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**How did combat intelligence develop in the American Expeditionary Forces during the First
World War?**

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Chapter One

Introduction: Combat Intelligence

'The decisive factor in warfare has often been combat intelligence. It has been of major influence in every battle, campaign, and war in history, affecting the outcome of struggles between squads and armies.'¹ On 15 June 1919, in a final report on the activities of the intelligence section of the American Expeditionary Forces (AEF), Brigadier General D.E. Nolan, the head of military intelligence, recapped some of the opportunities faced and successes achieved in the First World War. The following was a particular observation that General Nolan touched upon regarding intelligence gathering:

Intelligence sections at the various headquarters were interdependent. After they had given their own commanders, staffs, and troops any information of the enemy that was received, they transmitted this information to the next higher headquarters and to adjacent units if they were concerned. In this manner a flow of information was maintained to the rear.²

This statement from General Nolan gave birth to a series of questions. How did the AEF collect, analyze, and disseminate intelligence? How did the American military train intelligence specialists in the United States and allied countries? Finally, the main research question of this dissertation: how did the AEF develop combat intelligence during the First World War?

Why is the study of combat intelligence important to the academic field of military history? This dissertation on combat intelligence will examine topics such as American leadership, organizational development, and British and French influences on training and tactical philosophy. By studying the development of the intelligence section of the AEF, the success and failure of AEF leadership were highlighted. The American army that emerged from the First World War was not the same as the one that entered. The AEF's organizational development was nothing short of profound. This dissertation examines many aspects of the intelligence section's incorporation into the modern US Army. Another important aspect from this dissertation was the British influence on the development of the AEF training manual and training of specialists. Also, a unique aspect to this dissertation was an examination of coalition warfare from an intelligence standpoint.

¹Irving Heymont, *Combat Intelligence in Modern Warfare* (Pennsylvania: The Stackpole Company, 1960), p1.

²Center of Military History, US Army, *United States Army in the World War: 1917-1919, Volume 13* (Washington D.C.: Center of Military History, 1988), p3.

This dissertation will be focused on all three types of American armies that were sent to fight in France. The three types were the regular army, the National Guard and the National Army, which was filled by draftees. For example, the US 1st Division was part of the regular army, the US 26^h Division was a National Guard unit and the 82nd Division was a National Army unit. When possible, this dissertation utilizes case study examples from these divisions or a division in one of these classifications. Focusing on combat intelligence from regular, national and draft units is an important contribution of this dissertation as it allows us to track developments from different perspectives such as career soldiers, part time soldiers and citizen-soldiers.

A Brief history

In April 1917, the United States of America declared war on Germany. The US military established the AEF and quickly built-up training camps all cross the country with British and French instructors. The allied instructors were there to share their experience of war and teach American soldiers to fight in a siege or trench warfare environment. The main American contribution to the allied war effort was manpower. One of the AEF's initial needs was the establishment of an intelligence section and intelligence specialists, as will be discussed in chapter two. An interesting point at the beginning of the American war effort was that senior army leadership viewed intelligence as a drain on manpower that was better suited for operations.³ However, by the end of the war every divisional commander in the AEF was demanding trained G-2 intelligence officers.⁴ G-2 stood for general officer two intelligence, G-3 for operations. The demand for G-2s and specialists at battalion and regimental unit level stemmed from the need to execute combat intelligence gathering task. Heymont stated that 'combat intelligence is military intelligence which is used in the planning and conduct of tactical and administrative operations.'⁵ Combat intelligence can be defined as a system that was divided into three steps: collection, analysis, and dissemination. If one step fails, the entire intelligence process will fail.⁶ Combat intelligence existed in a continuous cycle.

During the First World War, the AEF was incorporating a new section for military intelligence while fighting a war in an eighteen-month span of time. Once the AEF began conducting trench raids, the analysis of captured intelligence presented a series of challenges

³Dennis Nolan, Dennis E. Nolan Papers Box 2, March 1935, U.S. Army Heritage and Education Center, p4.

⁴Ibid, p5.

⁵Irving Heymont, *Combat Intelligence in Modern Warfare* (Pennsylvania: The Stackpole Company, 1960), p3.

⁶Department of the Army, *Department of the Army Field Manual: Combat Intelligence*, (Washington D.C.: United States Government Printing Office, February 1951), p23.

that required the AEF to develop a system to process combat intelligence. The main challenge of processing prisoners of war (POW) from the point of capture to the US army interrogation cages was that questioning POWs at the battalion and regimental unit level required uniform questions and trained linguists, as will be discussed in chapter three.

In early October 1917, the AEF began occupying trenches on the Western Front. The infantry soldiers conducted daily operations into enemy trench areas. AEF battalion sent small raiding parties every night and day to collect intelligence.⁷ The AEF needed to understand the different ways in which planning and executing trench raids functioned in industrial warfare. Trench raiding was a function that all belligerent armies had to carry out to collect intelligence. The development of trench raids challenged AEF divisional leadership to develop successful methods. The study of trench raiding will illuminate senior AEF leadership's innovative ideas for proper trench raiding, as chapter four will show.

Developing a working order of battle section was a major obstacle that AEF Intelligence Section had to overcome. The order of battle section was under the leadership of Captain Hubbard during the First World War. Under his dynamic leadership and background, a process was devised to classify enemy units and troop quality. The order of battle section's senior leadership developed and implemented a system for tracking and identifying enemy units, as will be discussed in chapter five.

The AEF needed to develop solutions to the many challenges of processing POWs. Furthermore, the challenge of finding proficient linguists who could read and speak German was an area in which the AEF had to innovate solutions by developing a process to address the captured German documents that were produced from POWs, trench raiding, and from specialists who searched dead German soldiers.⁸ The AEF needed to teach American soldiers to speak and read German; while developing the utilization of foreign-born American soldiers to aid in the intelligence process. The development of prisoner and document processing for combat intelligence was all undertaken while actively fighting on the Western Front, as will be discussed in chapter six.

The AEF faced a new type of warfare that required intelligence specialists to carry out specific tasks. American scouts, observers and snipers (SOS) were all trained and placed in AEF divisions as intelligence specialists.⁹ The AEF faced challenges in the development of SOS

⁷Shiple Thomas, *The History of the AEF* (Nashville: The Battery Press, 1920), p59.

⁸Dennis Nolan, Dennis E. Nolan Papers Box 2, March 1935, U.S. Army Heritage and Education Center, pp13-15.

⁹Great Britain, War Office, General Staff, *Scouting and Patrolling* (London: War Office, 1917), p5-6.

specialists from training to the functions and uses of SOS specialists. The AEF devoted considerable resources to training SOS specialists: if there were elite American soldiers in the First World War, it would be SOS intelligence specialists.

The US Army had a long and complicated history with American Indians as scouts. During the First World War, the role of American Indians as scouts and the influences they had on the role sheds light on their experience of war and the racial bias of the American officer corps. A strong argument could be made in favor of the AEF scout as the most important soldier in an infantry battalion. Scouts were trained to collect intelligence in no man's land, then report back to battalion command, usually adding analysis to the oral report.¹⁰ A deeper investigation into the role and influences of the AEF scout will emphasize the development of combat intelligence. Among the intelligence specialists was the American scout of the First World War, which would be trained in all three specialist roles (sniper, observer and scout).

Snipers and observers developed in their role as intelligence specialists as a response to the type of warfare being fought along the Western Front. Observers were used as artillery firing spotters among other things. Observers were used to monitor enemy movements in concealed posts. Observers were also paired with snipers, working together as a team. The AEF faced challenges in teaching the snipers how to best use their telescopic scopes. This dissertation's exploration of the role of snipers, observers and scouts will illuminate the development of combat intelligence, as chapter seven will argue.

During the First World War, the intelligence gathering section of the AEF grew into a formidable organization. Intelligence gathering included aspects such as air reconnaissance, signaling and cryptography.¹¹ These aspects of intelligence gathering are abundantly researched. This dissertation focused primarily on the aspects of intelligence gathering that have been sparsely researched. Research into the intelligence section of the AEF during the First World War is important because it demonstrates the human capacity to adapt and innovate. Studying the organization of the intelligence section will provide the reader with a new depth of understanding of the AEF in the First World War.

During the First World War the American intelligence section never achieved the same level of efficiency as the British and French intelligence sections. Yet, the AEF was able to

¹⁰Great Britain, War Office, General Staff, *Scouting and Patrolling* (London: War Office, 1917) p11-12.

¹¹Herbert O Yardley, *The American Black Chamber* (New York: Ishi Press, 1931); James Cooke, *U.S. Air Service in the Great War: 1917-1919* (Connecticut: Praeger, 1996); Rebecca Robbins Raines, *Getting the Message Through* (Washington, D.C.: Center of Military History United States Army, 2011) p165-200.

adapt and synthesize an intelligence doctrine and implement the foundation of an intelligence systems in the 18 months of participation in the First World War. There were many failures that hindered the AEF and the intelligence section. Nevertheless, at the end of the First World War, the AEF had in place an intelligence section with a solid foundation for growth and was well on its way to mastering collection, analysis and dissemination of combat intelligence at the end of 1918.

Literature review: Secondary Sources

The following literature review section will highlight how scholars have viewed the development of combat intelligence during the First World War. Combat intelligence will be broken down into three ideas -leadership, adaptation and innovation- in order to understand the developments in the historiography of First World War intelligence.

Daniel Larsen stated in his article, 'Intelligence in the First World War: The state of the Field' (2014), that 'military intelligence had a significant impact on the First World War, but research here again remains relatively limited'.¹² Larsen pointed out that intelligence could be broken down into three areas: signal intelligence (SIGINT), human intelligence (HUMINT) and counterintelligence.¹³ Larsen covered the historiography on most of the belligerent nations, but noted that most of the literature was written on the British efforts. Although Larsen wrote in 2014, it remains the case that much remains to be done on the AEF's intelligence: this dissertation will help to fill that gap. This dissertation will be analyzing the establishment of the order of battle section and linguists inside the intelligence section, which was absent from Larsen's work. Thus, it will enhance Larsen's work and contribute new scholarship to the field of First World War intelligence.

In the hundred years since the end of the First World War, there have been only a few single volume books written on the operational performance of the AEF as an organization: Shipley Thomas in 1920, Russell F. Weigley in 1967, Edward M. Coffman in 1986 and most recently David R Woodward in 2014.¹⁴ Woodward only briefly covers intelligence activity or developments. Woodward's omission of intelligence development signifies the serious gap in

¹²Daniel Larsen, 'Intelligence in the First World War: The State of the Field', *Intelligence and National Security*, Vol 29, no 2(2014), p294.

¹³*Ibid*, p283.

¹⁴Shipley Thomas, *The History of the AEF* (Nashville: The Battery Press, 1920); Russell F Weigley, *History of the United States Army* (New York: Macmillan Publishing Co, Inc, 1967); Edward Coffman, *The War to End All Wars* (Madison, Wisconsin: The University of Wisconsin Press, 1986); David R Woodward, *The American Army and the First World War* (Cambridge: Cambridge University Press, 2014).

our knowledge. Edward M. Coffman's book, *The War to End All Wars*, provides the most well-rounded operational performance assessment. Specifically, Coffman's research highlighted the operational performance of the three different American armies that were sent to France. Coffman's research examined the leadership performance of some of the National Guard divisional commanders and the overall performance of the National Army soldiers. Coffman argued that there was a lack of leadership in key positions and the length of training time some of the combat soldiers were receiving. Coffman viewed leadership from the National Guard and National Army Division negatively. The contribution of new knowledge has the potential to flip the narrative of the negative connotation of the National Guard and National Army formations performance. This dissertation will build on Coffman's content and examine what innovation came out of the three different American army formations. This dissertation will look at the same leadership and their positive contributions to intelligence development.

A deeper look into the world of American intelligence brings us to the work of James L. Gilbert, *World War I and the Origins of U.S. Military Intelligence*.¹⁵ In 2015, Gilbert published to date the most comprehensive account of intelligence activities in the American military. However, out of the 200-page book, combat intelligence was only covered sparsely. Gilbert's work tried to cover every aspect of American intelligence during the First World War. Overall, Gilbert's aim was to introduce the reader to the subject of American intelligence during the First World War. Gilbert's book would fit well in an introduction survey of military intelligence. Gilbert's book looked at another specific event concerning a fallen German Zeppelin. Gilbert's aim was telling the reader of the discovery of maps that were recovered with the documents from the wreckage. This dissertation reviewed the same event with a different lens. The discovery of German documents revealed that the Americans had no process in place to translate or even deal with enemy documentation. This same event highlighted the relationship the Americans and British shared. Ultimately, the documentation found at the wreckage proved useful to British Naval Intelligence. This dissertation argues that the documents from the German Zeppelin were the catalyst for creation of a document exploration specialist.

Intelligence education has also been the subject of a number of studies. In 1936, American Colonel, later Brigadier General, Edwin Eugene Schwien published *Combat Intelligence: Its Acquisition and Transmission* (1936).¹⁶ This was the first major study on the

¹⁵James Gilbert, *World War I and the Origins of U.S. Military Intelligence* (London: Rowman & Littlefield, 2012).

¹⁶Edwin Eugene Schwien, *Combat Intelligence Its Acquisition and Transmission* (Richmond: Garrett and Massie, 1936).

AEF perspective: Schwien's writing was based on his work as a student at the prestigious French Army War College École Supérieure de Guerre (1930-32), and then as an instructor at the Command and General Staff School at Fort Leavenworth, Kansas (1932-36). Schwien's work utilized case studies as an articulation for a continuous education service school in peacetime to prepare for war. This dissertation will look at the development of intelligence schools and training and the professionalization of intelligence as a result of these schools.

Timothy K. Nenninger's book, *The Leavenworth Schools and The Old Army Education, Professionalism, and the Officer Corps of the United States Army, 1881-1918* (1978).¹⁷ Nenninger's work sheds valuable light on the establishment of a US army officer's education school. It covered the establishment and contribution to army officer education from 1881 to the end of the First World War. Leavenworth was a sort of army graduate school, whose alumni held senior positions in the AEF during the First World War. The overall content of Nenninger's work was the foundation and formation of the Langres school and its relationship to Leavenworth. The contribution from this dissertation will examine the development of the school in Langres, France and its curriculum by focusing on the development and teaching of linguists and translators for prisoner interrogation and document exploration.

Robert T Foley's article, 'Horizontal Military Innovation: The German Army, 1916-1918' (2012), focused on German learning and innovation during the First World War; specifically, combat tactical horizontal learning between German units.¹⁸ Traditional learning was viewed from a top/down manner. Foley's article examined the innovation and culture of learning in the German army during the war. Foley examined the speed and agility of German combat tactical change. Foley also pointed out the failures of horizontal innovation, which was the short coming of strategical change. Many of the arguments put forward by Foley align with the direction of this dissertation. The language and definition of innovation and horizontal learning aids this dissertation in areas such as AEF schools, learning and its cultural environment. This dissertation will build off of Foley's work regarding American intelligence and its uses and limits of horizontal learning and innovation; how the AEF developed and implemented various learning processes. Foley's article aided this dissertation with clarity of language for innovation and learning.

¹⁷Timothy K. Nenninger, *The Leavenworth Schools and The Old Army* (West Point, Connecticut: Greenwood Press, 1978).

¹⁸Robert Foley, 'A Case Study in Horizontal Military Innovation: The German Army, 1916-1918', *Journal of Strategic Studies*, 35:6, 799-827.

Although research on the AEF intelligence has been more limited, it is important to note some of the excellent research conducted on British intelligence. A review of British intelligence literature will provide a broader understanding of AEF intelligence. Jim Beach has written the best single volume book on British intelligence during the First World War, *Haig's Intelligence GHQ and the German Army, 1916-1918* (2013).¹⁹ Beach's book looks at the British army and keeps his research to field intelligence. The book was written in two parts. The first covered the various topics within intelligence and its development and the personnel and leadership of the intelligence section. The second section of the book discussed the various major battles between 1916-1918. From a leadership and influence perspective, Beach discussed Brigadier-General Edgar W. Cox's role within the BEF intelligence section. Also, the development and impact of the British order of battle section was discussed at great length. Beach's book serves as a counterpoint of this dissertation. This dissertation will focus on the American counterpart to Brigadier-General Cox, Captain Samuel Hubbard, who was the architect of AEF's order of battle section. Similar to Beach's book, this dissertation analyzes Hubbard's role and influence throughout the AEF. An interesting research overlap concerned the British order of battle section's performance in the days leading to the 21 March 1918 Operation Michael. This overlap in research has the added benefit of tying this dissertation into the wider academic context of First World War scholarship and discussion.

Aimée Fox's book, *Learning to Fight* (2018), argued that the British army of the First World War was an organization capable of learning.²⁰ The British army had the institutional foundations to educate itself over the course of the war. It was truly a ground breaking book that unpacked the process of disseminating knowledge within the British army.²¹ Fox's book was written on the British army during the First World War; yet, her underlining ideas can be applied to this dissertation. Some of Fox's key arguments for organizational learning require some specific elements to be present within an environment to grow and innovate. Fox also discussed organizational flexibility.²² Similar to the BEF (British Expeditionary Force), the AEF had to adapt an intelligence manual and innovate concepts to fit the mixture of the American soldier's skill set, ranging from regular army to civilian soldiers. This dissertation looked at the various training schools and the training at divisional level that was flexible in nature because it was designed based on experience from within the army during the war and from the British

¹⁹Jim Beach, *Haig's Intelligence* (United Kingdom: Cambridge University Press, 2013).

²⁰Aimée Fox, *Learning to Fight* (Cambridge: Cambridge University Press, 2018).

²¹Ibid, p47.

²²Ibid, p50.

specialists who were sent to train at the American schools both in France and the United States. Fox stated that an organization's flexibility was important.²³ Throughout this dissertation, flexibility was observed because the intelligence section was literally being formed on the fly. The AEF was adapting to its environment and innovating solutions such as the creation of an army intelligence school. The establishment of an intelligence school created specialists and guaranteed a supply of soldiers that were trained in combat intelligence tasks. Similar to Fox's book, this dissertation looks at the establishment of training manuals such as the intelligence regulation and the sniper scout manuals.²⁴ The key takeaways from Fox's book were the importance of disseminating of knowledge, organizational flexibility and the various training manuals and service schools that were established to grow and adapt to the changing conditions of intelligence work. This dissertation will build on these ideas from Fox's book and use them to fill the knowledge gap that exists in development of the intelligence section of the AEF during the First World War.

Literature Review: Primary Sources

A vital source of information for this research will be found in the memoirs and diaries of soldiers from high-ranking generals and intelligence officers to the observation sergeant or private. A good example is the work of Lieutenant Colonel Walter C. Sweeney, *Military Intelligence: A New Weapon in War* (1924).²⁵ Sweeney served on the general staff as an intelligence officer and his work offered the best insider look at intelligence staff work. He contended that interpersonal relationships with other staff positions were crucial to improving efficiency, which informs the direction of this research.

Equally as important to this research was the work of Samuel Thomas Hubbard, *Memoirs of a Staff Officer: 1917–1919* (1959).²⁶ Hubbard, a commissioned officer in the AEF, was head of the Order of Battle section at GHQ, reporting directly to General D.E. Nolan. Later in the war, Hubbard served as the Director of Military Intelligence at the school in Langres, France. Hubbard provided an in-depth examination on the development of the Langres School. He was well positioned to clarify the improvements in the development of combat intelligence and specifically the order of battle section.

²³Aimee Fox, *Learning to Fight* (Cambridge: Cambridge University Press, 2018), p50.

²⁴Ibid, pp78-101.

²⁵Walter Campbell Sweeney, *Military Intelligence: A new Weapon in War* (New York: Fredrick A Stokes Company, 1924).

²⁶Samuel T Hubbard, *Memoirs of a Staff Officer 1917–1919* (Library of Congress: Cardinal Associates Incorporated, 1959).

Captain Shipley Thomas was a regimental intelligence officer in the 1st Division. Thomas's book, *S-2 in Action* (1940), was pivotal in understanding the day-to-day life of a regimental intelligence officer.²⁷ His book was a memoir of his war experience. The drawback of his book was that there are no dates and sometimes these must be inferred. His book was a key eyewitness account of how intelligence was gathered at the regimental level from a first-hand experience.

Thomas Gowenlock's *Soldiers of Darkness* (1937) lends a personal view of the experience of a divisional intelligence officer.²⁸ He wrote the summary of intelligence reports for the 1st Division, which can be verified by both the archives located at the Army Heritage and Education Center in Carlisle, Pennsylvania and at the archives in College Park, Maryland. A significant amount of the research for this dissertation utilized the summary of intelligence reports, which can be cross verified with his book.

