Division*, vol. 2, HQ 3rd Bde., Memorandum No. 9, 9 August 1918.

Thankfully, the preparation for the beginning of the St. Mihiel Offensive was much better than the planning for the offensive at Soissons. Over the period of several nights prior to the 10 September attack, the regiments of the 3rd Infantry Brigade were able to methodically move into their starting positions. This gave the brigade and regiments ample time to disseminate their plan before the start of the offensive. Captain Quinn, from the 23rd Infantry, explains the plan in his 1933 monograph:

The general plan of attack for the division provided that the division attack in column of brigades, each brigade with regiments abreast, each regiment in column of battalions. The leading battalions were to advance to the intermediate objective, where they were to be passed thru by the rear battalions. The attack was then to be pushed to the 1st phase line. . . . Upon reaching the first day's objectives an organization in depth was to be effected and strong reconnaissance parties advanced to toward the line of the second day's objective. The rear (4th) [Marine] Brigade was to support the attack and be prepared to pass thru and relieve the leading Brigade.¹⁸¹

The plan called for the first attack to advance five to six kilometers to capture the intermediate objectives located in the vicinity of the high ground south of the village of Thiaucourt. Then the brigade would attack two or three additional kilometers to seize the first day's final objectives. The 4th Marine Brigade was to be prepared to pass through the 3rd Infantry Brigade and continue the fight. In addition to the movements and objectives, both the first and second assaults by the 3rd Infantry Brigade on 12 September had planned rolling barrages as they advanced.¹⁸² The 3rd Infantry Brigade was well rested, well fed, and most importantly, well trained, and ready again to lead the 2nd

¹⁸¹ Quinn, *A Critical Analysis of the Operations of the 23rd Infantry*, 4.

¹⁸² Second Division Historical Section, *Records of the Second Division*, vol. 1, 2d Div., "Tentative Plan of Attack," 8 November 1918; Spaulding and Wright, *The Second Division American Expeditionary Force in France*, 149; Grotelueschen, *The AEF Way of War*, 242-243.

Division over the top. At 0435, twenty-five minutes before H-hour, the brigade reported to division, all “troops ready for attack.” At 0503, the 2nd Division reported to First Corps, “All over the top. All gone.”¹⁸³ The St. Mihiel Offensive had begun and the 3rd Infantry Brigade would finally get to test their learning organization disciplines again after forty-five days of training and preparation. The results would show that the brigade had made significant progress in becoming a learning organization.

The St. Mihiel Offensive

The 9th and 23rd Infantry Regiments made great progress during the initial hours of the attack. The enemy was caught off guard while attempting to consolidate their forces further north in the salient. Within the first four and a half hours, both regiments had cleared almost five kilometers of their sector. By 1010 the 3rd Infantry Brigade secured its immediate objectives.¹⁸⁴ Here military historian, George Clark recounts the amusing story of a Marine interacting with a soldier from the 9th Infantry:

It was at about this time a wounded soldier of the [9th] regiment strolled back through the 5th Marines heading for an aid station. A young Marine replacement, anxious to learn what fate had in store for him asked, ‘Hey, buddy, how’s things goin’ up there?’ The response was ‘Aw, Hell, son, goin’ fine. We’re goin’ through ‘em like a dose of salts through a tall, thin woman.’¹⁸⁵

¹⁸³ Second Division Historical Section, *Records of the Second Division*, vol. 4, FM 3rd Bde. 0435, 12 September 1918, and FM 2nd Div. 0503, 12 September 1918.

¹⁸⁴ Second Division Historical Section, *Records of the Second Division*, vol. 6, 3rd Inf. Bde. Report of Action, 12 September 1918.

¹⁸⁵ Clark, *The Second Infantry Division in World War I*, 123-124; Elton E. Mackin, *Suddenly We Didn’t Want to Die: Memoirs of a World War I Marine* (Novato: Presidio Press, 1993), 141.

The rolling barrage then continued all the way up the village of Thiaucourt, where once lifted, the 23rd Infantry was able to clear the village with few losses. Immediately, Ely ordered for Stone and Stuart to continue to have their regiments push forward to their secondary objectives. Therefore, by seizing the initiative with their troops, both the 9th and the 23rd had taken all their objectives on the first day by 1400. Unlike many parts of the American I Corps line during the St. Mihiel Offensive, the 3rd Infantry Brigade encountered some significant enemy shelling and pockets of resistance. The 23rd Infantry reported a great deal of shelling as they advanced towards their final objective. They even “occupied the town of Thiaucourt under a heavy enemy barrage.”¹⁸⁶ However, unlike at Soissons, they had liaison with their fire support and were quickly able to overcome the German forward observers and machine gun nests with firepower. After leading a successful attack and holding the line for another twenty-four hours the 9th and 23rd Infantry Regiments were replaced by the 4th Marine Brigade on the evening of 13 September and the morning of 14 September. World War I Historian, Mark Grotelueschen writes of the success of the division, led by the 3rd Infantry Brigade, during the first day of the St. Mihiel Offensive:

In less than 9 hours, the division had advanced more than 8 kilometers over strongly fortified enemy positions and captured well over three thousand prisoners and more than ninety guns. For all this, the divisions suffered only light casualties... No division at St. Mihiel did more fighting than the 2nd Division, and none did as much damage to the enemy.¹⁸⁷

¹⁸⁶ Second Division Historical Section, *Records of the Second Division*, vol. 7, WD 23rd Inf. Reg., 12 September 1918.

¹⁸⁷ Grotelueschen, *The AEF Way of War*, 247.

Comparatively, to the battle of Soissons, the brigade's casualties were extremely low at St. Mihiel. The 3rd Infantry Brigade reported only eighty-six men KIA, and 285 men WIA.¹⁸⁸ The set-piece battle maneuver that was practiced at the division and brigade level contributed to these low casualty numbers. The 2nd Division *Field Order* for the St. Mihiel operation was extremely detailed, covering over thirty pages, with extensive an extensive plan for rolling barrages and machine gun support as the infantry advanced. This was a highly organized attack, with artillery support planned for all of the 3rd Infantry Brigade's advances.¹⁸⁹ This is in stark contrast to Soissons, where the artillery support was not planned for the brigade's second half of their operation. This showed that the new leadership was willing to challenge the status quo of the AEF doctrine by using the more refined and detailed set-piece battle doctrine throughout the entirety of the offensive. Coupled with the lessons learned from past battles, the 3rd Infantry Brigade finally started to consistently be a learning organization.

Lessons Learned

By Pershing's account, the 9th and 23rd Infantry Regiments had out shown all the other units of the AEF that participated in the St. Mihiel Offensive. The commander of the AEF heaped the following praise on them:

One brigade of the 2nd Division—the 9th and 23rd Infantry, made a capture in the fight possibly never outdone by a single brigade. In the taking of Thiaucourt, 3000 prisoners, 92 pieces of artillery already loaded in railway cars and about to be removed to the rear, a complete hospital train, a trainload of

¹⁸⁸ Second Division Historical Section, *Records of the Second Division*, vol. 6, WD 3rd Inf. Bde., 17 September 1918.

¹⁸⁹ Second Division Historical Section, *Records of the Second Division*, vol. 1, HQ 2nd Div., Field Order No. 27, 10 September 1918.

ammunition, a train of 52 empty good cars, lumber yards, depots, and other supplies, fell to these two regiments.¹⁹⁰

Now, the praise of the commander of the AEF aside, the 3rd Infantry Brigade successfully demonstrated all the disciplines of a learning organization to a degree that had not been seen before within the brigade.

First, Senge's discipline of personal mastery was practiced across the brigade during its training in August 1918. Lejeune reported that "ranges for firing were established and constant practice was held with rifles, pistols, machine guns, trench mortars, 37 mm. cannon, rifle grenades and hand grenades."¹⁹¹ Soldiers of the 3rd Infantry Brigade finally had the time to do training with their individual weapons again. This had not been the case from the beginning of the spring, when they went into the trenches, until the end of the brigade's participation in the battle of Soissons in the later part of July 1918. Brigadier General Ely, the 3rd Infantry Brigade Commander, commends the expert use of rifle fire, automatic rifles, rifle grenades, and machine guns. He states, "Men of this brigade had been taught to fire as they advanced, stopping momentarily to fire while the line advanced continuously. This was found of great use."¹⁹² Unlike before Vaux and Soissons, the veterans of the 9th and 23rd Infantry Regiments now truly understood how deadly important it was to be a master of their individual weapons. This training time also allowed the brigade and the division ample

¹⁹⁰ John J. Pershing, *My Experiences in the World War* (New York: Frederick A. Stokes Co, 1931), 268; Second Division Historical Section, *Records of the Second Division*, vol. 6, WD 3rd Inf. Bde., 17 September 1918.

¹⁹¹ Lejeune, *The Reminiscences*, 306.

¹⁹² Second Division Historical Section, *Records of the Second Division*, vol. 6, WD 3rd Inf. Bde., Supplementary Report, 22 September 1918.

time to practice the doctrine they planned to take into their next battle, effectively adopting the tactics that worked best.

Effective leadership is crucial for a learning organization to succeed. The example that Major General Lejeune set upon his arrival to the division in late July contributed to the division and subordinate units' success at St. Mihiel. First and foremost, he challenged the mental model of open warfare from the outset of his time in command. During training in August, Lejeune stressed doctrine and tactics more akin to set-piece battle with overwhelming firepower than relying on the spirit of his infantryman to win the day. During the month of August, the infantry regiments had trained under more under set-piece battle conditions rather than open warfare conditions as highlighted by Colonel Malone after the battle of Soissons. Malone writes, "Again all the conditions of trench warfare obtained in their most pronounced form . . . we spent hours each day in firing from the shoulder with live ammunition as we advanced to attack behind the imaginary barrage, close up to which the infantryman must push or pay in terms of death before the machine guns."¹⁹³ The brigade leadership's ability to challenge mental models and conduct effective team learning contributed to the success at St. Mihiel and the capture of Thiaucourt. As Senge writes, "This is vital because the most crucial mental models in any organization are those shared by key decision makers. Those models, if unexamined, limit an organization's range of actions to what is familiar and

¹⁹³ Paul B. Malone, "The Need for an Infantry School," *Infantry Journal* 15 (July 1919 to December 1919): 354.

comfortable.”¹⁹⁴ Through a shared vision and challenging mental models, the 3rd Infantry Brigade’s was able to effectively learn as a team before the St. Mihiel Offensive.