The memoirs of General Robert Lee Bullard, Colonel George C Marshall and General Dennis Nolan were used to share their opinions on the value of battlefield intelligence and the role intelligence played in their decision making.²⁹ Arguably, the most important diary that was analyzed was that of Brigadier General D.E. Nolan, whose unpublished diary provided a bird's eye view of the battlefield intelligence landscape during First World War.³⁰ Their diaries reflected the influence that senior leadership had on the development of combat intelligence. Nolan wrote the first manual on combat intelligence.

Archival material was gathered from the Army Heritage and Education Center in Carlisle, Pennsylvania and at the archives in College Park, Maryland. The veterans' survey, which often contained memoirs or written accounts, was the most valuable piece of research material discovered at the Army Heritage archive. Divisional histories, field messages and intelligence reports at various levels were the research materials uncovered at the archives in College Park. This dissertation greatly benefited from the archival information and it added depth and authenticity to this dissertation.

The following seven chapters will assess how the AEF developed combat intelligence during the First World War. Chapter two will discuss the AEF intelligence schools: specifically,

²⁷Shipley Thomas, *S-2 In Action* (Harrisburg: The Military Service Publishing co, 1940).

²⁸Thomas Gowenlock, *Soldiers of Darkness* (New York: Doubleday, Doran & Company, Inc, 1937).

²⁹Robert Lee Bullard, *Personalities and Reminiscences of the War* (New York: Doubleday, Page & company, 1925); George Marshall, *Memoirs of my Services in the World War 1917-1918* (Boston: Houghton Mifflin Company, 1976).

³⁰Dennis Nolan, Dennis E. Nolan Papers Box 2, March 1935, U.S. Army Heritage and Education Center.

the results of establishing an intelligence school. Chapter three will discuss the process and function of combat intelligence with regard to German POWs: specifically, how POWs were moved from the battlefield to the rear area and the questioning of POWs at each command formation beginning at the battalion level and ending at the divisional level. Chapter four will discuss how the AEF innovated a variety of tactics to conduct trench raids: it will explore, what influence AEF leadership had on the development of trench raiding tactics. Chapter five will discuss the order of battle section: especially, the development and implementation of an enemy unit tracking and identification system. Chapter six will assess captured German documents: particularly, the collaborative relationship between the Allies and the influence of foreign-born Americans on the development of document exploration. Chapter seven will discuss the role of snipers, observers, and scouts, in particular, the training of American specialists and the role of American Indians as scouts for the AEF. The chapter topics will articulate an empirical approach to expand our academic understanding of how combat intelligence developed in the First World War.

It warrants repeating that in April of 1917 the US Army had no intelligence section to meet the needs of industrial style warfare that the other belligerent nations were waging. Nevertheless, in November of 1918, the AEF had a fully functional intelligence section on par with that of its allies the British and French armies. The AEF leadership and institutional education centers would be put to the test. The time has come for a full assessment of the intelligence section of the AEF during the First World War.

Chapter Two:

Intelligence Training and Dissemination.

One of the major deficiencies highlighted by American entry into the First World War was military intelligence methods. A principal concept in the development of combat intelligence was the establishment of a training curriculum. Furthermore, the introduction of a reporting system of enemy actions that was disseminated through the AEF in the form of the summary of intelligence was a venue for sharing ideas and experiences for the AEF to learn from and increase situational awareness.

Improvements in dissemination of intelligence contributed to the development of combat intelligence during the First World War. The development of combat intelligence increased due to the format of dissemination within the AEF and the establishment of a school system to teach intelligence skills. The establishment of a professional military education school would not only develop the officers and specialists within the intelligence community, but would also guarantee the continued development of combat intelligence within the United States military post-war.

This chapter will argue the following points. Firstly, the use of summary of intelligence as a tool for dissemination to all AEF soldiers and adjoining units increased situational awareness. A case study regarding phone discipline from the summary of intelligence of the 1st Infantry Division will be examined to highlight the challenges and opportunities given the technological limitations of the time period. Secondly, divisional training for intelligence soldiers developed unit cohesion and team building. Course topics included map reading and selection of proper personnel.¹ Grouping of intelligence personnel for training was an important step in developing job skills. Thirdly, the use of general orders to establish the intelligence section within the AEF. Fourthly, the school in Langres, France established a common jargon among intelligence professionals and established continuing education for the AEF. Indeed, it was often called the Leavenworth of the east because of its consistent teaching of critical thinking skills. A history of the school and the courses that were taught will demonstrate a continued professional military education.²

¹A.E.F. General Headquarters, Army School of the line, Box 1739, RG 120, Records of the American Expeditionary Forces World War I, NARA College Park, College Park, MD.

²Timothy Nenninger, *The Leavenworth Schools and the Old Army* (London: Greenwood Press, 1978), p129.

Summary of Information and Intelligence

The summary of information was the central method for disseminating any and all enemy tactical information, including unit location and identification. Schwien stated that 'the summary is designed to inform higher and adjacent units of the enemy situation on the front of a particular unit.'³ The intelligence section of the general staff was responsible for collecting, analyzing and disseminating all information on the enemy. This information included organizational strength, position, armament, equipment, and troop morale and patterns. This information allowed the intelligence section to speculate on the enemy's intention and future actions.⁴

What is dissemination? It is the spreading of military information; specifically, in the case of the summary of intelligence, the spreading or sharing of collected and analyzed intelligence. The summary of intelligence was a report that was written in a 24-hour cycle by each unit of intelligence formation beginning with the lowest to the highest units: battalion, regiment, and divisional. A review of the summary of intelligence will highlight the influence dissemination had on combat intelligence specialists and their interpretation of the information held in the report. The summary of intelligence of all AEF combat divisions contained basic facts. When the reports are read continuously, their value becomes clear. The spreading and sharing of ideas and actions within an organization such as the AEF increased awareness of the enemy's actions such as the need for communication discipline.

The number of personnel involved in collecting, analyzing and disseminating the summary of intelligence was minimal within a combat infantry division. Military intelligence existed in a continuous cycle between collection, analysis and dissemination. The collection of intelligence began at battalion level. Each combat battalion consisted of 1,000 troops and 28 officers. The intelligence section of a combat battalion consisted of 27 enlisted soldiers and one officer who was usually a captain or a first-lieutenant. These 28 soldiers comprised only 2.7% of the entire battalion combat strength. A combat infantry regiment employed 14 enlisted soldiers and one officer, usually a major, who were assigned intelligence gathering duties. A combat infantry regiment was responsible for three combat battalions. The combat strength of an

³Edwin Eugene Schwien, *Combat Intelligence Its Acquisition and Transmission* (Richmond: Garrett and Massie, 1936), p68.

⁴Center of Military History, *United States Army in the World War: 1917-1919, Vol 15* (Washington D.C.: United States Army, 1988), p207.

infantry regiment was 3,832 soldiers.⁵ A combat brigade had no official intelligence organization according to the table of organization.⁶ A combat infantry division had a total strength of 28,059 soldiers. Within this strength, only 10 soldiers were assigned intelligence duties. This included the G-2 of the division who was typically a lieutenant-colonel.⁷ The total intelligence gathering strength was 1.4% of an entire combat division. At the height of the First World War, the AEF deployed 42 divisions of which 28 saw combat.⁸ Thus, a small percentage of a combat division was detailed for intelligence gathering such as unit identification (See Appendix A, B, C).

Communication Developments

The development of intelligence communication was aided by the summary of information and code talking. Enemy interception of communication among combat units required innovative methods for them to communicate over wireless devices. On 13 April 1918, the 1st Division summary of intelligence reported that English messages could not be sent in the clear and the cipher named 'Playfair' needed to be utilized for phone or radio communication.⁹ On 30 April 1918, the old cipher codes were to be collected by the G-2 of the division. On 17 July 1918, the 1st Division issued a four-point bulletin stating the rules on communication discipline, of which three will be discussed.¹⁰ First, it was forbidden to use telephones past the command post of regiments except when permission was given by division commander. Second, telephone usage was limited. Third, English language was avoided and interpreters would be utilized. This report served two functions. First, it established that the use of English language would result in the enemy intercepting and utilizing information. Communication using ciphers was slow and use was not beneficial for rapid communication.¹¹ An intelligence report of 17 July 1918 stated that AEF divisions had to abide by the rules on communication discipline. Clearly, the most frustrating technological limitation was the lack of rapid communication.

The AEF had to operate within the technological means of the time. Similarly, the BEF relied on the same technology, the telephone, which was vulnerable to enemy detection. According to Brian Hall, the telephone was vital to the BEF; however, it was susceptible to

⁵Center of Military History, *United States Army in the World War: 1917-1919, Vol 1: Organization* (Washington, D.C., 1988), p344.

⁶John Votaw, *The American Expeditionary Forces in World War I* (United Kingdom: Osprey Publishing, 2005), p37.

⁷Center of Military History, *United States Army in the World War: 1917-1919, Vol 1: Organization* (Washington, D.C., 1988), p342.

⁸United States, War Dept. General Staff, *The War with Germany: A Statistical Summary*, 2d. ed. (Washington: Govt. print off, 1919). p32

⁹U.S. Army. 1st Infantry Division, *World War Records: First Division, A.E.F., Regular, Vol 4 part 2* (Washington, DC :1928-30), p78.

¹⁰*Ibid*, p391.

¹¹*Ibid*, p78.

shellfire and enemy interception.¹² During the closing phases of the Meuse-Argonne offensive, the 36th Infantry Division improvised an innovation using Native Americans. This had short term benefits and laid the groundwork for open communications during the Second World War. Underscoring the need for wireless communication and intelligence gathering John Keegan stated that ‘the usefulness of intelligence had been limited since the beginning of war-making by the carry of voice, range of vision and speed of message-carriers.’¹³ The 36th Infantry Division innovated a solution.

Native Americans were utilized as a work-around to the German interception of communication. In October 1918, the 142nd Infantry Regiment of the 36th Infantry Division was occupying recently abandoned German positions and needed to communicate with brigade and divisional leadership. Colonel A.W. Bloor, Regimental Commander of the 142nd Infantry Regiment, called upon the Native American Indians, of the Choctaws Nation, under his command to establish radio communication by using their native language to communicate in the clear.¹⁴ After the 36th Infantry Division’s success with sending messages in the clear, the neighboring 41st Infantry Division with the help of the 36th Infantry Division started training Cheyenne Native Americans how to use the telephone and send messages in the clear.¹⁵ These units learning from one another is an example of horizontal innovation.¹⁶ The innovative adaptation of Native American code talkers provided the 36th Infantry Division a means of rapid communication which not only held intelligence gathering value, but allowed for an increase of collection and dissemination capacity. The dissemination of the summary of intelligence reports of the 1st Division aided the 36th Infantry Division to innovate a solution to send communication in the clear.

Equally as important as the innovation of using the Choctaw Nation soldiers for code talking was the follow up by the officers of the 142nd Infantry Regiment to establish a school after being pulled from the frontlines. In the small town of Louppy-le-petit, France and under direct orders from the divisional G-2, Lieutenant Temple Black opened a training school with about twenty-one Choctaw students.¹⁷ The goal of the school was to establish Choctaw nation

¹²Brian Hall, *Communications and the British Operations on the Western Front, 1914-1918* (Cambridge: Cambridge University Press, 2017), p94.

¹³John Keegan, *Intelligence in War* (New York: Alfred A Knopf, 2003), p99.

¹⁴Thomas Britten, *American Indians in World War* (Albuquerque: University of New Mexico Press, 1997), p106.

¹⁵Ibid, p106.

¹⁶Robert Foley, ‘A Case Study in Horizontal Military Innovation: The German Army, 1916-1918’, *Journal of Strategic Studies*, 35:6, 799-827, p803.

¹⁷William Meadows, *The First Code Talkers* (Norman: University of Oklahoma Press, 2021), pp85,104.

words for military terminology and to train more Choctaw Nation soldiers how to use and communicate over the radio.

The formation of a written training curriculum for code talker terminology was massively important because it established several different long-term army institutions. The US Army would grow its secure communications from this point on. This technology would evolve to its present form of cyber security. The linguist school that was created still operates in the US today. While some of the terminology Lt. Black formulated was simple, others were more complex. It should be noted that this was all spoken in the Choctaw language. Terminology such as 'field artillery = big gun' and '1st battalion = one grain of corn' and 'patrol = many scouts'.¹⁸ Ultimately, the effort of Lt. Black was never put to use in the First World War. However, it did pave the way for code talker schools to be established for the Second World War.¹⁹

The value of dissemination of intelligence and information throughout the AEF was key. While the knowledge of communication discipline was written by the 1st Division, the 36th Division benefited from this and produced a solution. As we observed in this example, the 36th Infantry Division used Native American code talkers. The resulting benefits from rapid communication had tremendous value for combat intelligence such as unit identification and troop and artillery movement. The ability to disseminate reports throughout the AEF was important to the development of combat intelligence because enemy activities such as communication interception were identified and solutions were produced.

The key point to take away from this section was that the function of the summaries of information and intelligence reports was to increase situational awareness of enemy activities. The number of specialists involved in the collection, analysis and dissemination of summary reports was minimal. The small number of code talkers showed the importance of the formation of a back bench of intelligence code talkers.²⁰ This necessity lends contexts to the requirement for divisional training and the Langres school, which will be explored in later sections.

Divisional School

The establishment of a training curriculum was a vital step for consistency within the AEF intelligence section. Hands on training of enlisted soldiers was invaluable to the AEF due to

¹⁸William Meadows, *The First Code Talkers* (Norman: University of Oklahoma Press, 2021), p105.

¹⁹*Ibid*, pp251-252.

²⁰*Ibid*, p85.

the limited amount of time during combat operations. On 31 December 1917, Colonel Campbell King, Chief of Staff of the 1st Division, sent a memorandum out to all the unit commanders of 1st Division requesting the commanders to select the best qualified soldiers to become intelligence personnel. King was a 1905 Leavenworth graduate and a 1911 Army War College graduate. He understood the value of continuing education and personal development. The memorandum also stated that intelligence personnel would have no other duty than to collect, analyze and disseminate intelligence.²¹ This was the first of many memoranda that established an in-house training capacity for all intelligence personnel. A follow up memorandum dated the same day, stated that the first class would begin on 3 January 1918 and would end on the 7th. Thus, investment in combat intelligence schools for specialists was a key part of the development of intelligence.²² Principal the establishment of divisional training of intelligence specialist would result in long-term sustainability.

The grouping of intelligence personnel as a single unit was important for unit cohesion. On 4 January 1918, the next memorandum for the establishment of an enlisted specialist divisional intelligence curriculum was published. The memorandum outlined three main points. First, unit commanders must submit in writing a valid reason for dismissal of intelligence personnel to the next higher-level command. This was a clear sign that the AEF was investing serious resources into the development of an intelligence organization and its personnel.²³ The second point outlined in the memorandum was that unit commanders were to select the best qualified candidate for future divisional training classes. The third point was that battalion, regimental and divisional intelligence personnel were to live, train and work together as a unit.²⁴ This point may at first seem insignificant, but this was a major development. Training intelligence personnel together established unit cohesion and continuous development which increased team building. This was absolutely vital for mission success and the continuous development of combat intelligence. A memorandum issued on 10 July 1918 from 1st Division G-2 outlined further unit integration. 'The Scout Platoon of each battalion, consisting of the present authorized intelligence personnel, and including scouts, snipers, and observers', the memorandum explained, 'will be billeted together at such place as the battalion commander may direct, and

²¹U.S. Army. 1st Infantry Division, *World War Records: First Division, A.E.F., Regular, Vol 4 part 2* (Washington, DC :1928-30), pp7-8.

²²Ibid, pp7-8.

²³Ibid, p10.

²⁴Ibid, p10.

will be attached for rations to the organization most convenient to their billets'.²⁵ This was further evidence of an organization developing strong structural foundations.

The more time and resources devoted to the establishment of the divisional training curriculum, the firmer the organizational structure of combat intelligence developed. Divisional courses taught soldiers skills that the AEF needed immediately such as map reading and scouting. From 17 May to 18 June 1918, the G-2 of the 82nd Division issued memoranda on training of intelligence personnel. These contained the subjects to be covered, including brigade, regiment and battalion unit topics. The majority of training at regiment and battalion level centered on scouts, observers and snipers (S.O.S). The focus on these three intelligence positions demonstrated the importance of the job function associated with them and the emphasis the AEF placed on the development of combat intelligence.²⁶

The battalion level training was specifically geared to train aspects of combat intelligence such as collection, analysis and dissemination. The curriculum was delivered in a hands-on manner. The topics were: proficiency in infantry weapons, reporting and messaging, the use of compasses, knowledge of the enemy, signaling, camouflage, understanding the meaning of enemy movement, and topography sketching. The curriculum for the scouts covered topics such as conduct in no man's land and patrolling.²⁷ Observers were taught the use of tools and equipment such as field glasses and how to establish and maintain an observation post. Snipers were taught how to shoot, the use of scopes, and the use of camouflage in a sniper post. Clearly, significant resources and time was devoted to establish and implement the curriculum. This created a reserve of trained intelligence specialist. The AEF clearly understood that investment in intelligence specialist equaled suitability.

General Orders and the establishment of the Intelligence section

The official history of the AEF was written in 19 volumes. Volume 16 presented all the General Orders issued from its initial formation to its final order before being decommissioned, as an organization. The development of combat intelligence begins with the official order which established the section within the military organization of the AEF. A review of a few general orders that were issued throughout the war will clarify the position of the intelligence section. On 26 May 1917 General Pershing received orders from the Secretary of War that outlined that he

²⁵Ibid, p384.

²⁶Records of Combat Divisions 1917-1919 82nd Division, Box 1, Arc Id 301641, RG 120, Records of the American Expeditionary Forces (World War I), NARA College Park, College Park, MD.

²⁷A.E.F. General Headquarters, Army School of the line, Box 1737, RG 120, Records of the American Expeditionary Forces World War I, NARA College Park, College Park, MD.

proceed to Paris, France via England with the necessary staff.²⁸ The point here was with the necessary staff. An organization without people was just orders on a paper. That same day General Pershing issued 'General Order number one' which stated that 'Pursuant to the orders of the President, the undersigned assumes command of the American Expeditionary Forces.'²⁹ This order was important for multiple reasons. First, it established the AEF, its commander as Pershing, and members of the general staff. One of these officers appointed to the general staff was Major Denis E. Nolan, head of AEF intelligence throughout the war.³⁰ 'General Order number eight' was issued on 5 July 1917 from AEF HQ in France. 'General Order number eight' displayed the 'distribution of staff duties and the Headquarters.'³¹ Both orders were signed by James G. Harbord, Chief of Staff. The General Staff positions were as follows: G-1 Administrative, G-2 Intelligence, G-3 Operations, G-4 supply, and G-5 Training.³² 'General Order number one and eight' can be seen as the first movement in the development of combat intelligence because they establish the section and names its commanding officer Nolan.

There are two more General Orders that were issued that will continue to cement the development of the intelligence section. 'General Order number nine', issued on 15 January 1918, established an army corps, and listed the staff positions and officers that would command them.³³ While it would take some time for the AEF to operate at corps formation level, the importance was the creation of the intelligence position that would serve to function the AEF in all matters of collection, analysis, and dissemination of combat intelligence. This would eventually place the AEF on equal footing with the other allied armies. 'General Order number 130' was issued on 6 August 1918.³⁴ The last line of this order was as follows: 'The Army intelligence School is established at Langres for the instruction of regimental intelligence officers and assistant intelligence officers or armies, army corps and divisions.'³⁵ If 'General Order number eight' gave birth to the intelligence section, then 'General Order number 130' was the paradigm shift which would enable the intelligence section to become self-sufficient and continue to develop within the AEF and beyond. The issuing of 'General Order number 8' established the intelligence section and continued its development with 'General Order number 130', which demonstrated institutional development. The issuing of official orders were principal

²⁸John J. Pershing, *My Experience in the First World War* (New York: Da Capo Press, 1995), p39.

²⁹Center of Military History, *United States Army in the World War, Vol 16* (Washington D.C.: United States Army, 1988), p1.

³⁰*Ibid*, p1.

³¹*Ibid*, p13.

³²*Ibid*, p13.

³³*Ibid*, p166.

³⁴*Ibid*, p408.

³⁵*Ibid*, p409.

indicators of development. The general orders were an organic function of the AEF which documents the official growth of the intelligence section. Pre-war manuals were another institutional development for the intelligence section, which will be properly analyzed next.