Challenging mental models during 3rd Infantry Brigade’s train-up, in August of 1918, directly resulted in improving the team learning within the brigade. This learning organization discipline encompasses learning how “to think insightfully about complex issues” and being able to execute “innovative, coordinated action.” Both Lejeune and Malone’s personal accounts of this training period highlight the importance of team learning. Here the brigade, with insightful leadership at the division and brigade level, developed “operational trust” by exercising Senge’s team learning discipline. This occurred when the soldiers and leaders of the 3rd Infantry Brigade understood how they were going to execute an attack, knowing that the units on their right and left recognize what needs to be done, and they readily “complement each other’s actions” when expected to do so.¹⁹⁵ However, challenging mental models and team learning are difficult to execute without a shared vision.

The 3rd Infantry Brigade’s shared vision of their overall mission, driving the enemy from their defensive line and capturing Thiaucourt, contributed greatly to their ultimate success on 12 and 13 September, 1918.¹⁹⁶ The 9th and 23rd Infantry Regiments ensured that the plan was disseminated down to the lowest levels. This helped guaranteed that the confusion and lack of communication that plagued the battle of Soissons did not

¹⁹⁴ Senge, *The Fifth Discipline*, 176.

¹⁹⁵ *Ibid.*, 219.

¹⁹⁶ Second Division Historical Section, *Records of the Second Division*, vol. 6, WD 3rd Inf. Bde., Supplementary Report, 22 September 1918.

happen again. A shared vision allowed the junior leaders and soldiers to seize the initiative when they captured their first objectives much faster than anticipated.

According to *The Fifth Discipline Fieldbook*, a shared vision can grow when it is backed up by the “spirit of success.”¹⁹⁷ Therefore, the 3rd Infantry Brigade’s initial success fueled by a shared vision, led to more success. With the support of a second rolling barrage, the 9th and 23rd Infantry pushed forward and captured their final objectives, including the town of Thiaucourt, before the Germans had time to regroup. Without a shared vision of the end state, the 3rd Infantry Brigade might have been prone to piece-meal their attacks to the final objectives with disastrous results. This shared vision was built on the personal mastery and team learning, even when the brigade had the opportunity to seize the initiative, they ensured that they had the proper fire support to prevent needless casualties as they advanced during the St. Mihiel Offensive.

The 3rd Infantry Brigade was finally starting to display a coherent systems thinking process. Aided by the practice of synchronizing the other four disciplines, the brigade was quickly arising as a true learning organization. With the results of the St. Mihiel Offensive in, the soldiers of the 3rd Infantry Brigade soon faced one final test, which helped bring about the capitulation of the German forces during Meuse-Argonne Offensive.

¹⁹⁷ Senge et al., *The Fifth Discipline Fieldbook*, 305.

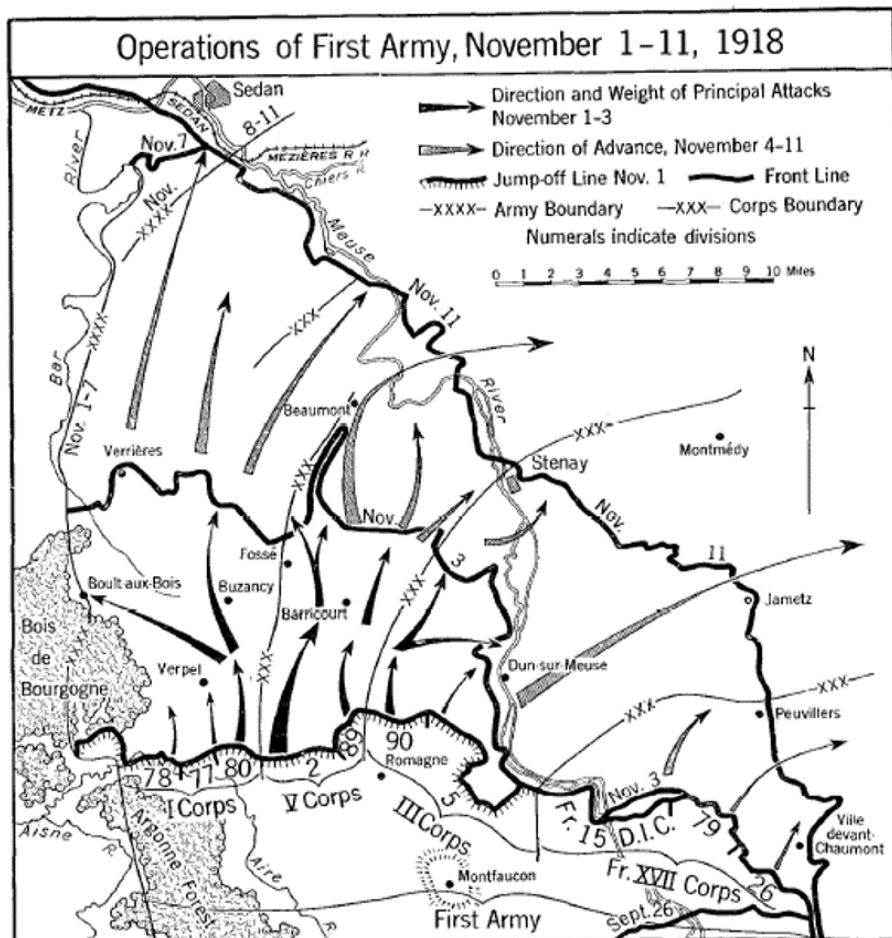


Figure 4. 2nd Division Operations during the Meuse-Argonne Offensive, 1 through 11 November

Source: American Battle Monuments Commission, *American Armies and Battlefields in Europe* (1938; repr., Washington, DC: United States Government Printing Press, 1992), 186.

Meuse-Argonne

Before examining the 3rd Infantry Brigade's final actions during the Meuse-Argonne Offensive (1 through 11 November 1918), it must be noted that the brigade participated in the successful Mont Blanc Ridge attack from 2 through 10 October 1918. During this attack, the division, down to its regiments, again displayed the ability to

conduct successful set-piece attacks, resisting the urge from higher commands to conduct open warfare attacks. At Blanc Mont Ridge, the 3rd Infantry Brigade participated in driving back the enemy almost eight kilometers and repelled some of the heaviest German counterattacks that any AEF unit faced in the war.¹⁹⁸ Grotelueschen sums up the 2nd Division feat during this attack in *The AEF Way of War*:

Only the division's improvements in infantry tactics, firepower employment, and communications capability, along with its rare esprit de corps, could have enabled such a feat. Behind most of these adjustments, and helping to bind them together, was the division's doctrinal shift away from any theoretical form of open warfare and toward the firepower-based, set-piece operations associated with the best practices of trench warfare.¹⁹⁹

It is clear here that the 2nd Division, with its 3rd Infantry Brigade included, did not suffer the setback that they incurred at Soissons after their initial success at Vaux. These lessons the 3rd Infantry Brigade continued to learn directly contributed to their future success during the last phase of the Meuse-Argonne Offensive.

At the time of planning for the third phase of the Meuse-Argonne Offensive, it was by no means a foregone conclusion that the war would soon be over. However, since July of 1918, starting at the Aisne-Marne Offensive, the Allied forces had been pushing back the German forces. The last stage of the Meuse-Argonne Offensive planned to rout the Germans back across the Meuse River, located less than ten kilometers to the west of the French-Belgium border. Major General Lejeune held the hope that it would be the last engagement of the war as he penned a letter to wife on the eve of the battle. "This battle, we hope, will inflict a deadly blow on the enemy and bring him to his knees. . . . I pray

¹⁹⁸ Lejeune, *The Reminiscences*, 357.

¹⁹⁹ Grotelueschen, *The AEF Way of War*, 266.

God that we may win, and end this horrible war by a decisive victory.²⁰⁰ However dire the circumstances, the Germans attempted one final stand at the Meuse.

Enemy Situation

Since the start of the first phase of the Meuse-Argonne Offensive on 26 September, the Germans had been beaten out of the Argonne Forest and now were attempting to hold their positions on the west side of the Meuse River. The enemy that the 3rd Infantry Brigade faced on 1 November was defending approximately twenty kilometers southwest of the Meuse. The German 52nd Division defended from the French village of St. Georges through the village of Landres et St. Georges. Machine gun positions were set in depth throughout this area, but due to the German's continual retreat since the summer of 1918, elaborate trench systems were non-existent.²⁰¹ This initial defense was strengthened by rolling terrain that contained numerous streams and small ponds as the ground neared the Meuse River. In addition, large forested areas were in the 3rd Infantry Brigade's axis of advance. Particular the Bois de Belval, which happened to be eerily similar to Belleau Wood, where the Marines of the 2nd Divisions had taken severe causality attacking in June of that year.²⁰² After moving nearly twenty kilometers, the 3rd Infantry Brigade faced the heavily defended Meuse River itself. The terrain on the

²⁰⁰ Lejeune, *The Reminiscences*, 382.

²⁰¹ Roy C. Hilton, *Operations of the Ninth Infantry, Second Division in the Third Phase, Meuse-Argonne, November 1-11, 1918* (Fort Benning, GA: The Infantry School Advanced Course, 1928), 2; American Battle Monuments Commission, *2d Division Summary of Operations in the World War*, 69.