Langres School

A combat intelligence school was established for the professionalization of intelligence officers and specialists in the AEF. On 13 July 1918, General Nolan sent a memorandum to the Chief of Staff of the AEF outlining the need for the establishment of an intelligence school.³⁶ Within one month, the army intelligence school was established on 6 August 1918.³⁷ This was the birth of American professional military intelligence. Nolan outlined that the facility could accommodate 50 students in class rooms and billets. Altogether the school graduated 138 students and the last group finished in December 1918.³⁸ The school was named after its location, which was Langres, France. Langres school was important because it taught officers and specialists how to think critically and utilize problem-solving skills. The creation of the Langres school was an innovation in itself, which supported a culture of learning that was a key development for combat intelligence.³⁹

On 4 August 1918, the following officers arrived at Langres as intelligence instructors: Major Thom Catron, Captain S.T. Hubbard, Lieutenant Basset, Lieutenant D.H. McGibney, Lieutenant J.H. Marsching, Lieutenant Frank E. Mason, Colonel Howell and Lieutenant Colonel Conger. Conger and Howell would lecture on topics that were outside the written curricula, such as new tactics and counterintelligence.⁴⁰ Captain Hubbard's role prior to this appointment was head of the order of battle section of the AEF.⁴¹ Lieutenant Marsching was also a graduate of the British intelligence school in Harrow, UK.⁴²

The Langres school's curriculum was based on the curriculum at Leavenworth school in Leavenworth, Kansas. Leavenworth was the US Army's professional development school. To

³⁶A.E.F. General Headquarters, Army School of the line, Box 1739, RG 120, Records of the American Expeditionary Forces World War I, NARA College Park, College Park, MD.

³⁷Samuel Hubbard, *Memoirs of a Staff Officer 1917-1919*, (Washington D.C.: Cardinal Associates Incorporated, 1959) p245.

³⁸A.E.F. General Headquarters, Army School of the line, Box 1739, RG 120, Records of the American Expeditionary Forces World War I, NARA College Park, College Park, MD.

³⁹Robert Foley, 'A Case Study in Horizontal Military Innovation: The German Army, 1916-1918', *Journal of strategic Studies*, 35:6, 799-827, p816.

⁴⁰A.E.F. General Headquarters, Army School of the line, Box 1738, RG 120, Records of the American Expeditionary Forces World War I, NARA College Park, College Park, MD.

⁴¹Samuel Hubbard, *Memoirs of a Staff Officer 1917-1919*, (Washington D.C.: Cardinal Associates Incorporated, 1959) p241.

⁴²A.E.F. General Headquarters, Army School of the line, Box 1737, RG 120, Records of the American Expeditionary Forces World War I, NARA College Park, College Park, MD.

underline the influence that Leavenworth had on the AEF and the establishment of the Langres school, a brief review of the school formation and unit commanders will be required. Out of the 28 active combat divisions of the AEF, five of the divisional commanding officers, 59 brigade positions, and 177 regimental command positions were filled by Leavenworth graduates.⁴³ Furthermore, the classrooms and training were set up simulate a general staff. Problem solving and critical thinking skills were at the root of all the activities. This form of teaching had a very important effects: students had an understanding of the doctrine, strategy, tactics, and intelligence. Fellow graduates had a common jargon and a clear understanding that helped to improve efficiency.⁴⁴ The AEF never had a deficiency of manpower. However, it did have a lack of professionally trained intelligence officers. The establishment of the Langres school under the Leavenworth model would close this gap, a necessary step in the continued development of combat intelligence. Principally, the goal for the Langres school of intelligence was to create a reserve of professionals, along the same lines as the divisional training schools for intelligence specialists. Now that the model of the Langres School has been established, the curriculum will be explored.

The Langres curriculum consisted of these main subjects: German army organization and battle order, the interrogation of prisoners and exploration of documents, divisional, regimental and branch intelligence, and interpretation of airplane photographs.⁴⁵ However, for the purpose of this chapter, only three aspects of the curriculum will be analyzed: the interrogation of prisoners and exploration of documents, and divisional topics. These three topics will be analyzed because they are a recurring theme throughout this dissertation. The POW and documents portions of the curriculum focused on building foreign language proficiency.⁴⁶ The divisional portion of the curriculum focused on training intelligence personnel under the G-2 of an infantry division. The emphasis on these topics highlighted the deficiency in trained specialists and further underscored the need for professionalization of intelligence.

The development of foreign language classes was the next innovation in the development of translators for combat intelligence. One of the classes taught at Langres covered the role of the military linguist. Yet, only two full classes underwent training before the

⁴³Timothy Nenner, *The Leavenworth Schools and the Old Army: Education, Professionalism, and the Officer Corps of the United States Army, 1881-1918* (Connecticut: Greenwood Press, 1978), p140.

⁴⁴Ibid, pp137-138.

⁴⁵A.E.F. General Headquarters, Army School of the line, Box 1737, RG 120, Records of the American Expeditionary Forces World War I, NARA II College Park, College Park, MD.

⁴⁶Ibid.

First World War ended.⁴⁷ This was only the beginning of the heritage of training American soldiers to become linguists and read foreign documents. To this very day the US military trains thousands of soldiers in a wide field of language and digital translations. However, the language school ended in December 1918.⁴⁸ The need to train linguists for the AEF in the First World War resulted in the establishment of a language school for the American military. Many years after the First World War, retired Lieutenant Colonel Richard Riccardelli said, regarding the priority of training soldiers to be linguists: 'Knowledge of foreign languages, obviously, has become an indispensable side arm to the modern soldier, a weapon upon which not only his mission, but his life may very well depend'.⁴⁹

The time and resources devoted to foreign language proficiency becomes evident by viewing the curriculum of the second class's schedule. From 21 to 26 October 1918, class schedules showed four hours daily devoted to learning German both written and spoken.⁵⁰ In one week, 20 hours was devoted to foreign language proficiency. This illustrated the AEF's establishment of a standard of language proficiency.⁵¹ Students were required to converse fluently and read German.⁵² Also, they were required to translate German back into military English.⁵³

POW interrogation in a class room setting was a method used to teach intelligence personnel and supplied them with hands-on training to supplement the curriculum. Each week for the duration of the intelligence school, 25 German POWs were sent to the school for the students to conduct interrogations.⁵⁴ American officers were sent to the Army level holding cages to learn hands-on skills. These skills included massive management of over 800 POWs, first-time interrogations of newly captured Germans and exploration of any documents that were available.⁵⁵ Overall, the academic setting combined with hands-on practice illustrated the commitment of AEF's curriculum. The AEF needed linguists. Combat intelligence was therefore

⁴⁷James Doty III, 'Allied Experience and American Expeditionary Forces School: Gathering Intelligence Knowledge for the Army Intelligence School, Langres, France.' Thesis (Ohio State University: 2005), p3.

⁴⁸Timothy Nenninger, *The Leavenworth Schools and the Old Army: Education, Professionalism, and the Officer Corps of the United States Army, 1881-1918* (Connecticut: Greenwood Press, 1978), p137.

⁴⁹Lieutenant Colonel Richard Riccardelli, 'The Linguist Paradigm', *Military Intelligence* (United States Army Intelligence Center & School: Ft. Huachuca, Az, 1977-1993, p16.

⁵⁰A.E.F. General Headquarters, Army School of the line, Box 1737, RG 120, Records of the American Expeditionary Forces World War I, NARA II College Park, College Park, MD.

⁵¹Irving Heymont, *Combat Intelligence in Modern Warfare* (Pennsylvania: The Stackpole Company, 1960), p 105

⁵²A.E.F. General Headquarters, Army School of the line, Box 1737, RG 120, Records of the American Expeditionary Forces World War I, NARA College Park, College Park, MD.

⁵³Ibid.

⁵⁴Ibid.

⁵⁵Ibid.

greatly improved due to the development of a foreign language profession. The divisional portion of the curriculum also fostered an academic focus on self-sufficiency.

Divisional training at Langres was structured to create subject matter experts and provided American officers with the academic ability to be self-sufficient instructors. The divisional training was centered around the development of the G-2, which was the highest intelligence staff position in an American infantry division. The planning and supervising of training were a key concept to the development of combat intelligence because it created a bench of enlisted soldiers to execute the job functions of the intelligence personnel.⁵⁶ The divisional training was covered in a problem-solving scenario. One example would be the proper procedure for battalion observation post establishment.⁵⁷ Observation specialists were taught where to place and conceal an observation post.⁵⁸ The general duties of the divisional, regimental and battalion intelligence officers were covered at Langres. The curriculum even covered how to work out effective divisional training schedules. The subject matter covered in division training was detailed and influenced by the AEF's intelligence experiences.

The establishment of the Langres school of intelligence was a principal stage in the development of combat intelligence because it created a pathway for professional intelligence officers to become subject matter experts. This was a step towards the development of instructors. The school included a robust curriculum for linguists to learn German. The portion of the curriculum that focused on divisional training created a profession that the intelligence officers and instructors could teach to the enlisted soldiers within an American combat division. The establishment of a professional intelligence curriculum and the creation of subject matter experts would have helped to ensure longevity for combat intelligence if the war had continued into 1919 or even 1920.

Conclusion

This chapter highlighted the importance of the training of enlisted intelligence specialist officers and the establishment of an intelligence school. The summary of intelligence report was a valuable aid to disseminate ideas and to standardize procedures. The establishment of a specialist curriculum and the establishment of an army intelligence school created a professionalization of combat intelligence.

⁵⁶Irving Heymont, *Combat Intelligence in Modern Warfare* (Pennsylvania: The Stackpole Company, 1960), p104.

⁵⁷A.E.F. General Headquarters, Army School of the line, Box 1737, RG 120, Records of the American Expeditionary Forces World War I, NARA College Park, College Park, MD.

⁵⁸World War I Veterans Survey, 1st Division, Field Artillery Regiments, Army War College, Carlisle, Pa.

The function of the summaries of information and intelligence was to provide a written account of German movements and activities. Principally the sustainability of the professionalization of intelligence specialist was a key point in the development of combat intelligence.

The ability to share and raise situational awareness in the form of reports such as the summary of intelligence aided the AEF's combat divisions by sharing what was known of the enemy. The benefit from rapid communication had tremendous value for combat intelligence such as unit identification and troop and artillery movement. The ability to disseminate challenges and solutions to problems throughout the AEF in report form was important to the development of combat intelligence because enemy methods such as communication interception were identified, and solutions were produced.

This chapter also highlighted the importance of establishing a training curriculum. The overall goal of the AEF was to build a bench of intelligence specialist personnel. Also, the integration of intelligence personnel such as battalion scouts were important steps in the development of combat intelligence. The long-term commitment of training at the divisional level was a key indicator to the longevity the AEF envisioned for combat intelligence.

Reviewing the issuing of general orders from the AEF outlined the documentation of organic growth of the intelligence section from official orders. The intelligence school would provide the intelligence section with a self-sufficient capacity for continuing function.

The Langres school of intelligence was a principal component for the development of combat intelligence because it created a pathway for professional intelligence officers to become subject matter experts. The establishment of a professional intelligence curriculum and the creation of subject matter experts guaranteed longevity and sustainability for combat intelligence in the First World War.

Chapter Three:

Prisoners of War

One of the many challenges faced by the AEF's intelligence section during the First World War was how to process German prisoners of war (POW). Interrogations of POWs were a priority that all belligerent armies' intelligence personnel pursued. The massive numbers of prisoner of war interrogations of German soldiers were a new experience for the AEF. Unlike the American Civil War, POW interrogations in the First World War were on a large scale and had a language barrier. Understanding the process of POW interrogations from a collection, analysis and dissemination standpoint will strengthen our knowledge of the development of combat intelligence in the AEF.

This chapter will examine four main points. Firstly, it will look at American pre-war intelligence training manuals and international agreements on the handling of POWs. Secondly, it will examine how the intelligence section collected POWs: specifically, how POWs were interrogated and how they were moved from the battlefield to the interrogation cages in the rear areas. Thirdly, it will explain how information from POWs was analyzed: specifically, the length of POWs interrogation and analysis of items collected from POWs as they were interrogated. Fourthly, the chapter will look at the dissemination of informal and formal POW information.

AEF combat intelligence activities centered around the collection, analysis, and dissemination of POW information. The case studies in this chapter will highlight collection, analysis, and dissemination to demonstrate how each activity functioned. This chapter will argue the necessary innovations and adaptations that the AEF had to undergo to establish a system for managing enemy POWs.

Pre-war Intelligence Training

In 1893, American army Colonel Arthur L. Wagner wrote 'The Service of Security and Information' (SSI).¹ The manual was meant to be an instructional manual for the infantry with historical examples to supplement each point. Wagner had a long army career and had the hands-on experience to write the 'SSI'. The section of the 'SSI' dealing with captured prisoners stated that 'prisoners are a most valuable source of information'.² It highlighted the need to interrogate the prisoner on the spot to verify any tactical information available. Time was the

¹Arthur L. Wagner, *The Service of Security and Information*. 11th ed. (Kansas City: Hudson-Kimberly Pub. Co, 1903), p11.

ultimate enemy. As more time passed the prisoner's resolve may strengthen. Time management in POW interrogation was therefore an important concept that carried on into the First World War. Wagner's text was updated again in 1896 and 1903. The manual was one of only two manuals that intelligence personnel had at the start of the First World War.

The 'Hague Convention' was signed on 18 May 1899, of which the United States, Germany, Russia, France and Great Britain were among the signatories. While this document was written to establish rules and the ethics of conducting warfare, there was a specific section covering POWs, which the United States incorporated into its intelligence operational functions. This was known as 'Special Regulation No. 62' and was published 29 March 1917.³ 'Special Regulation No. 62' established the procedure for managing POWs. In particular, it explained how to move POWs out of the shelling area of up to 12km from the front battle area and provide temporary shelter as POWs transition from combat soldiers into captivity. POWs being less than 12km from the front line of the battlefield was a violation of the 'Hague Convention'.⁴

In June 1917, the US War Department issued a much smaller supplement to Wagner's text to highlight the critical areas that Wagner touched upon. 'Instructions on the Research and Study of Information 1917' (IRSI) was more of a technical orientated text. The section covering POWs merely stated that prisoners were a source of information.⁵ Intelligence personnel being deployed to the Western Front had the 'SSI' and 'IRSI' to help with their job function and expectations. The 'IRSI' and 'ISS' manuals represented the only established procedure for managing enemy POWs. A significant point was the lack of institutional direction on the subject of foreign language, reading, writing or conversational. The AEF would have to develop these as we saw in the last chapter.

After reviewing the contribution from the 'ISS' and 'IRSI' and the influence of the Hague Convention, the AEF Chief of Intelligence Major (later Brigadier General) Dennis Nolan, set about publishing a definitive manual called 'Intelligence Regulations', dated 31 August 1917 (IR17).⁶ The 'Intelligence Regulation' manual was the governing manual of how intelligence operations processed the collection and handling of POWs among other things. It would be

³G. Glover Lewis, *History of Prisoner of War Utilization by the United States Army, 1776-1945*, Fascim. ed., 1982, 1988 (Washington, D.C.: Center of Military History, U.S. Army), p51.

⁴Heather Jones, *Violence against Prisoners of War in the First World War*, (New York: Cambridge University Press, 2011), p145.

⁵United States, War Dept. General Staff, *Instructions on the Research and Study of Information 1917* (Washington:1917), p7

⁶The Army War College Barracks in Carlisle, Pennsylvania. *Intelligence Regulations*. General Headquarters American Expeditionary Forces Papers: Second Section Reports and Regulations,1914-1918. Box 11 of 26.

revised twice more before the signing of the Treaty of Versailles. After spending a few weeks with French and British intelligence personnel, General Nolan borrowed aspects from both Allies and set forth a hybrid manual of both, relying heavily upon the British intelligence operations structure.⁷

Collection

Information from German prisoners was analyzed in three different unit formation points: battalion, regimental and divisional collection points. The collection of information from interrogation had tactical importance at each level. At battalion level, the main information sought was enemy unit identification. At regimental level, intelligence officers were concerned with the main line of resistance (MLR). The main line of resistance was the center of a unit or formation's strong point. The divisional level focused on the number of soldiers in their immediate formation, morale of the troops, and time in line including questions of troop movement.⁸

The first phase of prisoner processing began at the battalion level. Captured German soldiers were stripped of their weaponry. This operation was conducted under the watchful eye of the battalion intelligence officer (S-2). The presence of an intelligence officer also prevented enlisted infantry soldiers from potentially stealing objects or information from the German POWs. The S-2 was also a company grade officer with the rank of 1st Lieutenant.⁹ The prisoner's weapons were quickly looked over for any tactical changes such as modifications to the rifle or scope. If none were found, the weapons were sent to a specifically designated salvage depot area. The 1st Lieutenant had a staff of 27 enlisted personnel to help carry out intelligence gathering functions.¹⁰ However, if the weapons were found to have any interesting or unknown value, they would be sent along with the prisoner all the way to army level interrogation. The battalion officer would establish the prisoner's unit and any pressing local tactical questions, such as location of capturer with a map grid reference. The most important question that the battalion level S-2 could collect was that of unit identification or order of battle. The S-2s were concerned with the immediate frontage of their battalion and identification of the

⁷James Gilbert, *World War I and the Origins of U.S. Military Intelligence* (London: Rowman & Littlefield, 2012), p57.

⁸The Army War College Barracks in Carlisle, Pennsylvania. *Intelligence Regulations*. General Headquarters American Expeditionary Forces Papers: Second Section Reports and Regulations, 1914-1918. Box 11 of 26.

⁹Center of Military History, *United States Army in the World War, 1917-1919: Vol 1 Organization of the American Expeditionary Forces* (Washington, D.C.: United States Army, 1988), p290.

¹⁰The Army War College Barracks in Carlisle, Pennsylvania. *Intelligence Regulations*. General Headquarters American Expeditionary Forces Papers: Second Section Reports and Regulations, 1914-1918. Box 11 of 26.

enemy unit across no man's land. This and any observations made by the battalion officer would be sent with the prisoner to the regimental officer.

The second phase was the transfer from battalion headquarters to regiment headquarters. The transfer began with enemy officers and enlisted soldiers being separated. Furthermore, prisoners would be separated along ethnic lines, and even further if any of them was a deserter.¹¹ 'Intelligence Regulations 1917' (IR17) further stated that prisoners of high value (such as specialists in gas, tanks, mining, aviation and high-ranking officers) were to be moved to army level cages with the greatest haste. The 'IR17' also stated that the regiment intelligence officer's responsibility was to briefly interrogate the prisoners for tactical information such as the main line of resistance, then hand the prisoner over to the military police (MP) for transfer to division intelligence personnel (G-2).¹² Regiment intelligence (RI) was staffed by a captain, with a dedicated staff of 15 enlisted personnel to help control the flow of prisoner information coming from three battalions under regimental command.¹³ One of the Regiment intelligence staff was educated in the language of the enemy or was a natural born speaker. Intelligence staff educated in the written form of German language will be covered more extensively in chapter six: captured German documents.

The collection of prisoner information during combat was chaotic at best. Captain Shipley Thomas of the 1st Division, 28th Infantry Regiment, AEF, had this to say about collecting information from prisoners:

Four enemy prisoners are marched in by a triumphant private with a pistol in his left hand his right hand swathed in a blood-soaked bandage. Before you know what is happening, the sergeant of medical Corps has the wounded in process, and your sergeant is working on the four prisoners. You are talking with the wounded sergeant. Your interpreter sergeant hands you a paper. "Third Company, 186th Infantry, Captain J., here for three days, completely surprised, two battalion in line, third in reserve. Main line of resistance (MLR) about a mile back front. 97th F.A. supporting."¹⁴

This statement shows how intelligence was sometimes gathered. The intelligence collected often contained the enemy unit identification, the number of days on the firing line, the names of

¹¹Terrence Finnegan, 'The Origins of Modern Intelligence, Surveillance, and Reconnaissance.' *Journal of the American Intelligence Professional*. Vol 53 Number 4 (Dec 2009), p29.

¹²The Army War College Barracks in Carlisle, Pennsylvania. *Intelligence Regulations*. General Headquarters American Expeditionary Forces Papers: Second Section Reports and Regulations, 1914-1918. Box 11 of 26.

¹³ibid.

¹⁴Shipley Thomas, *S-2 In Action* (Pennsylvania: The Military service publishing co, 1940), p78.

the prisoners and the MLR. The intelligence that was gathered from this statement was the main concern and most important function of the American regimental intelligence officer. Furthermore, the statement showed the chaos of prisoner interrogation at the regimental level. There was minimal time to support interrogation. While interrogations were being conducted, soldiers' adrenaline was high due to just returning from battle and there were wounded to care for.