²⁰² Walther P. O'Brien, *Operations of Company H Ninth Infantry, Third Phase of the Meuse-Argonne, November 1-11, 1918* (Fort Benning, GA: The Infantry School Advanced Course, 1933), 9. Bois is the French word for wood and or forested areas.

east side of the river rose in elevation almost three hundred feet near Bois Flaviers and Bois d Alma-Gisers, providing the Germans with excellent observation posts. The Germans were going to make gaining a foothold on the east side of the Meuse very difficult for the members of the 2nd Division.

Last, in favor of the Germans, they knew that an attack was imminent. In a report on 26 October, the 52nd Division's higher headquarters, the 58th Provisional Corps, reported the following:

Enemy continued to remain conspicuously quiet. . . . In view of the general tactical situation it is a foregone conclusion that the enemy is preparing new centralized efforts to break through. . . . It is most suspicious that today, while the hostile aerial reconnaissance activity was very slight, a very strong aerial barrage, fired by AA guns which had been pushed far to the front, made its appearance.²⁰³

All in all, the German had set up a defense in depth, held all the key terrain, and knew the Allied attack was coming however, German morale was low. Once again the 3rd Infantry Brigade's fighting spirit would be put to the test. This spirit, coupled with practicing Senge's five disciplines bode very well for the brigade's preparation efforts for the last offensive of the war.

Preparation of the 3rd Infantry Brigade

After being relieved from the Mont Blanc sector on 10 October, the 3rd Infantry Brigade with the rest of the 2nd Division received some much needed time to recuperate. Of course the majority of the three weeks before 1 November was used to refit, retrain, and receive replacements to build back up the brigade's combat power. Along with

²⁰³ Second Division Historical Section, *Translations*, vol. 9, Doc. 2, 58th PC, 26 October 1918.

replacements at the lower ranks, the 3rd Infantry Brigade and 9th Infantry Regiment both received new commanders. First, Colonel Robert O. Van Horn assumed command of the 9th Infantry during late October. He also simultaneously commanded the 3rd Infantry Brigade until 2 November, when Colonel J.C. Rhea, Lejeune's former division aide, assumed command of the brigade. Colonel Stone stayed in command of the 23rd Infantry during this transition period for the 3rd Infantry Brigade.²⁰⁴ Unlike the leadership transition period prior to the battle of Soissons, this period of transition went much smoother due to the time available for the new commanders to get acquainted with their units before their next fight. Additionally, the men coming into command had more combat experience than their predecessors had at their assumptions of command. The leaders that had previously served in the 2nd Division also knew how the division was expected to fight and were, figuratively speaking, students under Lejeune's tutelage. This is important because the new commanders immediately bought into Lejeune's shared vision, which allowed for more effective team learning within the 3rd Infantry Brigade during the last weeks of October 1918.

Planning for the brigade and division's part in the Meuse-Argonne Offensive started in earnest once the leadership found out where on the line it was heading. At the division level, Lejeune made certain that supporting fires were a priority for his assaulting regiments. His request was granted for all the guns in the I Corps' artillery regiments to support his brigades when they jumped off for the attack on the morning of 1 November. Lejeune also made certain that the artillery would shoot its larger millimeter

²⁰⁴ O'Brien, *Operations of Company H Ninth Infantry*, 3; Lejeune, *The Reminiscences*, 337.

guns out in front, followed by the smaller millimeter guns closer to his assaulting infantry and marine regiments, making the rolling barrage more effective. This plan provided the max amount of cover for his men, hopefully allowing them to be almost on top of the German positions before the defenders raised their heads to shoot.²⁰⁵ As Lejeune stated the evening before the assault was to begin, “We shall make them sick tomorrow morning, though, as we have a tremendous amount of artillery and shall throw tens of thousands of shells into the area the 2nd Division is to attack. I hope each shell may find a suitable target.”²⁰⁶ The 3rd Infantry Brigade was going to be beneficiaries of one the greatest firepower displays the AEF conducted during the war. This extensive pre-bombardment coupled with the planned rolling barrages is evidence supporting the division and brigade’s leaning towards set-piece battle over the AEF open warfare concepts.

The 3rd Infantry Brigade was ordered to attack in column of brigades, with the 4th Marine Brigade and the 23rd Infantry initially abreast of each other in the division’s sector and the 9th Infantry in reserve. Just as planned at the division level, “elaborate arrangements were made for artillery and machine gun barrages preliminary to and during the initial stage of the attack.”²⁰⁷ The brigade received the “tentative plan for

²⁰⁵ Lejeune, *The Reminiscences*, 370-372. Second Division Historical Section, *Records of the Second Division*, vol. 1, Field Messages, Memorandum No. 1, 26 October 1918 and Field Order No. 49, 31 October 1918. The significant of having the I Corps artillery support is because the 2nd Division actually fell under the V Corps for tactical command during the Meuse-Argonne Offensive.

²⁰⁶ Lejeune, *The Reminiscences*, 382-383.

²⁰⁷ Hilton, *Operations of the Ninth Infantry*, 2.

attack” on 25 October with the actual order issued the day before the attack.²⁰⁸ The commander of Company H, 9th Infantry, Lieutenant Walter P. O’Brien recalls “that officers and noncommissioned officers of the company had ample opportunity, on the afternoon of October 31st, to study the map on which were shown our initial jump-off positions and our objectives.”²⁰⁹ There again would be no rush to battle as had happened at Soissons. The 3rd Infantry Brigade ensured that a detailed plan was fully disseminated down to all of its infantry companies, enhancing its shared vision across all the units.

The preparation for 3rd Infantry Brigade’s part in the Meuse-Argonne Offensive was complete. Colonel Van Horn, the interim 3rd Infantry Brigade commander, reported back to division at 1822 on 31 October, “Everything so far has gone nicely and indications from every standpoint most satisfactory.” By 0300 on 1 November the brigade was in place for the attack.²¹⁰ The 3rd Infantry began its final offensive of the war promptly at 0530, and once again it would show the disciplines of a true learning organization.

²⁰⁸ Second Division Historical Section, *Records of the Second Division*, vol. 6, WD 3rd Inf Bde., 12 January 1919. In addition to the preliminary plan on 25 October, Field Order No. 49 from division “directed an attack with sectors and objectives. . . . The 4th Brigade was to take the lead with the 9th Infantry . . . in reserve. The 23rd Infantry . . . was assigned the special mission of the capture of Landres-et-St. Georges and Bois de Hazais, joining the 9th Infantry as Division reserve upon completing its mission.” 3rd Bde., 2nd Div. War Diary.

²⁰⁹ O’Brien, *Operations of Company H Ninth Infantry*, 4.

²¹⁰ Second Division Historical Section, *Records of the Second Division*, vol. 4, WD 3rd Inf. Bde., FM 31 October and 1 November 1918.

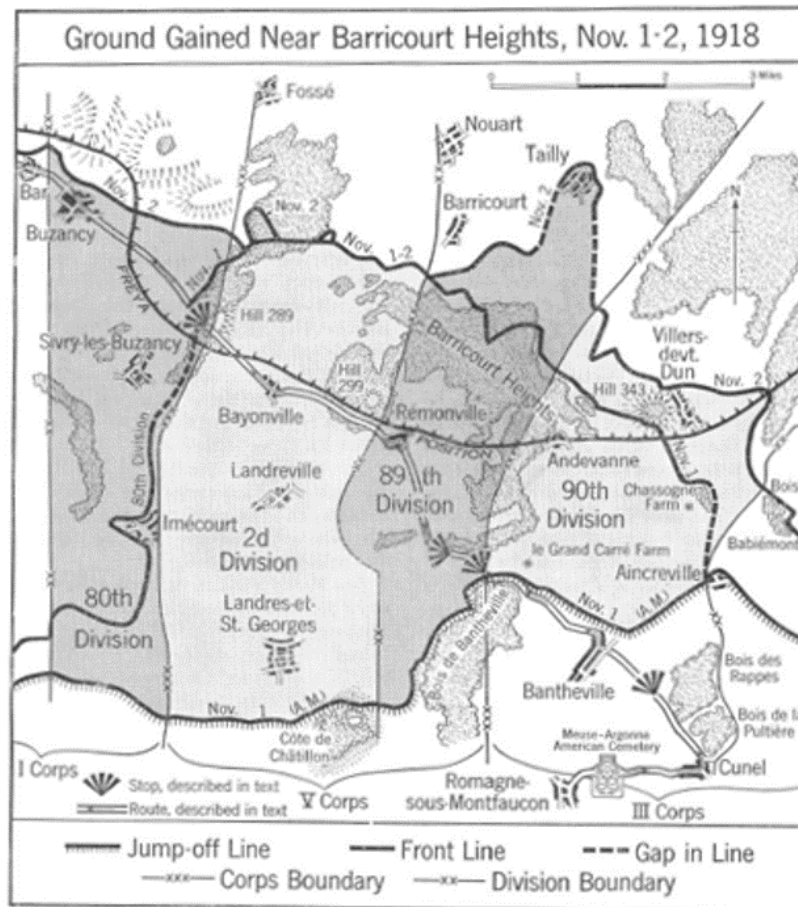


Figure 5. 2nd Division Operations during 1 and 2 November, 1918
(Meuse-Argonne)

Source: American Battle Monuments Commission, *American Armies and Battlefields in Europe* (1938; repr., Washington, DC: United States Government Printing Press, 1992), 276.