The third phase was divisional collection. Division intelligence (G-2) was where the first detailed interrogation took place for the captured prisoner. All tactical information for the division's front would be collected.¹⁵ The division G-2 was most concerned with the effectiveness of the unit that held position across its own front. The G-2's focus was comprised of questions such as the orientation of the battalions or companies, and the number of soldiers. The information collected along with the 12 battalions and 4 infantry regiments would supply the divisional G-2 with a detailed operational intelligence picture allowing the most accurate collection of tactical information to be sent to corps and army level interrogators to process all the collected tactical combat intelligence.

An example of the whole process of collection of information in a timely manner can be examined from the 82nd All American Division. On 8 October 1918, phase II of the Argonne offensive was a bloody affair which saw the AEF making headway in mobile warfare. Sergeant Alvin York with the aid of seven wounded soldiers of Company G, 2nd Battalion of the 328th Infantry Regiment found themselves in possession of a large number of enemy prisoners and three officers, including one Major. Following the regulations, York transferred the POWs to the intelligence officer Lieutenant Woods at the 328th Regimental Headquarters at Chatel Cheherry. Woods said "Sergeant York I see you have captured the whole German army", to which York simply replied "only 132".¹⁶ The tactical value of the major and large number of enlisted soldiers forced York to escort the prisoners all the way to the 82nd Divisional intelligence officer. This took York 24 hours to ensure that the captured major's interrogation was conducted as quickly as possible in order to collect all tactical information.

Prisoner interrogation at the corps and army level began to depart from immediate tactical information to more operational and strategic level information. The army cages were

¹⁵The Army War College Barracks in Carlisle, Pennsylvania. *Intelligence Regulations*. General Headquarters American Expeditionary Forces Papers: Second Section Reports and Regulations, 1914-1918. Box 11 of 26.

¹⁶Richard Wheeler (Ed), *Sergeant York and the Great War: His own Life Story and War Diary*. (San Antonio, Tx: The Vision Forum, 2004), p166.

the last stop for prisoner's interrogations until they were sent to POW camps until the end of the war. Army level interrogators separated the prisoners by rank to interview them on an individual basis.¹⁷ This method provided the interrogators with an in-depth collection process. The intelligence that was collected here was sent to AEF Headquarters for review by the assistant intelligence officers working under the Chief of Intelligence, Brigadier General Nolan. Before Nolan received any reports on the information that was collected, information was cross verified by other divisions' intelligence. Analysis of the intelligence which was collected was the second function in the process of interrogation of prisoners.

Analysis

The 'Intelligence Regulations' of 1917 stressed a recurring theme, which was the need for the intelligence officer to be ready to answer any tactical question posed to them from their immediate commander.¹⁸ The analysis of collected prisoner information was best understood in two steps. The first step was the questions posed to the enemy POWs and their meaning. Second was examples of information analyzed from prisoner interrogations and the strengths and weaknesses of enemy intelligence. The function of analyzing data from POW interrogations was an exercise in verifying information, then cross verifying, and having the ability to execute judgment calls.¹⁹

POWs were more susceptible to divulging information when they had just been captured.²⁰ The structure of the questions that were posed to the prisoners had a very specific format to allow consistent results from each question. Examples of the questions asked were as follows: where is your unit's main line of resistance? what is your unit? And how many rifles do you have in your unit?²¹ Prior to reaching the division G-2 officer, the structure of the questions was set to a specific response instead of open-ended questions such as order of battle and the mainline of resistance position. As we have seen in the previous section, battalion and regimental formations were concerned with the narrowest tactical information. However, not all interrogations were conducted under ideal conditions. Sometimes interrogations would occur

¹⁷John Parish, 'Intelligence Work at First Army Headquarters.' *The Historical Outlook*, Vol XI Number 6 p213-217 (June 1920), p215.

¹⁸The Army War College Barracks in Carlisle, Pennsylvania. General Headquarters American Expeditionary Force Box 11 of 26. Intelligence Regulation 1917.

¹⁹John Parish, 'Intelligence Work at First Army Headquarters.' *The Historical Outlook*, Vol XI Number 6 p213-217 (June 1920), p215.

²⁰Thomas Gowenlock, *Soldiers of Darkness* (New York: Doubleday, Doran, & company, Inc., 1937), p113.

²¹Military Intelligence Reports 1918-1932, Camp Harry J. Jones, Arizona, Box 2, RG 1394, U.S. Army Continental Commands, 1920-42, NARA College Park, College Park, MD.

during a pitched battle or defending against an attack. When questioning a prisoner, a point of reference was a good tool to start the conversation or a point on which both parties could agree. Having the prisoner's pay book was a great place to start a conversation.²² Making the soldier comfortable could produce actionable intelligence. Also, having aerial photographs of specific placements or trench lines or having maps with grid references were also useful in developing a picture of German defensive positions (See Appendix D).

The following case study example illustrated an American intelligence officer performing an interrogation on the battlefield. On 28 May 1918 in Cantigny, France, the 1st division G-2 Major Thomas Gowenlock dispatched Lieutenant Daniel Sargent of the 28th Infantry as part of a mop up operation with a French flame-thrower squad.²³ The 1st Division overtook Cantigny so fast that the German main line of resistance was mixed in with American troops. There were isolated pockets of German resistance within the American held zone. Lieutenant Daniel Sargent and the French flamethrowers unit discovered a German non-commissioned officer (NCO) hiding in the cellar of a house. Sargent quickly interrogated the NCO and discovered his unit identification, and to the best of the NCO's knowledge where the main line of resistance was located.²⁴ With the aid of the NCO, three other enlisted German soldiers were discovered and taken to the American 28th Infantry Regiment headquarters. The information Sargent gained may seem unimportant or a reaffirmation of what the local tactical situation was at the time. However, what was key here was that the Sargent followed the format of questioning for his part of the intelligence hierarchy. Based on the intelligence that was gathered by the German POWs, the Germans in this sector were ill-prepared for an attack from American forces in Cantigny.

Intelligence not only can be collected by interrogation of POWs; information could be inferred from the analysis of prisoners' gear or personal items on their body. On 22 May 1918 in the Cantigny area, intelligence scout Alexander J Polejewski of the 18th Infantry Regiment, Company E, killed a German on a patrol and made these conclusions based on analysis of the German soldier's gear: 'He had on French boots, possibly taken off a dead French soldier, and the German soldier had no underwear on at the time of death'.²⁵ Analyzing the facts would lead to the conclusion that the enemy in this area were under supplied and could further lead to the

²²Terrence Finnegan, 'The Origins of Modern Intelligence, Surveillance, and Reconnaissance.' *Journal of the American Intelligence Professional*. Vol 53 Number 4 (Dec 2009), p29.

²³The Army War College Barracks in Carlisle, Pennsylvania. World War I Veterans Survey, 1st Division, Field Artillery Regiment.

²⁴ibid.

²⁵Thomas Gowenlock, *Soldiers of Darkness* (New York: Doubleday, Doran, & company, Inc., 1937), p106.

conclusion that they were not ready for an attack. The previous two examples illustrated that more pressure could be applied in this sector to achieve further gain.

The previous set of prisoner interrogation analysis was conducted under ideal conditions and not in the heat of battle or pressures to produce intelligence. The next two examples will show battlefield analysis of prisoner interrogation. On 17 July 1918, the 1st Division completed prisoner interrogation analysis indicating where the enemy main line of resistance was by the end of the second day of fighting. Based on the intelligence prepared from prisoner testimony the enemy had greatly strengthened due to prisoners from two new divisions that were not present during previous days fighting.²⁶ This evidence, which was produced and analyzed from prisoner interrogations, led to the decision for the division to attack again at 4am on 18 July. The collection and analysis of POWs while on the battlefield highlights the relationship between intelligence and operations. Tactical decisions were being made on the battlefield partly based on intelligence that was analyzed, specifically, the identification of new enemy divisions.

A further example of the analysis of POW interrogations on the battlefield can be examined in the reduction of the St. Mihiel salient. Battalion commander Major Charles Senay of the 28th Infantry Regiment, 1st Division, participated in the reduction of the St. Mihiel salient. In three days of light fighting, Senay's battalion progressed 19 kilometers in 32 hours.²⁷ All the intelligence coming from prisoner statements were analyzed by Senay to the conclusion that the whole area was being evacuated by the enemy. The answers given by each captured prisoner interrogated in the salient were nearly identical. The prisoners stated they knew of an American attack soon and were in various stages of deploying to the rear when captured. Senay repeatedly asked for permission to advance beyond division set goals. This request was denied each time out of fear of German counter attack, which never materialized.²⁸ In this case, battlefield analysis of prisoner interrogation was correctly observed. However, the operational decision was not to follow up on the tactical intelligence that was analyzed clearly showing the Germans were evacuating the immediate sector. Intelligence analysis was needed to produce information so that operational commanders could make the best decision, which in this case was not to follow up. At the end of the day, intelligence from prisoner interrogations were

²⁶Thomas Gowenlock, *Soldiers of Darkness* (New York: Doubleday, Doran, & company, Inc., 1937), p147.

²⁷Infantry School Fort Benning, Ga. Senay, Charles T. MAJ, 'Operations of the First Battalion 28th Infantry in the Reduction of St. Mihiel Salient, September 12-13, 1918' (Fort Benning: Military History, 1932-1933),p22.

²⁸Ibid, pp24-25.

analyzed and a judgment in verifying the data was required to provide the most accurate information to operational leaders.

Another example of battlefield analysis was from Captain Leonard Boyd of the 1st Division 18th Infantry Regiment, during the second phase of the Meuse-Argonne Offensive.²⁹ On 9 October 1918, battlefield interrogation of a prisoner stated that a German counter attack to retake hill 272 was imminent. The battalion commander did nothing to shore up the battalion's position or use his machine gun company to deploy in a defensive stance. Company D of the 2nd Battalion, which was dug in on a dry river bed, took the brunt of the German counter attack.³⁰ The dynamics of mobile warfare had the battalion disorganized and in no position to devise a defensive plan for hill 272. In this case, prisoner interrogation analysis produced actionable localized tactical intelligence.

The examples of prisoner interrogation showed how questioning POWs produced tactical information. This information was for personnel in position of command to best utilize. Analysis under combat conditions was not the ideal environment to produce tactical intelligence, but it was the result of mobile warfare that American troops faced. The examples discussed previously show that the tactic of POW interrogation was successfully executed in a consistent manner. The key point from this section was the element of judgement derived from analyzed intelligence, which in turn had an influence on operational decisions. The next section will discuss dissemination of prisoner interrogation intelligence which resulted from collection and analysis.

Dissemination

Dissemination of data or information gained through prisoner interrogation can best be understood in two ways: formal and informal. Formal methods encompassed the summary of intelligence, which was in written form and massively distributed. Informal methods are best understood through looking at the relationship between intelligence (S-2, G-2) and operations (S-3, G-3). Intelligence officers needed to develop and maintain a working relationship with the other general staff positions. Dissemination of prisoner interrogation data was dependent upon the ability of the intelligence officers to communicate.

²⁹Infantry School Fort Benning, Ga. Boyd, Leonard R. CPT, 'Operations of the 1st Battalion, 16th Infantry, in their Second Phase of the Meuse-Argonne' (Fort Benning: Military History, 1932-1933), p14.

³⁰Ibid, p19-20.

Informal dissemination can best be explained through the words of one intelligence officer, Captain Shipley Thomas. Thomas of the 1st Division 28th Infantry Regiment S-2, had the following to say about the informal yet vital aspect of the S-2 job: 'The members of battalion, regimental, and divisional intelligence units must operate as a fraternity'.³¹ Captain Thomas continued to elaborate his point by stating that when the S-2 and S-3 of an infantry regiment work together 'then only will the combined combat team work smoothly'.³² Captain Thomas was writing from his regiment position and thus what he knew to be important to the functions of his job when he stated: 'it is evident that the S-2 of an infantry regiment must find and grow to know intimately the commander of the battalion of artillery.'³³

Captain Thomas echoed the words of the 1st Division G-2 officer Major Gowenlock. Major Thomas R. Gowenlock G-2 of the 1st Infantry Division was the senior intelligence officer in the 1st Division, who fostered and enabled an environment of dissemination and open communication by engaging with officers in other departments on the divisional general staff.³⁴ Gowenlock commented on the following regarding division preparation work at Cantigny in May of 1918: 'On this work, more than on any other phase of intelligence service, depended the General Staff's success in piecing together its intelligence maps and summaries and planning the attack'.³⁵ Gowenlock made additional comments at the end of the war: the success of intelligence section in the 1st Division was enjoyed due to the complete understanding and full co-operation of the division regiment and battalion commanders.³⁶

The data that was collected, analyzed and disseminated from POW interrogations were published in the summary intelligence reports. The infantry battalion and infantry regiment would produce a daily and weekly version of these reports for use in the battalion and regiment only. Mostly this was typed for commander's eyes only. The 'IR17' had very specific timetables for each echelon to produce the intelligence summary. At the Division, Corps and Army level the summary of intelligence report was one-page front and back. Each lower echelon was analyzed and simplified in their own summary. The 'IR17' also has a very specific format of statements that the summary was to fulfill. From start to finish, the act of gathering intelligence including data on POWs was structured around a pre-selected format. General Nolan, the Chief of Intelligence, would also produce an AEF summary of Intelligence for General John J. Pershing.

³¹Shipley Thomas, *S-2 In Action* (Pennsylvania: The Military service publishing co, 1940), p32-33.

³²Ibid, p57.

³³Ibid, p57.

³⁴Thomas Gowenlock, *Soldiers of Darkness* (New York: Doubleday, Doran, & company, Inc., 1937), p47.

³⁵Ibid, p102.

³⁶Ibid, p222.

The AEF summary would also be sent to the Secretary of War, Newton Baker and the chief of staff.³⁷ This format was the ultimate tool for dissemination that all parties were informed of the situation and especially of the information gathered from POW interrogation.

German Intelligence in Action

An example from German intelligence shows that when compared to the AEF's ability to produce combat intelligence, the result was the same. The following case study from a captured German infantry war diary will demonstrate how the Germans collected, analyzed and disseminated combat intelligence through POW interrogations. Bear in mind the German army had a full three years to perfect their intelligence gathering operations.

The war diary from the German 4th Foot Guards Regiment, which was a tier one shock troop regiment, stated their action prior to the Argonne Offensive. This diary was obtained after the armistice. On 23 September 1918, orders were issued from 1st Guards Division to clean up enemy activity.³⁸ On 24 September, the 4th Foot Guards Regiment collected information. 25 September was marked for a three-attack team assault on the front line and a four-team infiltration on the flank. The teams returned with nine French POW's, who told the 4th Foot Guards Regiment, of a great American offensive that was scheduled to begin at midnight on 26 September.³⁹ The 4th Foot Guards Regimental commander ordered the troops holding the front line near Bourdeilles area to pull back, which was out of the safety of their bombproof dugouts. The 4th Foot Guards Regiment was four companies of 80 rifles each, in total with logistical support 1,800 troops. On 26 September, the US artillery began its bombardment.⁴⁰ The 4th Foot Guard was left unharmed from this bombardment due to the collection of information from the French POW's. The 4th Foot Guards collected POWs, they analyzed the data from their interrogations and then disseminated the information that was collected and analyzed to the regiment commander, who acted on this intelligence and made an operational decision that saved the lives of countless German soldiers. This example of the 4th Foot Guards illustrated how effective combat intelligence gathering was when executed with proportional judgment.⁴¹

³⁷Richard Challenger, *United States Military Intelligence Vol 2* (New York: Garland Publishing, 1978), p20.

³⁸The Army War College Barracks in Carlisle, Pennsylvania. Notes and Translation of part of text of the histories of the following German Regiment. D 545.A63 N68413.

³⁹Ibid.

⁴⁰Ibid.

⁴¹Ibid.

Conclusion

The training literature for interrogation of POWs, along with collection, analysis and dissemination of POW data has been thoroughly reviewed. The training literature manuals that were available prior to the First World War were not very detail orientated for intelligence specialist. However, using 'The Service of Security and Information', 'Instructions on the Research and Study of Information 1917', and The 'Hague Convention', merged with the best parts of the British intelligence manuals, General Nolan produced a training manual literature. The 'Intelligence Regulation 1917' was the bedrock for AEF intelligence personnel. The AEF took a new concept entitled combat intelligence and disseminated it throughout the military hierarchy and incorporated it into a general staff position. The AEF further deployed these methods during combat operations thus demonstrating the AEF's ability to innovate new tactical concepts with a high level of consistency.

Collection of POW intelligence was best stated as a mechanical function. It was dependent on time management at the different command formations. The intelligence that had the highest value assigned to it was on enemy order of battle and the main line of resistance. Both intelligence points had significant operational considerations.

Analysis covered the tactical information from interrogations of POWs. Examples of interrogation of POWs under both ideal conditions and the heat of battle demonstrated the need for intelligence personnel to possess sound judgment. This was a skill set that not all soldiers had and a behavior that developed over time. Success at the analytical level was predicated on the ability to verify and cross-reference the available intelligence.

Dissemination was the product of accurately executing functions of collection and analysis. The ability to disseminate along both informal and formal avenues was key to getting POW interrogation intelligence to the right commanders in a timely manner. The formal avenue of dissemination, which was the daily summary of intelligence, was the greatest tactical advantage that was produced from POW interrogation data. Written in a specific format, all the data that was required was readily available. The informal relationship aspect of dissemination was predicated on developing and maintaining an environment of 'fraternity' between peers at each unit formation. The pre-selected formatted questions that intelligence personnel posed to the enemy POWs in interrogations produced the most tactically actionable information, especially at the battalion, regiment and division level.

Chapter Four:

Trench Raids

Trench raiding was a basic function of all belligerent armies. It was a core function for gathering combat intelligence, yet is one of the most under researched areas of combat intelligence tactics. Prisoners, documents and unit identification were the most pressing intelligence required from a trench raiding party. The sending of small teams of soldiers into enemy territory was the most effective source for gathering tactical intelligence. Successful trench raiding produced prisoners of war (POWs) for interrogation, enemy documents and technology for analysis.¹

This chapter will examine AEF trench raiding processes and the influence leadership had on innovation. This chapter will examine four main areas. Firstly, it will look at the influence leadership had on the development of trench raiding in the 1st Division by General Bullard and Major Roosevelt; specifically, how officers in leadership positions implemented innovative ideas when faced with challenging trench raiding obstacles. Secondly, it will explore the challenges faced by Captain Patterson of the 77th Division in executing a daylight raid, analyzing Patterson's flexible judgment and leadership approach. Thirdly, it will examine the failures of the 82ND Division to execute a trench raid; specifically, the leadership and innovative ideas for proper trench raiding from General Burnham, the divisional commander of the 82nd and the two brigade commanders Brigadier General Lindsey and Cronin. Fourthly, it will analyze the role of leadership and initiative in trench raiding; specifically, the leadership and initiative of General Bullard, Major Roosevelt, Captain Patterson and General Burnham.

The goal of this chapter is to highlight the progression of trench raiding from the view point of individual leadership. Development of a trench raiding system was directly influenced by leadership. Success and failure of trench raiding can be understood by how army officers chose to lead soldiers in trench raids. Individual leadership influenced the progress of trench raiding, which contributed to the development of combat intelligence.

The Importance of Trench Raids

¹Terrence Finnegan, *'A Delicate Affair' on the Western Front* (UK: Spellmount Gloucestershire: 2015), p80.

The Commander-in-Chief of the British Expeditionary Force (BEF), General Sir Douglas Haig, advocated an aggressive and consistent policy to press the enemy and attack to his subordinate generals regarding trench raids.² According to John Lee, General William Birdwood of the BEF utilized trench raids in accordance with Haig's policy to 'wear down the enemy and reduce their fighting efficiency'.³ The British sustained a program of 'patrolling and trench raids for the purpose of identifying the enemy formations to their front.'⁴ Trench raiding for the British added to the intelligence capability of the BEF and sustained the morale and fighting spirit of the British soldiers. The German army also had an aggressive policy in regards to trench raiding. On 1 December 1916, the Germans adopted a defensive doctrine entitled 'Collected Instructions for Trench Warfare'.⁵ Part 8 of this doctrine stated that the 'defender must remain active and keep the other side off balance by aggressive patrols, raids, and local attacks.'⁶

The experience of a trench raid for individual soldiers was a difficult task. It was described by Major General Robert Lee Bullard of the AEF as being no picnic. Major General Bullard had this to say about his personal observation of a trench raid:

It is a short, terrible, crashing fight, a thing of a few rods and a few minutes, filled with danger and death. It is preceded and followed by a tornado of artillery fire that drives men into the earth as the only safety, from which they may not emerge at all- or emerge to death or capture.⁷

Elements from Bullard's observation were repeated by many soldiers who conducted a trench raid.