The Meuse-Argonne Offensive

The war diary of the German 58th Provisional Corps, commanding the units opposed to the 3rd Infantry Brigade, describes the start of the third phase of the offensive:

Following three hours of violent artillery preparation, which reached far into the rear area with high explosives and gas, infantry attacks started against the entire Corps front. . . . The main pressure of the hostile attack was directed against

the left Corps wing where the enemy succeeded in effecting a local penetration at Landres. Counter measures are in progress.²¹¹

Unfortunately for the Germans, their “counter measures” were to no avail. The 23rd Infantry attacked abreast on a two kilometer front with the 9th Infantry following one kilometer in reserve. The 23rd Infantry advanced approximately three kilometers and cleared their first two objectives: the village of Landres et. St. Georges and the Hazois woods. By 0900, they had captured 400 prisoners, thirteen artillery pieces, and 120 machine guns.²¹² Colonel Stone, the 23rd Infantry commander, wrote in the *23rd Infantry War Diary* that “the men followed the barrage very well and the resistance of the enemy was shattered by the intensity and rapidity of the barrage fire.”²¹³ Even at the outset of the attack, it is clear that the 3rd Infantry Brigade relied on the firepower of a set-piece battle doctrine rather than the ambiguous AEF open warfare doctrine. The 3rd Infantry Brigade’s *War Diary* states, “The 23rd Infantry followed the [artillery] barrage closely and all positions [were] reached on schedule time.”²¹⁴ As for the 9th Infantry, they followed both the 4th Marine Brigade and the 23rd Infantry Regiment and cleared the remaining small pockets of small German units left in the rear areas. All in all, the 3rd

²¹¹ Second Division Historical Section, *Translations*, vol. 9, 58th Provisional Corps Report, 1 November 1918.

²¹² Second Division Historical Section, *Records of the Second Division*, vol. 7, WD 23rd Inf. Reg., 1-7 November 1918.

²¹³ Ibid.

²¹⁴ Second Division Historical Section, *Records of the Second Division*, vol. 6, WD 3rd Inf. Bde., Report of Operations, 9 January 1918.

Infantry Brigade pushed forward almost nine kilometers on the first day, to a position located one kilometer to the southwest of the village of Barricourt on 1 November.²¹⁵

The next major movement was planned for the early morning time period of 3 November. The plan required the 3rd Infantry Brigade to move in front of the 4th Marine Brigade and assume the entire 2nd Division front which narrowed to about three kilometers before it opened back up to a distance of six kilometers. Once again, this attack was accompanied by a heavy artillery barrage. During the early morning hours, the 23rd Infantry continued the advance, with one battalion of the 9th Infantry moving in line with them on their right, towards the villages of Fosse and Nouart, located on the high ground in the area. The 3rd Infantry Brigade advanced under the cover of darkness, allowing them to seize the two villages.²¹⁶ As the after action report of the 3rd Infantry Brigade states, “The troops captured Fosse and Nouart as ordered, encountering very little resistance from the hostile rear guard machine gunners, who, naturally, were unable to operate successfully against such a method of attack at night.”²¹⁷

By noon on 3 November, the 3rd Infantry Brigade advanced another four kilometers, where they were finally held up by German artillery and machine gun fire from the Bois de Belval. The order was soon given to advance as far forward towards the town of Beaumont as possible. To move through the rest of the Belval woods, the 9th Infantry assumed the lead position for the brigade and moved out in column along the

²¹⁵ American Battle Monuments Commission, *2d Division Summary of Operations in the World War*, 71.

²¹⁶ Second Division Historical Section, *Records of the Second Division*, vol. 6, WD 3rd Inf. Bde., CN 4 31, 2-11 November 1918.

²¹⁷ Ibid.

only suitable road with the 23rd Infantry in trail.²¹⁸ This night movement by-passed the German positions in the Belval woods and focused on reaching the banks of the Meuse River as fast as possible instead. So just like the movement of the previous night, advancing “in column of twos, with advance guard” proved successful again.²¹⁹ The 3rd Infantry Brigade operations reports states the benefit of this technique on the night of 3 November:

The advantage of this method being that troops are able to march at night through a terrain occupied by machine guns with comparatively slight losses, due to the fact that machine gunners, not having a definite target, cannot operate their guns with effect, and due to the fact that this method was a surprise and caught the enemy entirely off his guard, and either killed, captured or dispersed him before he had an opportunity to organize a successful counter-offense.²²⁰

This second night movement was so effective that Captain O’Brien stated that “men stumbled over German soldiers sleeping who had been passed by the advance guard. . . . Initiative and daring were responsible for the success achieved in the night marches made.”²²¹ By the morning of 4 November, the 3rd Infantry Brigade had advanced another five kilometers, just two kilometers short of their objective of Beaumont.

Another night attack was again conducted on 4 November to capture the town and dominating ridges of Beaumont. This time, the 23rd Infantry passed through the 9th Infantry’s position and gained the objectives that had not been obtainable during daylight hours. This was highlighted in Colonel Stone’s report of the battle, which stated, “The

²¹⁸ Clark, *The Second Infantry Division in World War I*, 168.

²¹⁹ Second Division Historical Section, *Records of the Second Division*, vol. 6, WD 3rd Inf. Bde., CN 4 31, 2-11 November 1918.

²²⁰ Ibid.

²²¹ O’Brien, *Operations of Company H Ninth Infantry*, 12, 20.

battalions advanced independently. The 2nd Battalion seized the wooded heights east and southeast of Beaumont, mopping up Beaumont and Beauregard Farm at daylight. . . .

The operation was carried out in all details exactly as planned, all objectives being gained by 5:30 A.M.”²²² This was the last significant action of the 23rd Infantry Regiment during World War I. The 9th Infantry Regiments last combat action occurred on 10 November in support of the 4th Marine Brigade crossing the Meuse River between the town of Villemonty and Mouzon.²²³ The deaths for the entire period of 1 through 11 November for the 3rd Infantry Brigade remained extremely low, suffering only 218 KIA. A marked improvement over the battle of Soissons, where the brigade lost 238 KIA in just a two-day period, while only covering half the ground that the brigade covered during the third phase of the Meuse-Argonne Offensive.²²⁴

All in all, the 3rd Infantry Brigade advanced over twenty kilometers in hostile territories, pushing the Germans back across the Meuse River for good. The use of artillery barrages and night marches contributed greatly to the success of the 3rd Infantry Brigade during the Meuse-Argonne Offensive. World War I historian, Mark Grotelueschen sums up the accomplishment of the 3rd Infantry Brigade and the 2nd Division actions from 1 through 11 November, “It had broken through the last German lines of resistance south of the Meuse . . . and had secured a line from which American

²²² Second Division Historical Section, *Records of the Second Division*, vol. 7, WD 23rd Inf. Reg., 1-7 November 1918.

²²³ Second Division Historical Section, *Records of the Second Division*, vol. 6, WD 3rd Inf. Bde., CN 4 31, 2-11 November 1918.

²²⁴ Second Division Historical Section, *Records of the Second Division*, vol. 6, WD HQ 2d Div., Statistical Section: 15 March-11 November 1918, 5 December 1918.

artillery could shell the important German railroad running west through Sedan. . . .

Many senior AEF officers rightly considered this the most successful American attack of the war.”²²⁵ Regardless of what higher powers thought about the attack, the men of the 3rd Infantry Brigade were glad that the fight was finally over. On 11 November, Captain Hilton, of the 9th Infantry writes, “Words cannot express the happiness of those who had suffered so during the attack and who missed death only by the Grace of God.”²²⁶ The learning organization disciplines that enabled these soldiers’ achievements during the Meuse-Argonne Offensive will be examined in the following section. What lessons from their previous combat experiences had the brigade finally taken to heart over the past six months in combat?

Lessons Learned

The 3rd Infantry Brigade’s successful actions portray a learning organization that continually worked to better itself while fighting in 1918. Again, just like before the St. Mihiel Offensive, the soldiers of the 3rd Infantry Brigade had time to continue to master their warfighting skills before the Meuse-Argonne Offensive. After Mont Blanc, the brigade spent from 10 October to 24 October refitting and training for their final offensive.²²⁷ This period also allowed the leadership time to reflect on their doctrinal

²²⁵ Grotelueschen, *The AEF Way of War*, 273.

²²⁶ Spaulding and Wright, *The Second Division American Expeditionary Force in France*, 284. From the diary of Captain R. C. Hilton, MG Co., 9th Infantry.

²²⁷ Ibid., 284. From the diary of Captain R. C. Hilton, MG Co., 9th Infantry; Second Division Historical Section, *Records of the Second Division*, vol. 1, Field Order No. 46, 24 October 1918.

mental models that had been successful during their advances at St. Mihiel and Mont Blanc.

The 2nd Division and their subordinate units were actively “discarding the theoretical vision of open warfare and relying on a doctrinal framework and operational approach that were closer to the Allied version of trench warfare.”²²⁸ Challenging their own sometimes flawed AEF doctrine continued to be a trade mark of the units of the 2nd Division during the Meuse Argonne offensive. In addition to set-piece battle attacks, the 3rd Infantry Brigade also challenged mental models by seizing significant amounts of ground during night time operations previously described during the execution of the Meuse-Argonne Offensive. The brigade executed successful night operations not once, but three time in a period of five days. These night advances showed a willingness by the regimental and brigade commanders to avoid needlessly putting their men in harm’s way during daylight attacks. Colonel Rhea writes about how they changed their formations and tactics due to the situation on the ground, “By forming the troops in columns of twos and marching them through hostile . . . machine gun positions, with an advance guard and flanking patrols, took the enemy completely by surprise. . . . This method of advance completely nullifies the advantages of hostile machine gun superiority.”²²⁹

Both Colonel Van Horn and Colonel Stone successfully led their regiments, as the spearhead of the division on these daring night attacks and showed a great willingness to apply formations and tactics that worked best for the situation at hand. The fact that they

²²⁸ Grotelueschen, *The AEF Way of War*, 276.

²²⁹ Second Division Historical Section, *Records of the Second Division*, vol. 6, Report of Operations, 3rd Bde., 2-11 November 1918; Operations Report of the 2d Div., 1-11 November 1918.

did not insist on having their men continue to advance on line, as many units in the AEF were attempting, shows leaders not being satisfied with the status quo. The 3rd Infantry Brigade's actions by the time they reached the Meuse River contributed greatly to the 2nd Division capturing 1,712 prisoners, 105 artillery pieces, and 500 machine guns from the enemy.²³⁰ Through the practice of Senge's challenging mental models discipline, the brigade was kept from executing costly daytime attacks and ultimately pushed the Germans back across the Meuse. In addition to challenging mental models, team learning also played a major role in the 3rd Infantry Brigade's success during the Meuse-Argonne Offensive.

The deliberate planning process had a significant effect on the team learning of the 3rd Infantry Brigade. During this offensive, each leading battalion was given its own artillery support for which it would be able to communicate with and either call back the rolling barrage or use in support of them destroying fortified enemy positions.²³¹ Clearly the 9th and 23rd Infantry regiments had learned from prior experiences that every unit moved at a different speed depending on the terrain and enemy in front of them, and a one-size fits all rolling barrage could be disastrous. Colonel Rhea states that this problem was fixed by "wonderfully echeloned" infantry battalions with close liaison with the supporting artillery units. The artillery units continued to move forward and provide

²³⁰ Ibid.

²³¹ Second Division Historical Section, *Records of the Second Division*, vol. 6, 2d Div. HQ, "Tentative Plan for Attack," 25 October 1918; Grotelueschen, *The AEF Way of War*, 272.

excellent fires as the infantry advanced from 2 through 11 November.²³² This team learning was developed through practice and execution over the past three months. In *The Fifth Discipline*, Senge states, “In fact, the process whereby such teams learn is through continual movement between practice and performance, practice, performance, practice again, perform again.”²³³ This scenario described by Senge had been exactly the case for the 3rd Infantry Brigade since July 1918. Along with practicing team learning, the brigade and its parent organization, the 2nd Division, continued to operate under one shared vision during the Meuse-Argonne Offensive.

A shared vision led to exceptional planning within the organization. Once the Meuse-Argonne Offensive operations order was given to 2nd Division, Lejeune immediately had a conference with all his brigade and regimental commanders. The offensive was then “described in utmost detail, and copies of the plan of attack and the large army maps were distributed to them.”²³⁴ Further, conferences were held by the 9th and 23rd Infantry Regiments, consisting of battalion, company, and platoon level leadership.²³⁵ Here, the 3rd Infantry Brigade’s shared vision for the offensive emerges from the personal visions of Major General Lejeune and from Colonel Van Horn, the interim brigade commander. This shared vision spread across the brigade and as soon as

²³² Second Division Historical Section, *Records of the Second Division*, vol. 6, Report of Operations, 3rd Bde., 2-11 November 1918; Operations Report of the 2d Div., 1-11 November 1918.

²³³ Senge, *The Fifth Discipline*, 221.

²³⁴ Lejeune, *The Reminiscences*, 379.

²³⁵ Ibid.

they experienced initial success on 1 November, the enthusiasm from this success only helped to rein-enforce the 3rd Infantry Brigade's shared vision.²³⁶

The 3rd Infantry Brigade was once again in the forefront of the division during the Meuse-Argonne Offensive. The brigade and division leadership successfully employed the art of creating a shared vision, practiced team learning, and ultimately succeeded by constantly challenging the mental models of their own doctrine during combat in November 1918. The 3rd Infantry Brigade, by utilizing a foundational and all-encompassing systems thinking approach, was an organization that could successfully deal with the complex combat environment of World War I. The brigade's success during the Meuse-Argonne Offensive showed a unit that effectively practiced the disciplines of a learning organization.

Conclusion

From the end of July through the 11 November armistice, the 3rd Infantry Brigade consistently demonstrated the ability to take the lessons learned from their last fight and apply them to their next. Undoubtedly, this started at the top with the new division commander. First and foremost, from Lejeune on down, training was instituted across the infantry regiments of the 3rd Infantry Brigade. Even when the brigade was on the front line, soldiers continued to train. This time allowed even replacements to gain valuable lessons before they saw real combat in September 1918. Personal mastery of soldiers' individual weapons during maneuvers was highlighted by Ely, the 3rd Infantry Brigade commander, in his after action report on St. Mihiel. The report states that, "Rifle fire was

²³⁶ Senge et al., *The Fifth Discipline Fieldbook*, 305.

used to its utmost. Men of this brigade had been taught to fire as they advanced, stopping momentarily to fire while the line advanced continuously. It was found of great use.”²³⁷

Though this may sound like open warfare, this personal mastery of rifle fire was accompanied by rolling barrages more akin to set-piece battle, allowing the infantry the ability to advance and fire on any short range enemy targets left behind the advancing barrage. Another benefit of having time to work on personal mastery was the ability for leaders to reflect on past experiences, allowing them to see if the doctrine and tactics they used could be improved upon. This allowed the brigade to examine their doctrinal mental models.

Challenging mental models became the second nature of the 2nd Division and its 3rd Infantry Brigade under Lejeune from July to November 1918. The actions at St. Mihiel and Meuse-Argonne show a unit that was not content to fight by the sometimes confusing AEF doctrine of open warfare, which had led to needless casualties throughout all the American divisions in the war. The 3rd Infantry Brigade planned set-piece battle attacks in detail during their combat operations in the fall of 1918. They even challenged the mental models of their higher organization, AEF headquarters, by either delaying attacks until they had sufficient fire support or “employing unauthorized artillery tactics” to achieve victory at St. Mihiel and the Meuse-Argonne Offensive.²³⁸

²³⁷ Second Division Historical Section, *Records of the Second Division*, vol. 6, 3rd Inf. Bde., “Supplementary Report on Operations,” 22 September 1918.

²³⁸ Grotelueschen, *The AEF Way of War*, 279. For example, Colonel Stone reported emphatically that the first attack during the Meuse-Argonne offensive on 1 November “was marked by a brilliant co-ordination of arms, the artillery laying down an absolutely smothering barrage which the infantry followed closely; Second Division Historical Section, *Records of the Second Division*, vol. 7, WD 23rd Inf. Reg., 2-5 November 1918.

Challenging mental models also allowed the 3rd Infantry Brigade to better learn as a team. Spurred on by the division commander, team learning permeated throughout the units of the 2nd Division during their extensive training period in August of 1918. The 3rd Infantry Brigade was able to start effectively coordinating with its artillery support through effective and realistic training. This team learning contributed to the success of the 9th and 23rd Infantry Regiments during the St. Mihiel Offensive. However, it did not stop there. Team learning continued throughout the brigade during its actions at Mont Blanc Ridge and the Meuse-Argonne Offensive. The 3rd Infantry Brigade displayed “innovative, coordinate action” perfected through combat training exercises and operational experience.²³⁹

The 3rd Infantry Brigade understood the shared vision of what they were supposed to accomplish at St. Mihiel and Meuse-Argonne. In battle, the “fog of war” can complicate a unit’s mission, adding to the confusion about one’s vision of what is actually occurring. Thanks to the leadership of commanders like Lejeune, Ely, Rhea, Stone, and Van Horn, the shared vision of the 3rd Infantry Brigade permeated throughout the ranks. This vision painted the picture of what the outcome of the operation was supposed to look like down to the company and platoon level in the 3rd Infantry Brigade. Undeniably, this shared vision led to a unity of effort by the brigade in the Fall of 1918.

In the end, the 3rd Infantry Brigade had come a long way since June of 1918. During six months of fighting, they had transformed from a green army unit into a veteran infantry brigade. They learned from their past experiences and mistakes and ultimately exhibited the disciplines of a learning organization. These disciplines and how

²³⁹ Senge, *The Fifth Discipline*, 219.

they contributed to the practice of the fifth discipline, systems thinking, will be examined in depth in the final chapter. There is a direct correlation between the 3rd Infantry Brigade's successful practice of the five disciplines and their overall combat success during the second half of their World War I experience.

CHAPTER 5

A LEARNING ORGANIZATION

BUILT IN COMBAT

The purpose of this thesis has been to show how the 3rd Infantry Brigade, 2nd Division, practiced the disciplines of a learning organization to achieve success by the end of World War I. The disciplines of personal mastery, challenging mental models, creating a shared vision, achieving team learning and attaining systems thinking, like all disciplines, must be continually trained and practiced for an organization to remain relevant in their field of work. In *The Fifth Discipline Fieldbook*, Peter Senge writes:

A discipline is not simply a “subject of study.” It is a body of technique, based on some underlying theory or understanding of the world, that must be studied and mastered to put into practice. As you develop proficiency, your perceptual capacity develops; you gradually surrender to new ways of looking at the world.²⁴⁰

The 3rd Infantry Brigade showed they were capable of learning and developing the disciplines that allowed them to be successful in 1918. This is not to say, however, that the 3rd Infantry Brigade was not without its own faults and difficulties during their combat operations. Sometimes the brigade’s learning process was slow, or conducted by trial and error in combat rather than training. However, this was a reality for all the other armies in World War I that had been fighting since 1914.

The French, British, and German armies all struggled greatly in implementing combined arms theory into executable doctrine. The tactics of 1914 through 1917 did not work with the current technology to coordinate effective offensive maneuvers to break

²⁴⁰ Senge et al., *The Fifth Discipline Fieldbook*, 7.

the stalemate, devolving all the belligerents into a battle of attrition. In 1918, the largely untrained and untested AEF came just in time to help stop the last German Spring Offensives of the war. However, with over 1,200,000 fresh troops swelling the AEF ranks in France by June 1918, it can be easily asserted that the United States' ability to produce manpower, rather than its ability to fight, contributed more to the defeat of Germany.²⁴¹ In *The School of Hard Knocks*, military historian, Dr. Richard S. Faulkner correctly states, "The sad reality was that the AEF was an army of 1914 thrust into 1918 . . . the AEF suffered from having to play catch-up with armies that had been studying in the school of hard knocks for four years."²⁴² This was the case for all the units of the AEF, to include the 3rd Infantry Brigade as this thesis has shown. However, it this thesis' assertion that the 3rd Infantry Brigade was able to overcome many of these shortcomings at the operational and tactical level due to the brigade's ability to practice the disciplines of a learning organization. Bill Godfrey, a contributor to Senge's book, *The Fifth Discipline Fieldbook*, asserts that governmental organizations must generally be in crisis mode, which forces them to plan for the future, and develop the traits of a learning organization.²⁴³ Even though the 3rd Infantry Brigade was not displaying all the traits of a learning organization at the beginning of the war, by the fall of 1918, the brigade was in crisis, and was willing to make the changes that led to its success in World War I, ultimately practicing the disciplines of a learning organization.