An American trench raid occurred under two conditions. The first condition was under specific orders with an outline and objectives. These mission specific trench raids were supported by the entire division with artillery preparations. This was known as a trench raid in force. The second condition occurred as a mission of opportunity. The AEF sent out daily patrols along its span of control on the Western Front. This type of trench raid was known as a silent raid. American patrols operated in a consistent frequency that resulted in opportunities for

²Gary Sheffield (Ed.), *Douglas Haig: War Diaries and Letters, 1914-1918* (London: Weidenfeld & Nicolson, 2005), pp210,211,219.

³John Lee, 'William Birdwood' in *Haig's Generals*, eds. Ian Beckett & Steven Corvi (Great Britain: Pen & Sword Military, 2006), p39.

⁴Ibid, p47.

⁵Jonathan Boff, *Haig's Enemy* (United Kingdom: Oxford University Press, 2018), p146.

⁶Ibid, p146.

⁷Robert Lee Bullard, *Personalities and Reminiscences of the War* (New York: Doubleday, Page & company, 1925), p148.

trench raids.⁸ Mission specific trench raids were conducted to acquire prisoners and/or documents. This specific type of raid often produced captured documents of varying tactical importance and also reduced enemy morale due to their comrades being captured or killed during the raid. A trench raid of opportunity usually presented minimal risk to the raiding party and consistently produced modest return. Overall, the raiding party's goal was to inflict damage and death while attempting to capture enemy combatants for intelligence gathering. Some examples of a trench raid of opportunity were as follows: a patrol coming across a single enemy in an outpost or an unguarded machine gun emplacement.

The structure of a typical raiding party varied in size. Some trench raids were battalion size and others as small as three soldiers. A typical raiding party consisted of two teams up to forty soldiers each.⁹ Each raiding party had specific goals. The specific mission goals were derived from intelligence reports from patrols. Patrols and raids were often used interchangeably. The battalion commander and the intelligence officer would collaborate together to determine areas that a patrol would have the potential to develop into a raid.

Soldiers' raiding gear was also unique to the silent raid type of intelligence activities. In some of the earlier raids, white survey tape was placed on the soldiers' backs.¹⁰ The idea was to maintain a line of sight going out; however, the raiding party quickly realized that on the return back to friendly trenches the enemy could easily spot the white tape moving about in no man's land.¹¹ This demonstrated innovation to overcome obstacles for night operations.

The typical raiding party soldier would have a blackened face.¹² Stephen Bull stated that by 1916 the 'recommended raiding wear now included woolen caps, gloves which might be discarded on reaching the enemy line, and a distinguishing mark that could be seen by friends but not obvious to an enemy observer'.¹³ Each member of an AEF raiding party would carry the Colt 1911 45 ACP, a favorite of scouts, or some type of variation of automatic pistol and a trench knife or some type of small club.¹⁴ Grenades were used for both defensive and offensive purposes. The incoming raiding party would toss them into an enemy trench, while simultaneously enemy combatants were tossing them at incoming American raiders. The raiding

⁸U.S. Army, *World War Records First Division A.E.F Regular* (Washington, 1928-30).

⁹Stephen Bull, *Trench: A History of Trench Warfare on the Western Front* (Oxford: Osprey Publishing, 2010), p150.

¹⁰Terrence Finnegan, *'A Delicate Affair' on the Western Front* (UK: Spellmount Gloucestershire: 2015), p122.

¹¹Thomas Gowenlock, *Soldiers of Darkness* (New York: Doubleday, Doran & Co, INC, 1937), p110-115.

¹²*Ibid*, p115.

¹³Stephen Bull, *Trench: A History of Trench Warfare on the Western Front* (Oxford: Osprey Publishing, 2010), p150.

¹⁴Thomas Gowenlock, *Soldiers of Darkness* (New York: Doubleday, Doran & Co, INC, 1937), pp3-4.

party carried an empty sandbag for intelligence information and souvenirs.¹⁵ The highest paid compliment from a German officer that had been on the receiving end of an American trench raid was that 'the American soldier's proficiency with a handgun is unmatched in the German army'.¹⁶

Failed Trench Raid

The technical construction of a trench from any one of the belligerent armies exhibited many different variable factors. These factors included the size, length and elaborate construction of zigzagging trench lines.¹⁷ Such factors were dependent on the geographical position and belligerent armies. The following was an overview of an average example of a typical trench raid found on the Western Front in late 1917 through 1918.

A typical US trench was laid out in sectors with a division holding a given length to defend. The sector was labeled using alphabetical designations. An example would be A-1, A-2 and so on down the sector that was held.¹⁸ Typical trench construction, by this period of the war, was layered three trenches deep. A-1 would be a fire trench that was lightly staffed with soldiers. Then a second trench, A-2, would have more soldiers and a machine gun emplacement. These two sectors would be connected by a communication trench that was used solely for logistical purposes.¹⁹ The third trench, A-3, was the command post of some type between platoon or even as high as battalion level.²⁰ It should be noted that this was only an example of a typical US trench section on the Western Front and that there were countless variations to this model.

In the early days of March 1918, the 1st Division was finally operationally free from French command.²¹ The first task of its commander, General Bullard, was to carry out a trench raid on the German forces facing the American lines.²² This would be the first raid conducted under the 1st Division operational controls. The planning, timetables, resources and location were all chosen by Bullard. This trench raid would be distinctively American because there were no Allied soldiers consulting the American soldiers on operational processes. According to

¹⁵Stephen Bull, *Trench: A History of Trench Warfare on the Western Front* (Oxford: Osprey Publishing, 2010), p150.

¹⁶Terrence Finnegan, *'A Delicate Affair' on the Western Front* (UK: Spellmount Gloucestershire: 2015), p115.

¹⁷Ibid, pp40-48.

¹⁸Ibid, pp40-48.

¹⁹Ibid, pp40-48.

²⁰Ibid, pp40-48.

²¹Marshall, George. *Memoirs of my Services in the World War 1917-1918*. Boston: Houghton Mifflin Company, 1976, p61.

²²Robert Lee Bullard, *Personalities and Reminiscences of the War* (New York: Doubleday, Page & company, 1925), p 150.

Major Roosevelt's diary, his regiment did some training with homemade Bangalore torpedoes. The training was a failure by his own accounts.²³ Roosevelt dates the training between November of 1917 to January of 1918. The dates in his diary were somewhat off because he dated the German spring offence as 28 March 1918. Regardless of the date, it was certainly before the first trench raid using Bangalore torpedoes. In the following case study, it is illuminated that the AEF needed training and experience.

At the beginning of March 1918, one team from the 18th Infantry Regiment and one from the 16th Infantry Regiment of the 1st Division planned and rehearsed their first trench raid.²⁴ The 16th Infantry Regiment was assigned the eastern area of Richecourt salient; whereas, the 18th Infantry Regiment was assigned the northwest corner of Bois de Remières. Division artillery resources were allocated for a planned artillery barrage at 01:00 on the night of the attack with the infantry prepared to leave their trenches after a brief, but intense artillery barrage.²⁵ On 2 March, the 1st Division 18^h Infantry Regiment Pioneer Engineers separately surveyed these two locations for enemy wire entanglement demolition points. These two groups of pioneer engineers were commanded by Lieutenant Thomas W. Ryan from Company F, 1st Engineering, 18th Infantry Regiment and Lieutenant Joseph McClure from Company E, 1st Engineering, 18th Infantry Regiment, respectively.²⁶ They surveyed these locations unescorted. At both survey points, German sentries fired flares into the air, nearly discovering the Americans. Returning to their respective lines before daybreak, the two pioneer engineers retrieved two each 16-meter-long (50 feet) Bangalore torpedoes from French ammunition dumps. Bangalore torpedoes are long, skinny cylinders packed with explosives that are slid under enemy barb wire entanglements to destroy them allowing infantry access to that part of the trench.²⁷

On 3 March, two teams of eight pioneering engineers set out with two Bangalore torpedoes each. The engineers traversed unfamiliar topography in the dark. Midway through, one of the team's Bangalores broke. The first team reached its designated location in the German wire entanglement taking nearly 4 hours to arrive. An additional 15 minutes were required to connect all the blasting wires which only allowed 10 minutes before the designated artillery barrage was to begin.²⁸ At this point, the decision was made to call off the trench raid in

²³Theodore Roosevelt, 1887-1944, *Average Americans* (New York: G. P. Putnam's Sons, 1919), pp104-110.

²⁴Terrence Finnegan, *'A Delicate Affair' on the Western Front* (UK: Spellmount Gloucestershire, 2015), p121.

²⁵Ibid, p120.

²⁶Ibid, pp120-122.

²⁷Ibid, p121.

²⁸Ibid, pp121.

the Richecourt salient. Similar difficulties affected the other engineering team. Both trench raids failed to materialize.

The following day, General Bullard ordered the two pioneer engineers for an open dialogue to analyze the failed trench raid.²⁹ General Bullard assured the engineers that he held ultimate accountability for the failed raid. Bullard asked the engineers open ended questions trying to determine what went wrong and obtain their opinion for improvement for the next raid.³⁰ The engineers collaborated and communicated openly with General Bullard and beneficial information ensued. Both engineers agreed that the unfamiliarity of the terrain and their inexperience with the Bangalore torpedoes were the culprits behind the failed trench raid.

Finnegan's account of the failed trench raid provided insight for future trench raids. The root causes of the failed raid were determined and improvements were implemented. On 4 Feb 1918, Bullard wrote a memo stating that battalion scouts were to go out on every scout and patrol. Interestingly, there was no mention of trench raids in the order.³¹ The scout and patrolling manual had two provisions that clearly stated that the role of the scout was to memorize enemy paths to and from no man's land.³² This would justify scouts accompanying trench raids. The manual further stated the role of the scout before and after an attack. It outlined the scout's role in patrols and reconnaissance. Yet, there was an omission of raids. The scout manual was published at the end of March 1918. The 3rd edition of the intelligence regulation was printed at the beginning of June 1919. This version of the manual indicated that a scout was required to accompany trench raids.³³ The scout increased the probability of a successful trench raid. Furthermore, Major Theodore Roosevelt stated that all the battalions of 1st Division practiced assembling and detonating the Bangalore torpedoes in mock training classes in the field.³⁴ This allowed the Bangalore torpedoes to be transported disassembled and built onsite.³⁵ Thus, two distinctive improvements can be derived from the failed trench raid: the battalions trained with the Bangalore torpedoes and the official designation of an intelligence scout in a raiding party. This would ensure that the Bangalore torpedoes reached their destination fully functional and reduced the

²⁹Terrence Finnegan, *'A Delicate Affair' on the Western Front* (UK: Spellmount Gloucestershire, 2015), p127.

³⁰Robert Lee Bullard, *Personalities and Reminiscences of the War* (New York: Doubleday, Page & company, 1925), pp148-152.

³¹World War Records First Division AEF Regular, 'Summaries of Intelligence First Division Dec 25, 1917- June 26, 1918', vol IV, Part 1, US Army Heritage and Education Center, Carlisle, Pa.

³²Army War College. Scouting and Patrolling. Class #M9403-B15 Accession # 42308. Box4, p8.

³³Intelligence Regulations. General Headquarters American Expeditionary Forces Papers. Second Section Reports and Regulations:1914-1918. Box 11 of 26. U.S. Army Military History Institute, Carlisle, Pa, p14 item #42.

³⁴Theodore Roosevelt, 1887-1944, *Average Americans* (New York: G. P. Putnam's Sons, 1919), pp105-106.

³⁵Society of the First Division, A.E.F. *History of the First Division During the World War, 1917-1919* (Philadelphia, Pa.: The John C. Winston company, 1922), p96.

amount of time it took the engineers to reach their destination. The proper execution of trench raids to collect enemy intelligence such as prisoner interrogation, captured documents, and unit identification were vital to combat intelligence gathering.

A few days later, the first division incorporated these new enhancements for executing a trench raid and sent two engineering parties out accompanied by scouts to two different destinations. They arrived at their respective locations unobserved and the engineers then assembled their Bangalore torpedoes.³⁶ The scout served as a lookout as they performed this task. Later, both Bangalore torpedoes successfully detonated and signaled a brief ten-minute barrage.³⁷ This allowed two raiding parties to approach their designated entry points into the enemy trench lines.³⁸ The result of this executed trench raid was no American casualties or captives. Even though, they failed to capture any enemies, they learned how to implement a trench raid. 'In fact, the tactical battlefield of the Western Front was one of constant and steady innovation and adaptation on both sides.'³⁹

Silent Raid

The 1st Division had been unsuccessful in obtaining a German prisoner of war (POW) with any trench raids until March 1918. They felt that either the Germans had stopped patrolling in the area or they were unfortunate not to run into any of them.⁴⁰ They wanted a German prisoner so badly that they pondered how best to cross the German lines to obtain one. Lieutenant Holmes, Sergeant Murphy, Corporals Leonard and McCormack, and Private Samere were assigned to raid a listening post in the Rambucourt area by Battalion Commander Major Theodore Roosevelt, Jr.⁴¹ They were determined not to come back without a prisoner. They crawled through no man's land with no artillery or machine gun support, armed only with wire cutters, a bayonet, and a club wrapped with concertina wire. They raided the listening post and came upon two German soldiers. After a brief skirmish, they were successful in their mission to obtain a German prisoner.⁴² This prisoner provided them with information regarding the German

³⁶Terrence Finnegan, *'A Delicate Affair' on the Western Front* (UK: Spellmount Gloucestershire: 2015), p1.

³⁷Ibid, pp125-126.

³⁸Society of the First Division, A.E.F. *History of the First Division During the World War, 1917-1919* (Philadelphia, Pa.: The John C. Winston company, 1922), p95-96.

³⁹Williamson Murray, *Military Adaptation in War with Fear of Change* (Cambridge: Cambridge University Press, 2011), p76.

⁴⁰Theodore Roosevelt, *Average Americans* (New York: G. P. Putnam's Sons, 1919), p112.

⁴¹Ibid, p113.

⁴²Ibid, p114.

troops in the immediate area. The previous raid was an example of a silent raid. It was a planned raid that resulted in beneficial information.

A Daylight Raid

The 1st Division was staffed with regular army personnel while the 82nd and 77th were mostly staffed at battalion level and lower of soldiers who were volunteers and draftees.⁴³ These citizen soldiers were not indoctrinated with battlefield tactics. This lack of military experience would lead to creative problem-solving tactics. The 77th Division had the privilege of executing their daylight raid on 14 August 1918 into the enemy controlled Bazoches area.⁴⁴ The goal of the raiding party was to locate an enemy machine gun emplacement.

Captain Shipley Thomas, in his work, *The History of the A.E.F.*, reflected on the first few months of American combat reconnaissance on the Western Front by stating that, 'after sad experience it was learned that it was not beneficial to send patrols out every night at the same time, down the same path and on the same type of mission.'⁴⁵ On 13 August 1918 in the vicinity of the Bazoches area the 2nd Battalion of the 306th Infantry had sent out nightly patrols over the next two days. These night patrols met stiff resistance and produced no tactical intelligence.⁴⁶ This was due mainly to their predictability. The battalion needed to locate machine gun emplacements to relay back to the artillery. Thus, it was decided to send a daylight reconnaissance raid out on 15 August 1918 to find the enemy's machine gun locations.⁴⁷ Assigned to lead the three-man day patrol was Battalion Commander Captain Robert Patterson, who would be the future Assistant Secretary of War during World War II. In Captain Patterson's own words, the daylight raid 'was the greatest adventure of my life.'⁴⁸

Patterson, believing that the Germans had completely evacuated the immediate area, continued forward and bypassed the unmanned German post. Amazingly, his patrol covered 200 yards in the open. Stumbling across a group of six Germans in a shell hole, Patterson and one of the other sergeants killed two of the Germans and the rest fled.⁴⁹ Patterson realized that he had stumbled into the rear of the German line and commenced a hasty retreat. Not covering

⁴³James Cooke, *The All-Americans at War: The 82nd Division in the Great War, 1917-1918* (London: Praeger, 1999), pp1-2.

⁴⁴306th Infantry Association, *History of the 306th Infantry* (New York: 306th Infantry Association, 1935), p49-50.

⁴⁵Captain Shipley Thomas, *The History of the A.E.F.* (Nashville: The Battery Press, 1920), p59.

⁴⁶James Cooke, *The All-Americans at War: The 82nd Division in the Great War, 1917-1918* (London: Praeger, 1999), pp45-46.

⁴⁷306th Infantry Association, *History of the 306th Infantry* (306th Infantry Association: New York, 1935), p49-50.

⁴⁸J. Garry Clifford (Ed.), *The World War I Memoirs of Robert P Patterson* (Knoxville: The University of Tennessee Press, 2012), p40.

⁴⁹Ibid, p40.

a distance more than twenty feet, he stumbled across another German shell hole. Only one German was killed and the rest began to fire. In the ensuing chaos, the two sergeants made it back to the American lines and Captain Patterson endured a grueling ten hours behind enemy lines before making it back to American lines.⁵⁰ The net result of this daylight raid was no American casualties, six enemy combatants killed and one machine gun nest located and destroyed.⁵¹ The importance of this example lay in the tactical intelligence that was absorbed from the reconnaissance raid. Patterson learned that the main line of resistance was farther back than they thought and the Germans were loosely organized. The randomization of patrols for reconnaissance and raiding purposes proved to be militarily effective because of its flexibility and point of egress. Battalion Commander Patterson's tactical concept for a daylight raid enhanced the division's tactical intelligence.

As we have seen it was very difficult to conduct a successful daylight raid into enemy trenches. Yet, with leadership and flexible judgement most obstacles could be overcome. After reviewing the examples from the 1st and 77th Division, it is clear that innovative concepts were driven by leadership and flexible judgement. Both were therefore key contributors to combat intelligence. The failure of the 82nd Division raiding party presented a different set of challenges and their solutions to these were innovative.

The 82nd Division Trench Raiding

The US 82nd Division entered the Woëvre trenches on the Western Front on 25 June 1918. From the next eight weeks till 31 August 1918, the division tried unsuccessfully to conduct a trench raid into enemy territory.⁵² The 82nd Division, in fact, went eight weeks without any success. Historian Robert Zieger best characterized the organizational challenges the AEF faced in the following excerpt: 'In the field, the doughboys acquitted themselves well, making up in vigor and energy what they initially lacked in experience, logistical efficiency, and large-unit leadership.'⁵³ A closer look at the leadership inside the 82nd Division's trench raiding will highlight the method the 82nd employed to conduct successful trench raids.

⁵⁰J. Garry Clifford (Ed.), *The World War I Memoirs of Robert P Patterson* (Knoxville: The University of Tennessee Press, 2012), p40-44.

⁵¹Ibid, p40-44.

⁵²Records of Combat Divisions 1917-1919 82nd Division, Box 1, Arc Id 301641, RG 120, Records of the American Expeditionary Forces (World War I), NARA College Park, College Park, MD.

⁵³Robert Zieger, *America's Great War: World War I and the American Experience* (New York: Rowman & Littlefield Publishers, 2000), p85.

Brigadier General William P. Burnham of the 82nd Division was failing to identify the German units in front of them. Specifically, essential combat tasks such as patrolling and raiding were not producing results. The reason for not completing these tasks were a mystery to the soldiers themselves. Historian James Cooke stated that Burnham blamed soldiers' incomprehension of the English language for combat operational failures.⁵⁴ During the First World War, the United States' population was a melting pot of several countries. This further meant that most young adults were first generation immigrants. It should be reiterated that the 82nd Division was comprised of volunteers and draftees of the National Army. These soldiers had little to no military background nor experience.

On 1 July 1918 in the Lagney area, a raiding party of ten soldiers from Company E of the 325th Infantry Regiment endeavored out in search of information and prisoners. As soon as the raiding party cleared the American wire, six of the ten soldiers became lost.⁵⁵ When these lost soldiers tried to make their way back to the American line individually, they were stopped by American sentries and due to the language barrier, they were treated like enemy combatants. The first guard threw a grenade at them. The next guard, Private Adamson, opened fire on American-Italian Private Frank Billota and shot him in the stomach. He did not speak any English and was unable to communicate with the guard once separated from the party.⁵⁶ This was an extreme example of the challenges the 82nd Division had to overcome to have a successful trench raid. Each and every trench raid in force that was launched in the eight weeks the 82nd was in Lagney area produced no captured enemy documents, materials or prisoners. By the second week of July, General Burnham offered 1,500 francs to the first American soldier of the 82nd to bring in a captured enemy.⁵⁷ Even this failed to produce any results.