²⁴¹ Pershing, *Final Report*, 35.

²⁴² Faulkner, *The School of Hard Knocks*, 9.

²⁴³ Senge et al., *The Fifth Discipline Fieldbook*, 494.

Personal Mastery

First, the discipline of personal mastery was one of the most fluid disciplines to master for the soldiers of the 3rd Infantry Brigade due to the personnel and leadership changes throughout the war. However, the 2nd Division, including its 3rd Infantry Brigade, benefitted from having more training time in France than any other AEF division in the war. Corporal John S. Miholik, of Company B, 23rd Infantry emphatically states, they were “trained to be shock troops,” proficient in rifle marksmanship, bayonet drills, marching with packs, and digging entrenchments.²⁴⁴ Although many AEF troops claimed to be “shock troops,” 2nd Division soldiers backed their claim up with actually training. As prescribed by the *2nd Division Program of Training*, the 3rd Infantry Brigade completed at least eight weeks of some semblance of individual training while in France. However, even though the brigade had more preparation time than other units, the brigade train-up was still incomplete by most military standards of the day.

The largest obstacle in training personal mastery was the fact that the 3rd Infantry Brigade was dealing with many recruits that had been in the army for less than a year. Training green soldiers to fight is never an easy task, and with contact with the Germans looming in the near future, the 3rd Infantry Brigade did as well as could be expected at the time. The largest drawback for the officers during their training period was the ability to conduct realistic scenarios that replicated offensive operations on the western front. All leaders struggled with command and control issues, and the leaders of the 3rd Infantry

²⁴⁴ John S. Miholik, *World War I Research Project: Army Service Experiences Questionnaire* (Carlisle Barracks, PA: Department of the Army, US Military History Institute, 1980), 2. Miholik first saw combat action on 17 March 1918, was wounded at Belleau Wood, and later participated in both the St. Mihiel and Meuse-Argonne Offensive.

Brigade were not immune to these issues. Command and control problems heavily plagued the brigade up through July 1918. Those leaders who survived were forced to use personal combat experiences to master their own personal skills.

In the irony of war, the soldiers of the 3rd Infantry Brigade displayed personal mastery of their individual weapons and command and control skills during their first engagement as a complete unit despite their training shortfalls. In July 1918, Vaux was an excellent display of how a limited attack should be conducted. However, their next attack at Soissons a few weeks later was in stark contrast to their successful attack at Vaux. Although they ultimately were victorious, the 9th and the 23rd Infantry both sustained heavy casualties. The reason for displaying the traits of personal mastery in their first battle and lacking them in their second was two-fold. First, Vaux was a much smaller battle, both in distance traveled, and in the size of the German enemy they were fighting. The scale of the engagement made the attack at Vaux much easier to control. Second, the infantry regiments had been on the line for over forty days. Even after their victory at Vaux, the soldiers of the 3rd Infantry Brigade had no time to reflect upon the personal skills they had learned, enabling them to see what would be useful to them during their actions at Soissons.

The capability to consistently practice personal mastery of their tradecraft started after the battle of Soissons. This occurred in large part to Major General Lejeune's ability to create a learning environment and Brigadier General Ely's readiness to learn from his mistakes. As co-author of *The Fifth Discipline Fieldbook*, Charlotte Roberts states, "Personal mastery implies a willingness to invest what is necessary to create an

environment that helps employees become high-quality contributors.”²⁴⁵ Both the 2nd Division Commander and the 3rd Infantry Brigade Commander emphasized training between Soissons, St. Mihiel, and the Meuse-Argonne Offensive to make their soldiers better. Tough, realistic training was conducted whenever the infantry units of the brigade were not on the front line. In addition, the leaders of the 3rd Infantry Brigade finally had time, aided by actual combat experience, to work on the issue of command and control throughout their attacks. Although there were some instances of advancing without fire support during the St. Mihiel and Meuse-Argonne Offensive, they were not even close to the scale of the unsupported attacks that had occurred earlier at the battle of Soissons. Undoubtedly, the veterans of the 3rd Infantry Brigade had learned personal mastery through experiences in crisis. Though not ideal, this “learning by doing” in combat played a major role in the personal mastery of even replacements before, and even during combat. Captain Walther P. O’Brien, a company commander in the 9th Infantry during the Meuse-Argonne Offensive, writes, “If green men are mixed with well-disciplined seasoned veterans the unit will function well.”²⁴⁶ So, by September 1918, the soldiers and leaders of 3rd Infantry Brigade were displaying the trait of personal mastery. Personal mastery of their warfighting skills directly contributed to their ability to reflect and challenge the mental models of the AEF warfighting doctrine, allowing them to adapt to the conditions of the battlefield.

²⁴⁵ Senge et al., *The Fifth Discipline Fieldbook*, 199.

²⁴⁶ O’Brien, *Operations of Company H Ninth Infantry*, 22.

Challenging Mental Models

The 3rd Infantry Brigade ultimately embraced the tactics and doctrine that worked best on the western front in 1918. Lessons learned during earlier offensives in June and July proved that open warfare doctrine needed to be revised to better fit the firepower centric warfare of World War I. On 6 June 1918, the 23rd Infantry Regiment, in support of the Marines at Belleau Wood, learned hard lessons while trying to follow AEF unpublished open warfare doctrine. As summarized by Major General Harbord, then the commander of the 4th Marine Brigade, open warfare was supposed to achieve surprise by moving to jump-off lines under the cover of darkness, only to be preceded by an intense but short artillery fire, and then successive thin lines of infantry advance “without reference to the progress of front units on either side of them.”²⁴⁷ Open warfare also called for artillery to keep up mass fires with lighter artillery pieces advancing just behind the infantry units. However, as the 23rd Infantry learned when one of their battalions advanced well ahead of the other units on 6 June, this was a recipe for disaster due to command and control issues of open warfare theory. Open warfare did call for mass artillery fires with the smaller artillery pieces following behind the infantry units as they advanced, but this was easier said than done.²⁴⁸ Once one unit advanced too far in front of the other units, the artillery support was lost due to the batteries not knowing where the friendly units were located. In addition to this, the smaller field pieces always advanced at a much slower pace, not being able to keep up with the infantry it was supposed to

²⁴⁷ Harbord, *The American Army in France*, 240.

²⁴⁸ Ibid.

support. Leaders of the 3rd Infantry Brigade were slowly learning that the mental models they held regarding combat needed to be challenged.

During the attack at Vaux on 1 and 2 July, it seemed that the 3rd Infantry Brigade had learned their lesson, reflected upon the mistakes that had been made, and adopted the tactics and doctrine of set-piece battle being taught by the French. In hindsight, their success at Vaux can be attributed more easily to the use of overwhelming firepower and the low physical and mental state of the Germans that they were fighting, not from challenging the mental models of the AEF.

The battle of Soissons, on 18 and 19 July, proved that the 3rd Infantry Brigade was not fully prepared to challenge outright the mental models of open warfare, even after the short-lived success at Vaux. Though successful, the second half of the battle was characterized by open warfare attacks without the support of massed artillery.

Regrettably, this led to many casualties across the 9th and the 23rd Infantry Regiments. Just like personal mastery up till this point, the leaders of the 3rd Infantry Brigade were not sufficiently challenging the mental models of their doctrine to see how they could improve before Soissons. Again, the time spent in the front line trenches from the beginning June till the middle of July played a factor in the brigade's inability to reflect and challenge the status quo before Soissons. However, this was soon to change.

Effectively challenging mental models requires time to both reflect and openly inquire about the way an organization is conducting itself. After Soissons, with new leadership at the division level, the 3rd Infantry Brigade finally had the time to reflect on, and inquire about lessons learned from previous battles with the full support of their leaders. In the *Fifth Discipline Fieldbook*, co-author Charlotte Roberts writes, "When we

begin practicing those skills [reflecting and inquiring], we bring to the surface some of our unconscious, automatic responses. We see, perhaps for the first time, what we have done to ourselves and others through automatic or incomplete thinking.”²⁴⁹ With time to train at the end of July and August of 1918, the 3rd Infantry Brigade finally reflected upon their “automatic and unconscious” mental models they had taken into their first two months of fighting and adjusted them to the realities of combat in Europe.

The St. Mihiel and Meuse-Argonne Offensives were supported by integrated artillery, with rolling barrages more accustomed to set-piece battle than open warfare. The leaders of the 3rd Infantry Brigade knew that in order achieve the most amount of success with the least amount of casualties they had to change the way they were conducting business. The brigade would not have been able to adjust their mental models without the time dedicated to training in the later part of the war. Although not ideal at first, the 3rd Infantry Brigade learned through experience that they could not blindly advance only using the “spirit of the infantryman” to win the day. Therefore, after the first few setbacks, the brigade and division leadership did everything they could to challenge the mental models of their higher organization. This led to the often praised success of the 3rd Infantry Brigade during the fall of 1918. The ability to challenge mental models also played a major role in building a shared vision across the brigade.

Shared Vision

The ability of the 3rd Infantry Brigade to cultivate a shared vision did not truly start until mid-way through their war experience. In *The Fifth Discipline Fieldbook*, co-

²⁴⁹ Senge et al., *The Fifth Discipline Fieldbook*, 199.

author Bryan Smith states: “The most successful shared visioning processes have the same goal for organizations: to develop a sense of destiny which the organization recognizes as its own, and help its members act accordingly.”²⁵⁰ During their initial train-up and front line combat experiences a true shared vision across the brigade was incomplete at best. The 3rd Infantry Brigade constantly switched between training for open warfare and set-piece battle. The AEF and French Army leadership had differing opinions about the priorities of training, and therefore the 3rd Infantry Brigade went into battle with an inconsistent goal of how they should execute their attacks. The shared vision of both the first two 2nd Division commanders, Bundy and Harbord, was sporadic at best. The 3rd Infantry Brigade felt the effects of a poor shared vision of how they should conduct offensive warfare in France, almost unconsciously switching from open warfare attacks to set-piece battle attacks and then back to open warfare attacks with no real rhyme or reason for doing so. After the costly success at the battle of Soissons in July 1918, under the tutelage of their new Division Commander, Lejeune, the 3rd Infantry Brigade finally started to operate under the same shared vision which had been absent up until that point in the war.

Ely, Stone, and Upton, the brigade and regimental commanders bought into Lejeune’s vision for realistic training and how the 2nd Division was going to execute its next offensives. Lejeune was determined to use tactics and doctrine that looked more like set-piece battle than the AEF’s open warfare doctrine. Regardless of which one was ultimately selected, the fact that only one was chosen greatly contributed to the ability to develop a coherent shared vision across the brigade.

²⁵⁰ Ibid., 341.

As Senge states, “A vision is truly shared when you and I have a similar picture and are committed to one another having it, not just to each of us, individually, having it.”²⁵¹ After the hard lessons learned during the battle of Soissons, the 3rd Infantry Brigade was committed to having the same shared vision. Although things did not always go as planned during the St. Mihiel and Meuse-Argonne Offensives, the 9th and 23rd Infantry understood the 3rd Infantry Brigade and 2nd Division commander’s intent. By understanding these matching shared visions, the soldiers of the 3rd Infantry Brigade were able to accomplish their mission without the confusion that had occurred earlier in the battle of Soissons. By the last three months of the war, and again through sometimes costly past experiences, the 3rd Infantry Brigade finally built a shared vision, a critical discipline of a true learning organization. While the 3rd Infantry Brigade was cultivating its own shared vision, it was also discovering how to learn as a team, the topic of the next section.

Team Learning

Team learning within the 3rd Infantry Brigade, like the other disciplines, was developed through experience and then by training to fix the faults that had occurred during their first few combat engagements. Team learning is not possible without first having a shared vision and then suspending assumptions. In *The Fifth Discipline Fieldbook*, contributor William Isaacs writes, that this “means exploring your assumptions from new angles: bringing them forward, making them explicit, giving them

²⁵¹ Senge, *The Fifth Discipline*, 192.

considerable weight, and trying to understand where they came from.”²⁵² So even after challenging the mental models of an organization, team learning comes through openly examining assumptions to see if they still hold weight.

Therefore, during their initial train-up through the battle of Soissons, the 3rd Infantry Brigade did not develop the discipline of team learning to its full capacity. The lack of a true shared vision across the division and the brigade hampered the regiments abilities to learn as a team. The success during the attack at Vaux in early July was more of an abnormality than the result of practice through team learning. The battle of Soissons soon showed that learning as a team was not easy task. Higher level commanders like Bundy and Harbord were not able to suspend their assumptions, which was a detriment to team learning. In addition to this, after the 3rd Infantry Brigade entered the trenches in the spring of 1918, they had little to no time to reflect on their initial wartime experiences and then train as a team to correct deficiencies until after the battle of Soissons in July of that year.

This ability to cultivate team learning changed for the better during the late summer months of 1918. With adequate time to reflect and retrain before the St. Mihiel and Meuse-Argonne Offensives, the leaders of the 3rd Infantry were able to suspend their assumptions and pinpoint the tactics and techniques that worked best for the war they were fighting. Once the mental models of the AEF doctrine had been challenged and a shared vision had been cultivated, team learning was the next step in making the needed changes for the 3rd Infantry Brigade to become a learning organization. The practice of team learning allowed the brigade to ultimately be more successful during their

²⁵² Senge et al., *The Fifth Discipline Fieldbook*, 378.

offensives conducted through September to November of 1918. Like the other disciplines, team learning came through battle experiences. The 3rd Infantry Brigade and its division leadership were willing to put forth the time and effort to make the needed changes and ultimately develop the capacity for team learning during World War I. With four of the disciplines discussed, this brings us to the fifth and final discipline, systems thinking.

Systems Thinking

In the end, the 3rd Infantry Brigade was practicing a form of systems thinking that allowed it to achieve battlefield success in World War I. Senge writes, “At its broadest level, systems thinking encompasses a large and fairly amorphous body of methods, tools, and principles, all oriented to looking at the interrelatedness of forces, and seeing them as part of a common process.”²⁵³ Systems thinking looks at all the disciplines and how they interact with each other to create an environment which cultivates a learning organization. At the beginning of the 3rd Infantry Brigade’s wartime experience, they were not conducting systems thinking.

The 3rd Infantry Brigade was a newly formed organization at the beginning of 1918, adding to this, it was composed of thousands of soldiers new to the army, lacking any form of combat experience. To compound this, the leaders of the brigade also had no World War I combat experience. The same difficulties in developing personal mastery, challenging mental models, cultivating a shared vision and learning as a team all negatively affected the brigade’s systems thinking process. Many of the 3rd Infantry

²⁵³ Ibid., 89.

Brigade's setbacks during the first few months in combat were due to the brigade and its division implementing a quick fix rather than systematically correcting the process of how they conducted their offensive maneuvers. As stated in *The Fifth Discipline*

Fieldbook:

Often, people are aware of the negative consequences of applying this quick fix. But they do it anyway, because the pain of not doing something right away is more urgent, and feels more powerful . . . than the delayed negative effects. Sure enough, the relief is temporary, and the symptom returns, often worse than before . . . often unnoticed at first but continuing to accumulate as the wrong solution is repeatedly applied.²⁵⁴

This statement, though not written about World War I, superbly sums up what had been happening during the first three years of the war and at first, the 3rd Infantry Brigade fell into this trap also. Costly advances during June and July were reinforced by even costlier advances. The leaders of the brigade, and of the AEF for that matter, knew that many men would lose their lives conducting unproven and inadequately trained tactics, but they were caught in "the vicious cycle of the reinforcing loop."²⁵⁵

It was not until after the battle of Soissons that the 3rd Infantry Brigade and the 2nd Division as a whole were able to start to break out of this loop. All the other four learning organization disciplines played a part in this process. Starting at the top and beginning with personal mastery, Major General Lejeune was committed to be a model for his subordinate commands to follow. As Senge states, "Talking about personal mastery may open people's minds somewhat, but actions always speak louder than

²⁵⁴ Ibid., 126.

²⁵⁵ Ibid.

words.”²⁵⁶ Leaders of the 3rd Infantry Brigade did likewise, and training was instituted even more rigorously in between battles than what had been the case before their first enemy engagement.

Next, challenging mental models is a vital part of cultivating the systems thinking process. In *The Fifth Discipline*, Senge writes:

Ultimately, the payoff from integrating systems thinking and mental models will be not only improving our mental models (what we think) but altering our ways of thinking . . . the learning organizations of the future will make key decisions based on shared understanding of interrelationships and patterns of change.²⁵⁷

The interrelationship between challenging mental models and developing a systems thinking process go hand in hand. Mental models focus on the hidden assumptions and systems thinking, finds a way to restructure those assumptions, revealing the root cause of the problems at hand. Even though the 3rd Infantry Brigade fought in 1918, a glimpse of this thinking process can be seen in the way the 3rd Infantry Brigade and the 2nd Division prepared themselves for their final offensives in the fall of 1918.

Third, a shared vision gains value if it is implemented with systems thinking. A shared vision is empty if it is not tied to a system to implement the vision. From August to November 1918, we see the shared vision of the 3rd Infantry Brigade take root and start to grow as the other disciplines are cultivated. By practicing the systems thinking discipline, the brigade was able see how their existing doctrine and actions affected their current reality, thus allowing a more comprehensive shared vision to develop.²⁵⁸ As

²⁵⁶ Senge, *The Fifth Discipline*, 162.

²⁵⁷ Ibid.

²⁵⁸ Ibid.

Senge states, “A new source of confidence develops, rooted in deeper understanding of the forces shaping current reality, a place where there is leverage for influencing those forces.”²⁵⁹ Systems thinking, tied to the shared vision of the 3rd Infantry Brigade aided them in leveraging all the assets they had, with help from the 2nd Division, to ultimately push back and defeat the Germans during the final three months of combat.

Last, without a system that deals with complexity and confusion, the discipline of team learning will always be limited.²⁶⁰ The lack of a systems thinking process directly contributed to the poor team learning of the 3rd Infantry Brigade during the first half of 1918. However, once the brigade’s systems thinking process started to emerge in late July 1918, team learning across the 3rd Infantry Brigade increased dramatically. Costly lessons learned in past battles fueled the fire of team learning once the brigade’s systems thinking process tied all the learning organization disciplines together.

Modeled by their division and brigade commanders from August to November 1918, the soldiers and leaders of the 3rd Infantry Brigade had finally bought into a process that allowed them to achieve greater success during their final battles of World War I.

Conclusion

It is fair to say that all military organizations during their involvement in World War I struggled greatly at times. The aim of this thesis has not been to prove that the 3rd Infantry Brigade, 2nd Division, AEF, was not without fault during the war. However, it

²⁵⁹ Ibid., 162.