On 31 August 1918, General Burnham ordered Brigade Commander Marcus D. Cronin of the 163 Infantry Brigade and Brigade Commander Julian R. Lindsey of the 164 Infantry Brigade to obtain prisoners.⁵⁸ The two brigade commanders collaborated together and came to a solution that was immediately implemented. The first was the establishment of a rifle firing range located near the 82nd Division's headquarters. This would improve soldiers' confidence with their rifles and hand guns. It would also improve their accuracy and strengthen their

⁵⁴James Cooke, *The All-Americans at War* (Westport, Connecticut: Praeger, 1999), p45.

⁵⁵Ibid, p46.

⁵⁶Ibid, p46.

⁵⁷Ibid, p46.

⁵⁸Records of Combat Divisions 1917-1919 82nd Division, Box 17, Arc Id 301641, RG 120, Records of the American Expeditionary Forces (World War I), NARA College Park, College Park, MD.

aggressiveness. Secondly, the brigade commanders allocated one section from the machine gun battalion for additional support for all raiding parties. Thirdly, they directed that battalion intelligence officers were to be involved in 'the process of patrol planning and assisted the battalion operations officers in preparing for the mission.'⁵⁹ This improved the communication between operations and intelligence in the division primarily at the battalion level.

General Burnham's leadership contributed to the success of the development of operational missions such as trench raids. Burnham's sole contribution to the development of the division through his order on 31 August was to obtain prisoners.⁶⁰ This forced his brigade commanders to identify the reason for unsuccessful trench raids and implement a solution to rectify this operational deficiency. Brigadier General Cronin and Brigadier General Lindsey successfully implemented a solution. After an intense four-week course, the 325th, 326^h, 327th and 328th Infantry Regiments were able to cycle through the divisional firing range one week each.⁶¹ From this point forward, the 82nd Division started to produce intelligence in the form of documents and prisoners from trench raids. Burnham set an expectation for his generals to obtain prisoners and execute successful trench raids. From that expectation, his generals made a plan and executed it. This resulted in the capture of an enemy prisoner and enemy documents on 12 September 1918.⁶² Collaboration between battalion intelligence and operations was a major contributing factor alongside significant infantry weaponry confidence. The collaboration between battalion intelligence and operations was a major driving factor in the development of combat intelligence.

Leadership and Initiative

Upon examination of the previously mentioned trench raids, the inconsistency of successful trench raids in 1st Division can be attributed to the failed demolition of the wire entanglements with Bangalore torpedoes in front of the German trenches.⁶³ Furthermore, the 1st Division lacked planning of silent trench raids. Whereas, the 77^h Division's failure in trench raids lay in its failure to utilize all of its resources to plan its daylight raid. The 82nd Division's inconsistencies with trench raids were the soldiers' lack of confidence with their rifles and the failure of senior leadership to outline their expectations for trench raids.

⁵⁹James Cooke, *The All-Americans at War* (Westport, Connecticut: Praeger, 1999), p47.

⁶⁰Ibid, p47.

⁶¹Ibid, p49.

⁶²Records of Combat Divisions 1917-1919 82nd Division, Box 17, Arc Id 301641, RG 120, Records of the American Expeditionary Forces (World War I), NARA College Park, College Park, MD.

⁶³Theodore Roosevelt, *Average Americans* (New York: G. P. Putnam's Sons, 1919), p112.

When two or more individuals collaborate with one another in an open and risk-free dialogue, a deeper understanding of the inconsistencies and a climate of change has the potential to materialize. In the 1st Division, open dialogue between General Bullard and the two pioneer engineers, Lieutenant Ryan and McClure, pinpointed the failure of the trench raid to the inability to transport the Bangalore torpedoes.⁶⁴ With regards to the silent raids in the 1st Division, Major Roosevelt's dialogue was sufficient for the mission at hand. However, it lacked formal structure for a precise military operation in the future. When Captain Patterson, of the 77th Division, received orders from the regimental commander regarding the daylight raid, the regimental commander clearly defined the mission's expectations and outcomes.⁶⁵ This type of communication allowed Captain Patterson to execute the raid autonomously to the best of his own ability. Communication in the 82nd Division was complicated due to a language barrier. The previous example emphasized the role of leadership. General Burnham, the divisional commander, did not have the foresight or initiative to establish an English language school within the division.⁶⁶ On the other hand, the divisional commander of the 77^h Division established a school to help eliminate the language barrier.⁶⁷ The two brigade commanders, Cronin and Lindsey, collaborated in an open dialogue drawing from their own experiences. This type of collaborative dialogue between peers was one of the most effective types of communications within a large organization due to the mass number of soldiers under their supervision.

The actionable solution that derived from Bullard and the two pioneer engineers in the 1st Division was that an intelligence scout escort was needed on all missions across no man's land.⁶⁸ This particular solution was implemented across the entire AEF organization and became a requirement in training materials for intelligence personnel. Also, the best method to transport the Bangalore torpedoes was determined. The Bangalore torpedoes were to be transported unassembled until they were needed. Bullard also increased the size of the pioneer engineers' team from 8 to 12 in order to assemble the torpedo more effectively.⁶⁹ Captain Patterson of the 77th Division and the two sergeants decided that their safe return to their own trenches from their daylight raid would have a greater probability of success traversing the land

⁶⁴Terrence Finnegan, *'A Delicate Affair' on the Western Front* (UK: Spellmount Gloucestershire, 2015), p122.

⁶⁵J. Garry Clifford (Ed.), *The World War I Memoirs of Robert P Patterson* (Knoxville: The University of Tennessee Press, 2012), p40-44.

⁶⁶James Cooke, *The All-Americans at War* (Westport, Connecticut: Praeger, 1999), p52.

⁶⁷306th infantry association, and Julius Ochs Adler, *History of the 306th Infantry* (New York city, N.Y.: 306th Infantry Association, 1935), p8.

⁶⁸Dennis E Nolan Papers box 2 of 3. US Army Military Institute, US Army War College, Carlisle Barracks, Penn.

⁶⁹Terrence Finnegan, *'A Delicate Affair' on the Western Front* (UK: Spellmount Gloucestershire, 2015), p120-129.

route individually instead of as a group. They felt they would be a bigger target as a group. General Burnham's order on 31 August 1918 for the 82nd Division to start securing prisoners from trench raiding, forced the two brigade commanders to devise an action plan to execute a successful trench raid and obtain prisoners and enemy documentation.⁷⁰ This order caused brigade, regimental, and battalion commanders to think critically and devise a successful and executable plan.

Military leadership was a central factor within the AEF to drive intelligence innovation. General Robert Bullard held ultimate responsibility for the failure of the trench raid by taking ownership of this failure. He did not place the blame on his pioneer engineers. He submitted a report to General Pershing stating this fact. Bullard's example of accountability drove the specific changes that were required for the division to execute a successful trench raid. Major Roosevelt conceived of the silent raid to produce a prisoner as a source of tactical intelligence. In this case, Roosevelt demonstrated initiative and forward thinking by implementing a silent raid. Roosevelt held ultimate accountability for the success of the raid. Captain Patterson was ordered to execute and plan a daylight raid because night raids had hence failed. Captain Patterson's leadership allowed the raid to be carried out successfully. Patterson's quick thinking resulted in no American casualties, six German casualties.⁷¹ While General Burnham held accountability for the 82nd Division's operations, he drove change through his two brigade, four regimental and twelve battalion commanders. By shifting accountability to the junior leadership of the division, they devised the creation of a rifle firing range and an action plan to execute a trench raid. Burnham's leadership resulted in his sixteen junior leaders collaborating collectively to create solutions to the previous failed trench raids.⁷² Burnham shifted accountability to the junior leadership, but offered them no guidance. Despite the lack of leadership from Burnham, this produced the desired effect for the 82nd Division. They were able to execute successfully trench raids. From the previous examples, it was evident that leadership and accountability fostered the development of combat intelligence.

Conclusion

Leadership and initiative were the hallmarks that enabled combat intelligence tactics such as trench raiding to develop. Innovation takes time. Leadership in the AEF at the divisional

⁷⁰James Cooke, *The All-Americans at War* (Westport, Connecticut: Praeger, 1999), p47.

⁷¹J. Garry Clifford (Ed.), *The World War I Memoirs of Robert P Patterson* (Knoxville: The University of Tennessee Press, 2012), p44.

⁷²James Cooke, *The All-Americans at War* (Westport, Connecticut: Praeger, 1999), p47-52.

level seemed to drive the greatest change and carried meaningful improvements. While the leadership of Bullard and Burnham were wildly different, they had a meaningful impact on the AEF as an organization. Bullard and Burnham had the authority to disseminate their trench raid changes to large sections of the AEF. The 306^h Infantry regimental commander vested mission autonomy in Captain Patterson's leadership. He gave Patterson discretion to execute the mission. Meanwhile, the collaborative nature of peer collaboration drove real change in the 82nd Division by Brigadier General Cronin and Brigadier General Lindsey. Self-diagnosis accompanied by an executable action plan for trench raiding resulted in increased divisional efficiency. The spirit of innovation and learning was deeply imbedded in the mind of Major Roosevelt. Roosevelt taking ownership for the mission for a trench raid without artillery and machine gun support (the silent raid) had the desired effect of producing a prisoner. The development of the AEF's tactical intelligence benefitted from key individuals in leadership positions. Individual leadership established the process for tactical intelligence to develop.

Leadership influenced innovation in the AEF because successful leaders approached failure with a flexible judgement that allowed innovation. Senior leadership could learn from their failures and adapt new processes to improve tactical combat intelligence. AEF trench raids improved over time because leaders in positions of influence took actions that resulted in an improvement across the AEF.

Chapter Five:

Order of Battle Section

Order of battle was defined as the units, formations and equipment of a military force. In a more general sense, it was the identification and position of military units. The study of battles begins with the locations and movements of units and formations of opposing armies. Heymont stated that 'unit identification factor is the complete designation of a specific unit, containing a number, a branch of service and a specified size, such as regiment or a division.'¹ Historians of the First World War used military documents such as the order of battle to identify units and movements of any given army on the Western Front. John Keegan wrote about the knowledge of the enemy when he stated the following 'from the earliest times, military leaders have always sought information of the enemy, his strengths, his weaknesses, his intentions, his dispositions.'² Indeed, the disposition of the German formation confronting the American units was the principal concern of the order of battle section. The order of battle section of the AEF in the First World War remains an under researched area. The examination of the function and innovative processes from the American order of battle section will clearly show the establishment of one of the principal functions of combat intelligence.

This chapter will firstly focus on the innovative leadership of Captain Hubbard, who established the order of battle section for the AEF. Secondly, this chapter will consider the establishment of processes used for classifying enemy units and troop quality. Thirdly, Hubbard's analysis of enemy attacking divisions prior to the German Spring Offensive on 21 March 1918 will highlight a form of unit tracking. This chapter will argue that the order of battle section's leadership developed an innovative process for tracking and identifying enemy units. Examination of the process of collection, analysis, and dissemination of the order of battle section will underscore its importance in the development of combat intelligence.

Historical background

¹Irving Heymont, *Combat Intelligence in Modern Warfare* (Pennsylvania: The Stackpole Company, 1960), p111.

²John Keegan, *Intelligence in War* (New York: Alfred A Knopf, 2003), p7.

Prior to the US entry into the First World War, the US Army did not have the means nor the method for tracking enemy movements.³ Once the US entered the war, the AEF's need to establish a uniform approach to tracking and identifying enemy movements was a high priority of the newly formed intelligence section. The designation G-2 A-1 Order of Battle as the department's official title highlighted its importance in the department among the other sections due to its alpha designation: quite literally the first sub-department established within the intelligence section. The order of battle section's primary function was to identify and track enemy units or formations. An understanding of the workings of the order of battle section can be reached by using the diaries of two AEF intelligence officers, Captain S.J. Hubbard and Lt-Colonel Walter C. Sweeney.

Captain Hubbard had a mathematical education and experience with numeric pattern recognition. In 1909, Hubbard graduated from Harvard Business School. His family ran a cotton brokerage firm. Captain Hubbard, like most citizen soldiers of his time, was a 1915 Plattsburgh military training camp graduate.⁴ This was part of the preparedness movement for war that was sweeping the United States and specifically, the influential and well-to-do Americans. After the war, Hubbard continued working as a stock broker in one form or another and lived a financially successful life.⁵ Prior to being recruited into the intelligence section by General Nolan, he was studying at Fort Leavenworth.⁶ Studying at Leavenworth was beneficial because it resulted in him being able to speak the same jargon as the field grade officers and staff positions within the AEF. Hubbard was very comfortable working with numbers, a skill that would be beneficial to him in the order of battle section. Hubbard's work must be read with caution as he tends to inflate his importance or heads into long winded stories of soldiers with whom he made acquaintance during the war. The importance of Hubbard's work lies in the details of how the order of battle section worked and how it developed from a nonexistent department to one that produced creditable intelligence at the end of the First World War. Hubbard established the order of battle section.

Lieutenant-Colonel Sweeney had a proud legacy. In an article published in *The Washington Post* on 11 April 1963, Sweeney was credited as being a founding member and editor of the United States *Stars & Stripes* magazine, which is still published.⁷ Sweeney's diary

³Walter Campbell Sweeney, *Military Intelligence: A new Weapon in War* (Fredrick A Stokes Company: New York, 1924), p3.

⁴Samuel T. Hubbard, *Memoirs of a Staff Officer 1917-1919* (Cardinal Associates, Incorporated: 1959), p3.

⁵Ibid, p4.

⁶Ibid, piii.

was important to this research because it described how the order of battle section functioned, and can therefore be used to supplement and support the work of Hubbard. Sweeney used a description of 'raw material' as information and 'product' as intelligence to articulate intelligence analysis. He highlighted the innovation of Hubbard's work in tracking enemy movement on the Western Front.

Order of Battle Section Development

On 28 May 1917, a rainy and cold day in New York city harbor, the White Star Line passenger ship *Baltic* began its voyage to Liverpool, England.⁸ The passengers comprised the core staff positions of General Pershing's American Expeditionary Force General Headquarters (AEFGHQ). The general staff included the newly formed intelligence section along with General Nolan and Captain Hubbard. By 13 June, the AEFGHQ had crossed the Channel to France. On Monday 18 June 1917, Hubbard started working at the temporary AEFGHQ on 27 and 31 Rue Constantine in Paris, France.⁹ It was at this time that General Nolan explained to Hubbard the expectations and responsibilities for the department of order of battle section, which would function under Hubbard's command. Hubbard was given a general goal and rough outline of what the order of battle section's structure should look like. This structure was completely at Hubbard's direction and designed to maximize the section's productivity. At this time, Hubbard began his working relationship with his French counterpart, who would teach Hubbard how the order of battle section functioned as a component of tactical combat intelligence.¹⁰

On 1 September 1917, General Pershing, General Nolan, Captain Hubbard and the entire general staff of the AEF including the intelligence section established their permanent barracks located in Chaumont, France.¹¹ Chaumont provided adequate work space for Hubbard to continue developing the structural framework of the order of battle section. Hubbard's civilian experience as a stock broker and his Master of Business in accounting from Harvard undoubtedly made him the best candidate for the job. AEF officers were sent to Allied armies in January 1918 to learn everything they could on how an intelligence section functioned. They learned how to critically analyze and articulate the sheer volume of information collected by the intelligence organization into a summary report. Officers such as Hubbard, Sweeney and others were sent to observe and learn from both the British and the French armies.

⁸John J. Pershing, *My Experience in the First World War* (New York: Da Capo Press, 1995), pp41,59,64.

⁹Samuel T. Hubbard, *Memoirs of a Staff Officer 1917-1919* (Cardinal Associates, Incorporated: 1959), p25.

¹⁰*Ibid*, p25.

¹¹John J. Pershing, *My Experience in the First World War*. (New York: Da Capo Press, 1995), p156.

According to Hubbard's diary, the Americans utilized information from the French to aid in the development of the order of battle section, which was officially based on the British model.¹² The French order of battle system worked off a three-class category system.¹³ The first class was considered an attack division. The second class was considered a holding division for before or after an attack stabilized. The third class was the '*division du vieil homme*' or the old man division. This division was comprised of men over 35 years old.¹⁴ The three-class category system was beneficial because it allowed French operations to make informed decision based on the classification of the division. Once enemy unit identification was confirmed, their position was placed on a map. These maps can vary in size depending on the situational requirements. A trench raid would require a pocket size map whereas a division attack would produce a table size map. In general, the map was the size of a large table. A database of maps was kept in a file folder form.¹⁵ Along with current maps of the Western Front, a complete set of up-to-date file folder was given to Hubbard to begin developing the American version of the order of battle section. This category system had one other significant feature. The French order of battle system had a paper database compiling all known German divisions. The key point here was that the French were tracking all enemy divisions on and behind the front lines.

The necessary information for developing a tactical map of German units was derived from POW interrogation and trench raiding, which were covered in chapters three and four. The need for continuous trench raids becomes apparent in order to have a tactical image of the enemy units facing the AEF. Unit identification was assigned the highest priority from American interrogators and their linguistic support staff. By conducting trench raids, interrogating German POWs and identifying the enemy units and formations, the order of battle section could understand the potential impact of the German units facing the AEF because of the file folders given by the French and the three-tier system. According to POW interrogations on 2 August 1918, it was determined that the German sector to the front of the 82nd Division was being held by the 227^h Division and the 77th Reserve Division. Both divisions were brought from the Russian front earlier that year and under Hubbard's classification were green or holding divisions.¹⁶ Clearly the Germans' perceived intentions were to stabilize or maintain the line in front of the US 82nd Division.

¹²Samuel T. Hubbard, *Memoirs of a Staff Officer 1917–1919* (Cardinal Associates, Incorporated: 1959), p25.

¹³Ibid, p25.

¹⁴Ibid, p25.

¹⁵Ibid, pp28-29.

¹⁶Records of the American Expeditionary Forces (World War I), Record of Combat Divisions:1917-1918, RG 120, ARC ID 301641, Entry NM-91 1241.

A secondary source of enemy unit identification was derived from captured enemy documents, which will be covered in chapter six. Documents such as postcards either found on enemy combatants or in unoccupied trenches were sources of information. In one instance, an envelope was found by the 1st Division in an enemy trench with the address on it. The address on the envelope confirmed the location of the enemy regiment.¹⁷ On 7 June 1918, another postcard was captured that showed that a man belonging to the German 2nd Battery of the 28th Foot Artillery had passed through a hospital in St. Quentin on his way to the rear.¹⁸ In January 1918, intelligence specialist found a Metz newspaper during a raid against the Germans along the St Mihiel front. The newspaper contained an advertisement that the Guard Band would be holding a concert the following Sunday. This provided the AEF with the location of the Guard's Division, which until this time they had been unable to locate.¹⁹

While developing an order of battle system, Hubbard constructed a spreadsheet grid for each German division considering known variables. These variables included knowing that the German division would be removed from the line when they sustained fifty percent casualties.²⁰ Hubbard would then add a three to six weeks assumption for that division to reconstitute before rejoining the fight. At first, this information was provided by the French and British summary of intelligence reports. However, once the AEF combat divisions came online, they supplemented the information to the order of battle section. Hence, Hubbard recognized a very specific behavior of the enemy division which generated a tactical image of the Western Front. Hubbard could estimate, as the war progressed, when an attack seemed imminent. The longer the unit was out and an increase in the number of unaccounted attack units could indicate when an attack was coming, but not its geographical location.

Three Tier System

At Chaumont AEFHQ, Hubbard finished the process of developing the structure of the order of battle section. Analytics and map-making were the necessary tools which Hubbard utilized. Hubbard changed the three-class category system to a color scheme. Red corresponded to attack division, green to holding division, and white to old man division. In addition, Hubbard added the names of each German division.²¹ The map that was constructed

¹⁷World War Records 1st Division A.E.F. Regular: Summaries of Intelligence 1st, 25 Dec 1917 to 26 June 1918, US Army War College, Carlisle, PA, p50.

¹⁸Ibid, p363.

¹⁹Samuel T. Hubbard, *Memoirs of a Staff Officer 1917–1919* (Cardinal Associates, Incorporated: 1959), p166.

²⁰Ibid, pp31-32.