²⁶⁰ Ibid., 251.

has shown that the 3rd Infantry Brigade was willing to overcome inadequate training, leadership mistakes, and costly battles to better itself as a fighting organization by the end of the war. In doing so, the brigade as a whole demonstrated the disciplines of a learning organization. Although not perfect, the 3rd Infantry Brigade achieved personal mastery, challenged the mental models of the war, created a shared vision across its units, achieved team learning and developed a systems thinking process that ultimately led to their successful triumph in their final combat engagements of World War I.

BIBLIOGRAPHY

- American Battle Monuments Commission. *2d Division Summary of Operations in the World War*. Washington, DC: Government Printing Office, 1944.
- . *American Armies and Battlefields in Europe*. 1938. Reprint, Washington, DC: United States Government Printing Press, 1992.
- American Expeditionary Forces Headquarters. *Program of Training for the 2nd Division*. France: Records of the AEF, 1917.
- Army Times Publishing Company. *The Yanks Are Coming: The Story of General John J. Pershing*. New York: Putnam, 1960.
- Army War College. *Infantry Training: Prepared at the Army War College, August, 1917*. Washington, DC: Government Printing Office, 1917.
- Bartlett, Merrill L. *Lejeune: A Marine's Life: 1867-1942*. Columbia, SC: University of South Carolina Press, 1991.
- Behan, Eugene V. *Operations of the Supply Company, 9th U.S. Infantry (2d Division) during the Meuse-Argonne Offensive November 1—November 11, 1918 (Personal Experience of a Supply Officer)*. Fort Benning, GA: The Infantry School Advanced Course, 1933.
- Burress, Withers A. *The 23d Infantry Southwest of Chateau-Thierry: Personal Experience of a Regimental Operations Officer, May 30 to July 9, 1918*. Fort Benning, GA: The Infantry School Advanced Course, 1929.
- . *The Operations of the 23d Infantry in the Soissons Offensive, July 16-25, 1918*. Fort Benning, GA: The Infantry School Advanced Course, 1929.
- Caygill, Harry W. *Operations of Company M 23d Infantry in the Attack on Vaux, July 1-2, 1918: Personal Experience of a Platoon Leader*. Fort Benning, GA: The Infantry School Advanced Course, 1933.
- Clark, George B. *The Second Infantry Division in World War I: A History of the American Expeditionary Force Regulars, 1917-1919*. Jefferson, NC: McFarland, 2007.
- Cochrane, Rexmond C. *Gas Warfare at Belleau Wood, June 1918*. Army Chemical Center, MD: US Army Chemical Corps Historical Office, 1957.
- . *Gas Warfare at Chateau Thierry, June 1918*. Army Chemical Center, MD: US Army Chemical Corps Historical Office, 1956.

- Coffman, Edward M. *The Regulars: The American Army, 1898-1941*. Cambridge: Belknap Press of Harvard University Press, 2004.
- Davis, George A. *Operations of the 9th Infantry, 2d Division in the Aisne-Marne Offensive, 17-20 July, 1918*. Fort Leavenworth, KS: Command and General Staff School, 1933.
- Faulkner, Richard Shawn. *The School of Hard Knocks Combat Leadership in the American Expeditionary Forces*. College Station: Texas A & M University Press, 2012.
- France and United States. *Instruction on the Offensive Action Large Units in Battle*. France: General Headquarters, American Expeditionary Forces, 1918.
- Grotelueschen, Mark E. *The AEF Way of War: The American Army and Combat in World War I*. Cambridge: Cambridge University Press, 2007.
- Hallas, James H. *Doughboy War: The American Expeditionary Force in World War I*. Boulder, CO: Lynne Rienner Publishers, 2000.
- Harbord, James G. *The American Army in France, 1917-1918*. Boston: Little, Brown, and Company, 1936.
- . *Leaves from a War Diary*. New York: Dodd, Mead and Company, 1931.
- Hilton, Roy C. *Operations of the Ninth Infantry, Second Division in the Third Phase, Meuse-Argonne, November 1-11, 1918*. Fort Benning, GA: The Infantry School Advanced Course, 1928.
- Johnson, Douglas V., and Rolfe L. Hillman. *Soissons, 1918*. College Station: Texas A&M University Press, 1999.
- Lejeune, John A. *The Reminiscences of a Marine*. Philadelphia: Dorrance and Co., 1930.
- Lengel, Edward G. *Thunder and Flames: Americans in the Crucible of Combat, 1917-1918*. Lawrence: University Press of Kansas, 2015.
- Mackin, Elton E. *Suddenly We Didn't Want to Die: Memoirs of a World War I Marine*. Novato: Presidio Press, 1993.
- Malone, Paul B. "The Need for an Infantry School." *Infantry Journal* 16 (July 1919 to December 1919): 347-359.
- Messersmith, Robert E. *Operations of Company "E", Sixth Regiment Marines (2d Division) at Belleau Woods, June 1 to June 13, 1918 (Personal Experience)*. Fort Benning, GA: The Infantry School Advanced Course, 1929.

- Miholik, John S. *World War I Research Project: Army Service Experiences Questionnaire*. Carlisle Barracks, PA: Department of the Army, US Military History Institute, 1980.
- Monash, Sir John. *The Australian Victories in France in 1918*. New York: E. P. Dutton and Company, 1920.
- O'Brien, Walther P. *Operations of Company H Ninth Infantry, Third Phase of the Meuse-Argonne, November 1-11, 1918*. Fort Benning, GA: The Infantry School Advanced Course, 1933.
- Palmer, Frederick. *John J. Pershing, General of the Armies, a Biography*. Harrisburg, PA: Military Service Pub. Co, 1948.
- Parker, Geoffrey. *The Cambridge Illustrated History of Warfare*. Cambridge: Cambridge University Press, 1995.
- Paschall, Rod. *The Defeat of Imperial Germany, 1917-1918*. New York: Da Capo Press, 1989.
- Pershing, John J. *Final Report of General John J Pershing, Commander in Chief, AEF*. Washington, DC: Government Printing Office, 1920.
- . *My Experiences in the World War*. New York: Frederick A. Stokes Co, 1931.
- Quinn, Lawrence A. *A Critical Analysis of the Operations of the 23rd Infantry (2d Division) in the Saint Mihiel Offensive, 12th-13th September, 1918*. Fort Leavenworth, KS: The Command and General Staff School, 1933.
- Rainey, James W. "The Questionable Training of the AEF in World War I." *Parameters: Journal of the US Army War College*, 22 (Winter 1992-93): 100.
- Record Group 120. *Records of the American Expeditionary Forces, 1917-1923*. Washington, DC: National Archives.
- Scholz, Hermine, and Richard J. Sommers. *World War I Manuscripts: The World War I Survey*. Carlisle Barracks, PA: U.S. Army Military History Institute, 1986.
- Second Division Historical Section. *Records of the Second Division (Regular)*. 10 vols. Washington, DC: The Army War College, 1927.
- . *Translations. War Diaries of German Units Opposed to the Second Division (Regular) 1918*. 9 vols. Washington, DC: The Army War College, 1930.
- Senge, Peter M. *The Dance of Change: The Challenges of Sustaining Momentum in Learning Organizations*. New York: Currency/Doubleday, 1999.

- . *The Fifth Discipline: The Art and Practice of the Learning Organization*. New York: Doubleday/Currency, 1990.
- Senge, Peter M., Charlotte Roberts, Richard B. Ross, Bryan J. Smith, and Art Kleiner. *The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization*. New York: Doubleday, 1994.
- Spaulding, Oliver Lyman, and John Womack Wright. *The Second Division American Expeditionary Force in France, 1917-1919*. Nashville: The Battery Press, 1989.
- Speer, Charles E. *The 1st Battalion, 9th Infantry (2d Division) in the Aisne Marne Offensive, July 18-19, 1918 (Personal Experience)*. Fort Benning, GA: The Infantry School Advanced Course, 1930.
- Strachan, Hew. *The First World War*. New York: Penguin Books, 2005.
- . *The Oxford Illustrated History of the First World War*. Oxford: Oxford University Press, 2014.
- United States Army. *Field Service Regulation, United States Army, 1910*. Washington, DC: Government Printing Office, 1910.
- . *Field Service Regulation, United States Army, 1914: corrected to April 15, 1917*. Washington, DC: Government Printing Office, 1917.
- . *Infantry Drill Regulations (Provisional) American Expeditionary Forces, Part I-II*. Paris: E. Desfossés, 1918.
- . *Infantry Drill Regulations, United States Army, 1911*. Washington, DC: Government Printing Press, 1911.
- . *Provisional Infantry Training Manual 1918 Part I. Minimum Specifications for Trained Infantry. Part II. Training Methods. War Plans Division. August 1918*. Washington, DC: War Department, 1918.
- . *The Twenty Third United States Infantry, 1812-1945*. Pilsen: Planografia, 1945.
- . *United States Army in the World War, 1917-1919*. Washington, DC: Government Printing Office, 1948.
- . *United States Army in the World War, 1917-1919: Volume 1-17, Organization of the American Expeditionary Forces*. Washington, DC: Government Printing Office, 1948.
- United States Army Military History Institute. *The World War I Survey*. Carlisle Barracks: U.S. Army Military History Institute, 1986.

U.S. Army War College. *Notes on Recent Operations, Army War College, August, 1917.* no. 3. Washington, DC: Government Printing Office, 1917.

———. *Supplement to Instructions (Provisional) Issued January 8, 1916 on the Offensive Combat of Small Units: Edited and Prepared at the Army War College Washington, 1917.* Washington, DC: Government Printing Office, 1918.

U.S. Army War College, and Great Britain. *Instructions for the Training of Divisions for Offensive Action.* Washington, DC: Government Printing Office, 1917.

Van Every, Dale. *The A. E. F. in Battle.* New York: D. Appleton and Company, 1928.

Votaw, John F., and Duncan Anderson. *The American Expeditionary Forces in World War I.* Oxford: Osprey, 2005.

War Plans Division. Training Circular No. 12, *Combined Training of a Division.* Washington, DC: War Plans Division, 1918.