²¹Ibid, p29.

via Hubbard's method was updated every 24 hours and was made as large as current technology would allow. Smaller maps would be sent down to divisions. There were even maps specifically designed for battalion commanders prior to any planned attack. In addition, Hubbard added a 365-day schedule spreadsheet grid for each division containing a color scheme that identified the daily activity of the enemy divisions to the database files. A red X meant that the division was actively fighting, a black grid appearance meant little or no activity, and an empty box meant that it was out of the fighting line and being replenished with manpower.²² In his *Memoirs of a Staff Officer*, Hubbard suggested that the British only concerned themselves with the enemy units that their respective armies were facing. By improving on the category system and improving the database, Hubbard began to track all known German divisions. Hubbard contended that by limiting the focus to only the enemy troops they were facing, the British left themselves vulnerable to an attack from an untracked enemy division. He argued that the great German Spring Offensive of 21 March 1918 was a missed opportunity for Allied intelligence, because there were several red divisions that were out of line too long that were not accounted for by the Allies.²³ However, a closer inspection of Hubbard's claims suggests that they do not stand up to scrutiny.

Operation Michael, the first of the German offensives of 1918, dealt a terrible tactical blow to the British army.²⁴ Hubbard's mathematical pattern recognition system that was applied to the order of battle section for tracking enemy units lacked practical application for the British and French. The American order of battle section did not possess the ability to predict future locations of battle. Hubbard's statement concerning the events of the German Spring Offensive exaggerated the potential of the American order of battle system. The American order of battle section could provide statistical information on any given enemy division. Hubbard recognized mathematical patterns in the movement and behavior of the German division. According to Hubbard, the allied intelligence sections had their own presumed geographical locations for future possible German offensives since the close of the Russian Eastern front. Hubbard's book raised an interesting point concerning the French and British intelligence sections for a distinctively different perspective on future German attack. The French intelligence section always thought that the German attack would fall upon Alsace-Lorraine, which it never did.²⁵ The British intelligence section thought that there would be either a German attack on the coast

²²Samuel T. Hubbard, *Memoirs of a Staff Officer 1917-1919* (Cardinal Associates, Incorporated: 1959), p30.

²³Ibid, p45.

²⁴David Zabecki, *The German 1918 Offensives: A Case Study in the Operational Level of War* (London: Routledge, 2006), pp113-172.

²⁵Samuel T. Hubbard, *Memoirs of a Staff Officer 1917-1919* (Cardinal Associates, Incorporated: 1959), p39.

to cut them off from their sea supply route or between the area of the Western Front that was held jointly with the French.

The following excerpt dated 2 March 1918 from General Douglas Haig's diary during a meeting with British army commanders and Brigadier General Edgar Cox counters Hubbard's unfavorable assessment of the British order of battle section:

The usual statement on the position of the Enemy was made by my Intelligence Officer (Cox). He gave reasons why we think the Enemy is preparing to attack on the fronts of our Third and Fifth Armies. I emphasized the necessity for being ready as soon as possible to meet a big hostile offensive of prolonged duration.²⁶

As early as 12 March 1918, British aerial reconnaissance photography confirmed the movement of large German units near the 3rd and 5th British Armies.²⁷ However, it would seem that 'Haig and GHQ had underestimated both the weight and direction of the attack.'²⁸ According to Jim Beach, British General Headquarters miscalculated the German and British 'determined resistance'.²⁹ They felt that the German fighting resolve was at a breaking point and the British fighting morale was at an all-time high and could withstand an attack, which turned out to be not the case in this situation.³⁰ The German offensive of 21 March 1918 'fell on the southernmost part of Haig's line, destroying Sir Hubert Gough's 5th Army'.³¹ This evidence shows that Hubbard was incorrect when he stated the Allies should have expected an attack on 21 March 1918. The British summary of Intelligence prior to 21 March 1918, did not report inactive German divisions or corps. However, starting in the 'month of May 1918, BEF intelligence staff had tracked carefully the number and location of German divisions in reserve.'³² It was unclear as to whether Hubbard invented this tracking system or borrowed it informally from a British intelligence officer. The tracking of inactive German formations was a practice done by both American and British armies by May 1918.³³

²⁶Gary Sheffield (Ed.), *Douglas Haig: War Diaries and Letters, 1914-1918* (London: Weidenfeld & Nicolson, 2005), p385.

²⁷Jim Beach, *Haig's Intelligence* (United Kingdom: Cambridge University Press,2013), p280.

²⁸Tim Travers, *The Killing Ground* (United Kingdom: Pen & Sword, 1987), p225.

²⁹Jim Beach, *Haig's Intelligence* (United Kingdom: Cambridge University Press,2013), p288.

³⁰Ibid, p288.

³¹David French, 'Failures of Intelligence: The Retreat to the Hindenburg Line and the March 1918 Offensive,' in *Strategy and Intelligence: British Policy during the First World War*, ed. Michael Dockrill and David French (London: The Hambledon Press, 1996), p70.

³²Jim Beach, *Haig's Intelligence* (United Kingdom: Cambridge University Press,2013), p297.

³³A.E.F. General Headquarters G-2, British G.H.Q. Summary of Information No. 476-550 1918, Box 6374, RG 120, Records of the American Expeditionary Forces World War I, NARA College Park, MD.

From the British summary of information prior to March 1918, it would seem that the British were uninterested in documenting, unaccounted for German divisions that were inactive.³⁴ Surprisingly by May 1918, the British summary of information was publishing this information.³⁵ It would seem highly probable that the British were tracking uncounted divisions but were not disseminating the information on the summary reports. The entire point of the British summary of information was to deliver compact and decisive information in a few possible words. The lack of publication could very well be efficiency discipline, why waste the space on unknown movements. A review of the British summary of information from 1-26 March 1918, states noting beyond immediate verifiable German division.³⁶ However, the British summary of information dated 20 May 1918 was tracking 156 German divisions.³⁷ The AEF once they started collecting and producing summary reports disseminated inactive divisions from the beginning.

There are a few important points from the British order of battle section as it relates to the American order of battle section. The performance of the British order of battle section along with Hubbard's statement demonstrate some of the developmental weakness of the American order of battle section. By 1918, the British intelligence section was operating a first-class organization; in comparison the American order of battle section was in the process of learning and establishing their own enemy unit tracking system. The comparison from this case study clearly demonstrates the British intelligence efficiency, as well as the tremendous progress the American order of battle section had made.

Now that the functions of the American order of battle section have been established, an examination of how information and intelligence flowed throughout the command units can occur. According to Nolan, 'a flow of information was maintained to the rear'.³⁸ The order of battle section received information from lower echelons. It then converted information or 'raw materials' into intelligence or 'products'.³⁹ The benefit of the summary of information and

³⁴General Headquarters; General Staff; G-2 Information Division (G-2-A); Dissemination and Filing (G-2-A-8), Daily Summaries of Information, 1917-1918, Box 5960, RG120 Records of the American Expeditionary Forces (World War I), NARA College Park, MD.

³⁵A.E.F. General Headquarters G-2, British G.H.Q. Summary of Information No. 476-550 1918, Box 6374, RG 120, Records of the American Expeditionary Forces World War I, NARA College Park, MD.

³⁶Ibid.

³⁷General Headquarters; General Staff; G-2 Information Division (G-2-A); Dissemination and Filing (G-2-A-8), Daily Summaries of Information, 1917-1918, Box 5960, RG120 Records of the American Expeditionary Forces (World War I), NARA College Park, MD.

³⁸Center of Military History, *United States Army in the World War-1919, Vol 13* (Washington D.C.: Center of Military History, 1988), p3.

³⁹Walter Campbell Sweeney, *Military Intelligence: A new Weapon in War* (New York: Fredrick A Stokes Company, 1924), pp105-110.

intelligence was its dissemination of tactical enemy data. The American order of battle section was an integral component of the summary of intelligence and information.

Summary of Intelligence

The summary of intelligence's main function was disseminating any and all enemy tactical information including unit identification. The act of gathering enemy identification also produced the enemy's location. Each intelligence officer in the organization's hierarchy within the AEF combat units was required to disseminate enemy identification to the next higher level. This type of information carried the most weight once it was confirmed at divisional and corps formation. At battalion and regimental infantry formation, the enemy's exact position or the enemy's main line of resistance (MLR) was the most valued tactical data. Once enemy identification reached divisional intelligence officers (G-2) it had been observed and confirmed by the 12 battalion intelligence officers (S-2). Thus, two of the most important components of tactical combat intelligence merged together to produce a vital piece of intelligence: where was the enemy and who was the enemy. Each intelligence formation (battalion, regimental, brigade, and divisional) produced their own order of battle section.⁴⁰ Each higher echelon would refine this material and confirm its contents until it reached its final destination at the desk of Hubbard in the order of battle section. Once an enemy unit's identification reached Hubbard at AEFHQ, a tactical image emerged. Enemy identification and MLR information helped Pershing make informed decisions as the war went on. The summary of information was an important reporting tool for the AEF because it kept all parts of the organization constantly informed on all known enemy activities. Dissemination of information was key to the AEF's growth and to the development of its intelligence machinery.

AEF officers in the intelligence section studied all aspects of intelligence down to the divisional level and were trained how to write the summary of information and intelligence. The information gathered from lower echelon officers was then sent to General Dennis Nolan head of all-American intelligence G-2 at AEFHQ. Nolan in turn analyzed and condensed all the information from the raw material into a summary of intelligence.⁴¹ This summary of intelligence was given to General John J. Pershing, commander of all AEF soldiers in France. It contained the concentration of German troops and identified the troops by unit along with their possible objectives. German possible objectives were derived directly from Hubbard's three-tiered

⁴⁰The Army War College Barracks in Carlisle, Pennsylvania. General Headquarters American Expeditionary Force Box 11 of 26. Intelligence Regulation 1917.

⁴¹James Cooke, *Pershing and his Generals: Command and staff in the AEF* (Connecticut: Praeger, 1997), p94.

system. The summary of intelligence in turn was cascaded down through AEF combat units.⁴² The distinction between the two summary reports was that the intelligence report had an analytical summary that was not contained in the summary of information. In this manner, the flow of information and intelligence cycles through the military organization cascaded between the top echelon and the fighting battalions in the trenches. The summary of intelligence was the method to brief and inform the AEF as an organization of the various enemy activities.

An example of summary of intelligence process can be seen with the AEF I Corps' summary of intelligence on unit identification at the start of Meuse-Argonne Offensive on 25-26 September 1918. The timetable for the summary was on a 24-hour cycle. The summary report for that day stated that in the Argonne area, the 'order of battle confirmed' was 2nd Landwehr Division and 1st Guards Division in the line. On 26-27 September, the summary report stated that order of battle section confirmed the presence of 2nd Landwehr Division, 1st Guards Division and 5th Guards Division.⁴³ The key here was the word 'confirmed'. The process of identifying enemy units from battalion level to divisional level showed that the AEF's system for collecting, analyzing and disseminating enemy identification could produce sound tactical intelligence on the location of German units.

G-2 at I Corps would have had access to the German division's file folders. The information in the folders was used to understand the tactical capability of the enemy divisions based off Hubbard's color code system. The 1st Guard Division was considered one of the best shock divisions in the German army. It consisted of three regiments. According to Hubbard's system it was a red division.⁴⁴ The 2nd Landwehr Division had three regiments and was considered a 3rd class or white division. They were used as a training unit for the whole four years of the war, this division stayed in the Argonne.⁴⁵ The 5th Guards Division had three regiments. It was not identified until 20 March 1918. This was a first class or red division. The file folder for this division contained a high opinion for this division. It stated that 'the 5th Guards Division must be considered one of the best divisions of the German army'.⁴⁶ This summary was disseminated down to the regiment units of the AEF. The tactical advantage given to the AEF I Corps by the order of battle section would provide options and the opportunities to apply

⁴²James Cooke, *Pershing and his Generals: Command and staff in the AEF* (Connecticut: Praeger, 1997), p96.

⁴³Center of Military History, *United States Army in the World War: 1917-1919, Vol 9.: Military Operations* (Washington, D.C. :1990), pp162-164.

⁴⁴United States Army, American Expeditionary Forces, General Staff, G. *Histories of two hundred and fifty-one divisions of the German army which participated in the war (1914-1918)* (Washington: G.P.O. :1920), p18-19.

⁴⁵*Ibid*, p62.

⁴⁶*Ibid*, p105.

previous experience dealing with the different classes of enemy divisions. Having this kind of specific intelligence would allow the operational commander to make better informed decisions.

Conclusion

The goal of AEF intelligence officers in the First World War was to know the enemy's capacity and intention. The American intelligence section within the AEF proved to be a flexible organization. The foundation for a learning environment was created by General Nolan when he granted Captain Hubbard autonomy for the order of battle section's structural organizational development. Having an established environment open to new and different ideas developed and solidified the order of battle section as a fully functional department within the intelligence section of the AEF. Hubbard's leadership, civilian experience and education contributed to the numeric pattern recognition system. The summary of information and intelligence was the means by which intelligence was reported and disseminated. It was a vital tool in the growing military effectiveness of the AEF.

Sweeney's interpretation of intelligence and information flow was articulated using the analogy of raw material as information that flowed from front line troops to the rear, where it (information) would be converted into a product (intelligence). This flow of ideas and information would be the greatest accomplishment of the order of battle section. Information should be understood as fact, where intelligence should be understood as highly educated opinion supported by experience.

The AEF intelligence section was created out of the necessity to obtain tactical battlefield intelligence such as the enemy's order of battle. This section was influenced from the French intelligence services. Hubbard enhanced it by developing a color-coded grid spreadsheet. Hubbard also changed it from a numeric class system to a color scheme: red was attacking, green was holding, and white was the 'old man division'. This innovative approach enabled the AEF intelligence to develop and incorporate a functioning order of battle section. Civilian-soldiers' influence on the development and establishment of the order of battle section represented the effects of innovation on an organization, namely in this case the AEF's military intelligence section.

Chapter Six:

Captured German Documents

Analysis of captured German documents during the course of the First World War was a component of combat intelligence that when used correctly had the ability to shift momentum on the battlefield. One of the functions of combat intelligence was to collect, analyze, and disseminate captured enemy documents.¹ Americans also shared combat intelligence through the use of captured German documents with the French and British. Captured German documents had a direct influence on the AEF's battlefield operations. The operational benefit of using captured documents resulted in the establishment of a professional military education component of the AEF and US Army, specifically in linguistics.

Firstly, this chapter will argue that the development of AEF combat intelligence with regards to captured German documents occurred due to the collaborative partnership of disseminating intelligence with the British and French armies. This chapter will examine the case study of a downed German airship near American GHQ in October 1917. An analysis of captured German documents will also highlight the underlying need to establish a 'papers and documents examining service' to teach American soldiers how to read German.² Another case study in this chapter will be the review of captured German manuals for infantry tactics. Furthermore, the chapter will look at operational orders captured in the Marne sector on 17 July 1918 during the German Marneschutz-Reims Offensive, and captured carrier pigeon documentation during the Second Battle of the Marne.

Secondly, the chapter will examine the contributions made by foreign-born American soldiers to the use of captured German documents. It will also examine the veterans' questionnaire survey to highlight the influence foreign-born American soldiers had on the use of these documents. Analysis of captured German documents will underscore how American combat intelligence developed during the First World War.

Documents 101

Captured German documents consisted of any form of text on paper found on or in enemy hands or trench locations. Some of the more consistent examples of captured German documents were maps, operational orders, written communications, and tactical and technical

¹Irving Heymont, *Combat Intelligence in Modern Warfare* (Pennsylvania: The Stackpole Company, 1960), p6.

²Edwin Eugene Schwien, *Combat Intelligence Its Acquisition and Transmission* (Richmond: Garrett and Massie, 1936), p60.

training manuals. Soldiers' paybooks and personal letters to and from the home front were also carefully analyzed for clues such as morale and troop movement.³ The AEF intelligence section designed a classification scheme to help prioritize the many different kinds of captured documents.

Captured documents, such as paybooks, provided a good conversational interrogation talking point with German POWs. Historian Jim Beach discussed an analytical component to the German paybook that allowed calculation of the number of soldiers in a given unit. In 1916, Camena d' Almeida, a citizen turned soldier of the French army, was the first to observe that the German infantry paybooks were sequential.⁴ Almeida concluded that if one were to take the highest number and lowest number from a batch of captured German paybooks from the same unit, a statistical extrapolation of manpower of the enemy unit could be known.⁵ Sharing this information with the British intelligence section then later American intelligence section. This information had several implications. First German manpower within units could be reasonably established. Secondly, casualty figures could be deduced by collecting paybooks from dead enemy combatants.⁶ The most interesting contribution was that Almeida was not a career officer in the French army, but a civilian, whom add to the development of combat intelligence, which the Americans later adapted and integrated as its own.

In general, captured German documents were classified into three categories: A, B, and C. Category 'A' documents were of immediate tactical value and were transmitted to headquarters immediately to be acted upon. Category 'B' documents had strategic intelligence value and were evaluated before being transmitted to headquarters. Category 'C' documents had no military or strategic value and were retained then at a later date destroyed.⁷ At the point of capture, documents were placed in mail bags with the location they were found, and the name and rank of the soldier and/or unit from which they were captured.⁸ Typically, this was done at regiment Headquarters. The manner in which captured German documents traveled from point of capture to army level headquarters for inspection was the same as that of the prisoners of war, as discussed in chapter three. A point of interest from the 'Intelligence Regulation Manual' on captured German documents was 'speed is key, do not waste time on

³Terrence Finnegan, *'A Delicate Affair' on the Western Front* (Gloucestershire: Spellmount, 2015), p80.

⁴Jim Beach, *Haig's Intelligence* (United Kingdom: Cambridge University Press, 2013), p178.

⁵Ibid, p178.

⁶Ibid, p177.

⁷Irving Heymont, *Combat Intelligence in Modern Warfare* (Pennsylvania: The Stackpole Company, 1960), p120.

⁸Intelligence Regulations, 4 June 1919, General Headquarters American Expeditionary Forces Papers: Second Section Reports and Regulations:1914-1918. U.S. Army Heritage and Education Center.

translations'.⁹ This was an important concept that was not only written in the first manual, but also in the last updated manual at the war's conclusion. This statement was a strong indication of the AEF's weak institutional development of foreign language proficiency, specifically concerning the written form of the German language.

Foreign language proficiency, among the officer corps of the AEF, was a mixed bag of skills. No structure existed to teach officers foreign languages. Translators were pulled out of the enlisted troops based on their foreign language proficiency. On 3 May 1917, U.S. Senator Warren sent a telegram to General Pershing stating '{Warren} wire me today whether and how much you speak, read and write French.'¹⁰ According to Pershing, he was proficient in French.¹¹ Various intelligence and operational officers in the AEF were not proficient in foreign languages. John Patrick Finnegan stated that all division G-2 intelligence officers were assigned a commissioned interpreter as part of their staff.¹² Lieutenant Colonel George C. Marshall, a G-3 operations officer of the 1st Division at the time, had no foreign language proficiency.¹³ Captain Thomas Shipley, a regimental S-2 intelligence officer for the 28^h Infantry Regiment of the 1st Division, stated in his book that he was proficient, but felt that intelligence officers should have a sergeant who was proficient in foreign language.¹⁴ This soldier would serve as a check and balance to the translation. General Dennis Nolan, head of intelligence G-2 AEFHQ, stated in his unpublished diary that he was not proficient in a foreign language. Thus, the French army provided a French and German translator for Nolan.¹⁵ Thomas Gowenlock, G-2 of the 1st Division, had an American translator who could read and write French and German.¹⁶ Captain Hubbard, head of order of battle section, had a French provided translator.¹⁷ Clearly, the AEF senior leadership lacked proficiency in foreign language.

Captured German documents including manuals, divisional war diaries and maps that General Nolan felt were important to the AEF, were disseminated with his approval. This contributed to the development of combat intelligence because all intelligence units had access

⁹Intelligence Regulations, 4 June 1919, General Headquarters American Expeditionary Forces Papers: Second Section Reports and Regulations:1914-1918. U.S. Army Heritage and Education Center.

¹⁰John Pershing, *My Experience in the First World War: General John J Pershing* (New York: De Capo Press, 1995), p1.

¹¹Ibid, p1.

¹²John Patrick Finnegan, and Romana Danysh, *Military Intelligence* (Washington, D.C.: Center of Military History, United States Army, 1998), p34.

¹³George Marshall, *Memoirs of my Services in the World War 1917-1918* (Boston: Houghton Mifflin Company, 1976), p33.

¹⁴Shipley Thomas, *S-2 In Action* (Harrisburg, Pa.: The Military service publishing co, 1940), p1,14,39.

¹⁵Dennis Nolan, Dennis E. Nolan Papers Box 2, March 1935, U.S. Army Heritage and Education Center.

¹⁶Thomas Gowenlock, *Soldiers of Darkness* (New York: Doubleday, Doran & Company, Inc, 1937), p6.

¹⁷S.J. Hubbard, *Memoirs of a Staff Officer 1917-1918*, 1959, Library of Congress, p6.

to intelligence information. Nolan controlled the shared intelligence from captured documents that was received from the French and British armies. Consistency in the development of intelligence was maintained because only one person was in charge of the intelligence flowing from allied armies. The AEF was for some time completely dependent on the British and French for complicated or technical translation of captured German documents with the exception of a few American soldiers who were proficient in a foreign language.

The nature of the relationship between the French, the British and the Americans was a collaborative effort to improve the AEF's deficiencies such as the translation of captured documents. The AEF's General Headquarters had expert linguists who were trained to quickly determine if a captured document had any intelligence value such as enemy troop strength.¹⁸ There was a general understanding between the French and the AEF that the French would translate captured documents and help to interrogate German prisoners until the AEF was capable of this task. By 10 August 1918, the AEF was operating at army formation level and was capable of translation and interrogation.¹⁹ The AEF had skilled personnel in place to handle the translation workload, but the French not only provided interpreters, but further translated documents. The development of captured German documents for the AEF truly progressed because of the collaborative effort of the British and French. The next case study will highlight the sharing of intelligence while continuing to note the challenges of document translation.

Zeppelin Down

In September 1917, the AEFHQ was located in the city of Chaumont.²⁰ This was also the location where Captain Hubbard operated the order of battle section of the AEF. On 19-20 October 1917, several German Zeppelins were returning from a major air-raid on London.²¹ As Zeppelin L49 was returning to Germany, it suffered a mechanical failure.²² Zeppelin L49 crashed near the American GHQ.²³

The diaries of Captain Hubbard and General James Harbord described the events surrounding the capture and dissemination of the Zeppelin's documents. Early Saturday

¹⁸Karen Kovach, *The Life and Times of MG Dennis E Nolan, 1862-1956: The Army's First G2* (Virginia: U.S. Army Intelligence and Security Command, 1998), p30.

¹⁹John Votaw, *The American Expeditionary Forces in World War I* (Great Britain: Osprey Publishing, 2005), p29.

²⁰Edward Coffman, *The War to End All Wars: The American Military Experience in World War I* (The University of Wisconsin Press: Madison, 1986), p131.

²¹Ian Castle, 'Zeppelin Raids, Gothas, and 'Giants': Britain's First Blitz, 1914-1918.'

<http://www.iancastlezeppelin.co.uk/1920-oct-1917-1/4594081024>.

²²Douglas H. Robinson, 'ZEPPELIN Intelligence.' *Aerospace Historian* 21, no. 1 (1974): 1-7. Accessed October 17, 2020, p3.

²³Ibid, p4.

morning on 20 October in the skies over Chaumont headquarters, an enemy Zeppelin was spotted in the sky.²⁴ It was clear to all that the Zeppelin was malfunctioning and descending at an uncontrollable rate. All of the available intelligence officers on hand quickly armed themselves and ran to the nearby crash site. A perimeter was established and a search of the wreckage for documents began immediately. The crew was captured by a single French farmer with a shotgun before any Americans arrived.²⁵ Anticipating the capture of enemy material and documents, the American soldiers made ready as many 'gunny sacks' as they had on hand.²⁶

Investigation of the wrecked Zeppelin was tedious as the wreckage was spread over a great distance including a partial swamp. The search produced a German code book.²⁷ It also produced a stack of 50 plus documents. Captain Hubbard and Colonel Williams, who was acting head of intelligence while General Nolan and his second in command Colonel Conger were away from GHQ, worked throughout the night to reconstruct the documents as some of them were damaged. After the documents were reconstructed, they began to translate them. The documents included a navigation chart. Hubbard was able to make this determination from his knowledge of longitude and latitude, which helped him to piece together the chart. In fact, the American intelligence officer had found a 'squared position chart of the North Sea.'²⁸ They also included naval charts of some parts of the United Kingdom's coast and the towns that were to be targeted. Colonel Williams decided to first send Captain Hubbard to the American Naval Headquarters in London, a journey of 655.7 kilometers, to the office of Admiral William S. Sims.²⁹ Later the office of British Naval Intelligence Admiral Hall.³⁰

Hubbard met with British General Charteris, Haig's Head of Intelligence and General Sir George Macdonogh, Director of Military Intelligence in London, when he arrived in the city of Montreuil, France. Captain Hubbard briefed the two Generals on the code book and charts captured from the Zeppelin. The British Generals agreed that this intelligence was of the highest importance. General Macdonogh took Hubbard as his 'temporary aide' and the two of them left for London.³¹ After Hubbard shared the captured German documents with American Naval Intelligence, it was decided that Hubbard would take them to British Admiral Sir William

²⁴S.J. Hubbard, *Memoirs of a Staff Officer 1917-1918*, 1959, Library of Congress, p107.

²⁵James Harbord, *The American army in France, 1917-1919* (Boston: Little, Brown and Co, 1936), pp156-57.

²⁶*Ibid*, pp156-57.

²⁷S.J. Hubbard, *Memoirs of a Staff Officer 1917-1918*, 1959, Library of Congress, p107.

²⁸Douglas H. Robinson, 'ZEPPELIN Intelligence.' *Aerospace Historian* 21, no. 1 (1974): 1-7. Accessed October 17, 2020, p4.

²⁹S.J. Hubbard, *Memoirs of a Staff Officer 1917-1918*, 1959, Library of Congress, p117

³⁰Douglas H. Robinson, 'ZEPPELIN Intelligence.' *Aerospace Historian* 21, no. 1 (1974): 1-7. Accessed October 17, 2020, p4.

³¹S.J. Hubbard, *Memoirs of a Staff Officer 1917-1918*, 1959, Library of Congress, p117.

Reginald Hall, Director of Naval Intelligence.³² It would be sometime after the war that Hubbard would learn that the code book proved to be one of the most valuable finds for the British Naval authorities.³³ It enabled the British to locate where practically all the German submarines would surface. Before the discovery of the code book, the British were losing 50-60 ships a week to German submarine attacks. After the code book, the sinking of British ships decreased according to Hubbard.³⁴ Admiral Hall's biography corroborated Captain Hubbard's statements on the acquisition of the German code source book and the decrease in the number of merchant vessels being sunk.³⁵

The captured German documents from the Zeppelin L49 crash produced a rare opportunity and should be regarded as an unusual intelligence-gathering find that occurred by pure chance. However, once AEF intelligence started piecing together the documents it became clear that they were inexperienced. The highest echelons of the AEF had no section at this point devoted to translating or even dealing with captured documents. What could be readily observed from the Zeppelin L49 documents was the level of collaboration between the British and American intelligence sections.

General Nolan stated that the AEF needed subject matter experts to allow it to adequately examine captured German documents. He further stated that the creation of a clearing house or laboratory for captured documents was needed to sort quickly the various materials captured.³⁶ The need to establish a school to teach soldiers how to read and identify tactical and strategic documents now became a noticeable opportunity for improvement. At the end of October 1917, General Nolan published the intelligence regulation manual for the AEF. The intelligence regulation manual would be the foundation for intelligence officers in the field to conduct their job functions. As far as captured German documents were concerned, the regulations simply stated to forward the documents to the next higher echelon with extreme urgency.³⁷ The case study on Zeppelin L49 was a strategic and tactical benefit, yet it was also a glaring institutional failure for document exploration that the AEF would need to address in order to solidify its intelligence section.

³²Sir William James, *The Code Breakers of Room 40* (New York: St Martin's Press, 1956), p xvii.

³³S.J. Hubbard, *Memoirs of a Staff Officer 1917-1918*, 1959, Library of Congress, p117.

³⁴*Ibid*, pp129-133.

³⁵Sir William James, *The Code Breakers of Room 40* (New York: St Martin's Press, 1956), p115,160.

³⁶Dennis Nolan, Dennis E. Nolan Papers Box 2, March 1935, U.S. Army Heritage and Education Center.

³⁷Intelligence Regulations, 4 June 1919. General Headquarters American Expeditionary Forces Papers: Second Section Reports and Regulations:1914-1918. U.S. Army Heritage and Education Center.

Initial Intelligence Formation

The US Army entered the First World War without training manuals that could help guide the soldiers in combat tactics against the Germans. The French and British militaries provided these manuals. One of the training manuals shared with the AEF was 'German and Austrian Tactical Studies', a German tactics manual.³⁸ The manual focused on the infiltration tactics of the German *Sturmmann* or stormtrooper as they were more commonly called. A brief review of the chronological journey of the German tactics' manual would highlight the collaborative nature of intelligence sharing and the level of priority the AEF attached to this manual in enhancing the tactical development of the AEF.

On 31 July 1917, the German army attacked Cerny Plateau, France. The goal was to attack with limited objectives.³⁹ The result was the French army capturing the training manual and other documents that formed the German tactics manual. On 28 August 1917, the French intelligence bulletin published the manual. On 15 October 1917, the AEF received a copy of the manual. It should be recalled that General Nolan was ultimately responsible for the dissemination of any captured German documents to the AEF. Nolan had the authority on what material was published throughout the AEF. In late December of 1917, the manual was printed and disseminated to all incoming American divisions. On 5 February 1918, the 1st Division started using this manual as a training guide for future raids and as a learning tool to defend against German attacks.⁴⁰

The AEF's manual did not incorporate the German tactics manual as they were written, but rather adopted its formula to the best of their ability. The German tactical manual's key emphases were speed and flexibility. Also, rehearsal prior to the attack was important. According to the German tactical manual, 'the speed of the blow seems to be the first element of success with extreme rapid action'.⁴¹ Another feature of the attack was two teams: one for speed and one for counterattack when resistance strengthens.⁴²

Effective infiltration tactics were needed by the AEF to develop their plan for localized attacks on enemy trenches. The AEF 1st Division worked on infiltrating enemy trenches for

³⁸The US Army War College, *German and Austrian Tactical Studies* (Washington: Government Printing Office, 1917), p103.

³⁹*Ibid*, p103.

⁴⁰George Marshall, *Memoirs of my Services in the World War 1917-1918* (Boston: Houghton Mifflin Company, 1976), p61.

⁴¹The US Army War College, *German and Austrian Tactical Studies* (Washington: Government Printing Office, 1917), p109.

⁴²*Ibid*, p109.

prisoners and documents from 5 February 1918 to the end of June 1918 with mixed results. The 1st Division planned four major raids against the German 25th Reserve Division in the Cantigny sector during the last few days of June and the first few days of July 1918.⁴³ Each regiment of the 1st Division planned and executed their own raid. The 18^h Infantry Regiment assigned Major Roosevelt the task of planning the raid for the sole purpose of capturing prisoners and documents. According to Major Roosevelt's memoir, he stated that they did just that.⁴⁴

On 29 June 1918 at 03:45 the 18th Infantry Regiment of the 1st Division AEF fired a concentrated artillery barrage along the main line of resistance of the German 25th Reserve Division, 118th Infantry Regiment.⁴⁵ The AEF's 18th Infantry Regiment's hammer fell on the trench section and 'subsectors of A- 1 and A-2'.⁴⁶ This shelling continued in undiminished strength until 4:15 am. At this time, the 18th Infantry Regiment attacked with two strong detachments. One detachment pushed steamroller-fashion through the 1st and 6th Companies of the German 118th Infantry Regiment.⁴⁷ The raid was an overall success. The 1st Division and the German 25^h Reserve Division's war diaries both recount an American surprise attack with only one American soldier's death. This raid produced a German 'captured document showing the precise location of a 105 MM-Howitzer battery at the center of Belle Assise farm as its location'.⁴⁸ Artillery rounds from the 1st Division were fired at the location on the captured map and the Howitzers were destroyed.

The raid itself was important because it was a key stepping stone for the AEF. The ability to surprise the German army with a successful raid, and quickly capitalize on the tactical information that was gained, demonstrated the effective development of AEF tactics. It also showed the development and implementation of tactical combat intelligence. Historian and First World War veteran Cyril Falls stated that tactical surprise required three elements: place, time, and weight.⁴⁹ The 1st Division delivered on all three with overwhelming conviction.

Ultimately, combat success depended on the soldiers who carried out the mission. Success on the battlefield started with proper training. The French intelligence bureau collaborated with the AEF by sharing captured German documents in the form of tactical

⁴³Center of Military History. *United States Army in the World War 1917-1919, Vol 4: Military Operations of the American Expeditionary Forces* (Washington, D.C.: United States Army, 1988), p782.

⁴⁴Theodore Roosevelt, 1887-1944, *Average Americans* (New York: G. P. Putnam's Sons, 1919), p132.

⁴⁵Center of Military History. *United States Army in the World War 1917-1919, Vol 4: Military Operations of the American Expeditionary Forces* (Washington, D.C.: United States Army, 1988), p801.

⁴⁶Ibid, p800-801.

⁴⁷Ibid, p800-801.

⁴⁸Ibid, p782.

⁴⁹Cyril Falls, *The Great War:1914-1918* (New York: G.P. Putnam's Sons, 1959), p349.

manuals. AEF divisions, namely the 1st, used these types of manuals to adapt their own style of warfare. The precise execution of the 29 June trench raid produced actionable intelligence that the 1st Division was able to quickly follow up on and influence the battlefield by eliminating a 105mm Howitzer, a costly piece of technology that was not easily replaced.⁵⁰ The destruction of the 105mm Howitzer occurred within an acceptable time frame (24-48 hours). This was attributed to having a soldier proficient in foreign language within the 1st Division. The improvements shown in the use of capture documents can also be examined using the case study of the Second Battle of the Marne.

The Second Battle of the Marne

15 July 1918 was the beginning of the fifth and final German offensive, named the Marneschutz-Reims Offensive. Historians such as Michael Neiberg have stated that the Second Battle of the Marne was unique because it was the only battle that had a large number of German, American, British and French soldiers on the same battlefield at the same time.⁵¹ The Germans attacked to the east and west of Reims (an area of the Marne River bend). Over the next three days, the Germans continued to attack. Then the Entente Powers began their counter-attack in the same area of the Marne. If the Second Battle of the Marne was unique from an operational point of view, then similarly intelligence gathering was in step with this assessment. The French intelligence section was very successful the days and hours leading up to the Marneschutz-Reims offensive.⁵² The French, through their own summary of intelligence and information, were keeping the British Expeditionary Force and AEF up to date as events were unfolding in a timely manner that benefited all parties involved. The AEF 42nd Infantry Divisions' intelligence section was also operating in an efficient manner.

The 42nd Division was a National Guard unit. It was nicknamed the Rainbow Division. The 42nd intelligence section established that the German order of battle on 17 July was as follows: from east to west all German Divisions starting with 7^h Division, 88th Division, Bavarian 1st Division, Bavarian 2nd Division, The Guard Cavalry Division, and 1st Division. Each German

⁵⁰Center of Military History. *United States Army in the World War 1917-1919, Vol 4: Military Operations of the American Expeditionary Forces* (Washington, D.C.: United States Army, 1988), p782.

⁵¹Michael Neiberg. *The Second Battle of the Marne*. Indiana: Indiana University Press, 2008.

⁵²David Retherford and Richard Willis, 'The Decisive Impact of French Military Intelligence on the German Marneschutz-Reims Offensive' *The Strategy Bridge*, (29 July 2019).

division placed one regiment on the main line of resistance with one regiment in reserve with about 2,500-3,000 meters of frontage each.⁵³

In the early hours of 17 July, the 42nd Division captured maps and operational orders of the first day (15 July) goals of the German offensive.⁵⁴ The document listed in detail the geographical expectation of each German unit. The capture of this document and the translation of it proved what the Entente Powers already knew. The German offensive was a failure due to the French intelligence section. The 42nd Division's intelligence section translated the document and disseminated the information to its Allied partners. Clearly, the 42nd had enough trained and skilled translators on hand to efficiently translate these and other documents. Most of the translation work within any given AEF division was done by foreign born American soldiers. This was truly the lifeblood for the AEF with regards to translation work.

17 July continued to yield intelligence for the 42nd. However, this time it came from the most surprising venue. The section of frontage held by the 110th Infantry Regiment of the 42nd had one YMCA volunteer embedded within a dugout built on the reverse side of a hill very close to the fighting, but safe from a direct hit.⁵⁵ Father Francis A. La Violette, an American from the state of Wisconsin, was in the YMCA dugout. When Violette heard the fluttering of wings near the entry, he found a tired and frightened pigeon with a message tube fastened to its leg. Removing the tube from the carrier pigeon, Violette found a message written in German.⁵⁶ Unable to read German, Violette rushed the document to the 42nd HQ. The message was quickly translated. It turned out to be a plea for reinforcements from the German regiment in front of the 110th Regiment.⁵⁷ For the last 24 hours the 42nd was in near constant combat thinking that the Germans were one push away from overtaking them, when in fact the Germans were in much worse shape. This method of collecting intelligence was not common, but it did happen from time to time. On 18 July, the Entente Powers unleashed an offensive of their own. The 42nd made sure to focus artillery fire on the regiment that sent the pigeon request for support.⁵⁸ The timely translation of the pigeon's message reinforces the advantage foreign

⁵³Center of Military History, *United States Army in the World War 1917-1919, Vol 5: Military Operations of the American Expeditionary Forces* (Washington, D.C.: United States Army, 1988), p166.

⁵⁴Ibid, p169.

⁵⁵Harry George Proctor, *The Iron Division, National Guard of Pennsylvania, In the World War: The Authentic and Comprehensive Narrative of the Gallant Deeds and Glorious Achievements of the 28th Division in the World's Greatest War* (Philadelphia: The John C. Winston company, 1919), p87.

⁵⁶Michael Neiberg, *The Second Battle of the Marne* (Indiana: Indiana University Press, 2008), p125.

⁵⁷Harry George Proctor, *The Iron Division, National Guard of Pennsylvania, In the World War: The Authentic and Comprehensive Narrative of the Gallant Deeds and Glorious Achievements of the 28th Division in the World's Greatest War* (Philadelphia: The John C. Winston company, 1919), p87.

⁵⁸Michael Neiberg, *The Second Battle of the Marne* (Indiana: Indiana University Press, 2008), p125.

language proficiency had on combat intelligence and the benefits that might accrue on the battlefield. Time and time again throughout the combat divisions of the AEF, the few trained linguists would prove their value to the war effort by giving the AEF a tactical advantage because they had specially trained translators and linguists.

Peer Learning in Combat Intelligence

A more helpful insight into the influence of captured German documents on the development of combat intelligence can be gained by analyzing the experience of collecting and reading German documents by enlisted soldiers of the AEF. Private First Class Knud Julius of the 325th Infantry Regiment, of the 82nd Division, a National Army Division, was one of these soldiers.⁵⁹ Upon capture of any German documents, PFC Julius and soldiers just like him would make decisions on the value of the document and the priority assigned to it. Based on the priority of the captured German documents, it would be sent to corps for in-depth analysis. Document exploration was carried out at GHQ by expert linguists trained to quickly assess if a document had intelligence value. Documents, such as captured orders, pay books, casualty lists and letters, could provide important indications regarding enemy troops strength.⁶⁰ This analysis of captured German documents was possible because PFC Julius, like some of the other soldiers of the AEF, could read German because he was born in Denmark.⁶¹

The study of PFC Julius's experiences as an intelligence soldier therefore helped to illuminate the influence of captured German documents on the development of combat intelligence. PFC Julius's company commander, Captain Maraburn, assigned Julius to the intelligence section due to his foreign language proficiency, including reading and writing German. PFC Julius described intelligence training as an advanced special force unit consisting of about twenty soldiers.⁶²

PFC Julius was trained for close quarter combat including extensive training with handguns. He was equally trained for all aspects of sniper, observation and scouting work. He even used the special 'drab clothing that blended into the surroundings', also known as camouflage.⁶³ He proved to be very good at reading German documents because he was rarely

⁵⁹World War I Veterans Survey, 82nd Division, 325th Infantry Regiment, U.S. Army Heritage and Education Center, pp1-10.

⁶⁰Karen Kovach, *The Life and Times of MG Dennis E Nolan, 1862-1956: The Army's First G2* (Virginia: U.S. Army Intelligence and Security Command, 1998), p30.

⁶¹World War I Veterans Survey, 82nd Division, 325th Infantry Regiment, U.S. Army Heritage and Education Center.

⁶²Ibid.

⁶³Ibid.

used for any other role. He tells us that when entering the battlefield to search the fallen German soldiers for documents, the 82nd Division issued 'green arm bands' to identify the intelligence soldiers from non-authorized soldiers.⁶⁴ Julius's own words best describe the function of a translator: 'we could really get a lot of information from their [German] little books'.⁶⁵ He further stated that the German 'army was six months behind in paying their soldiers' and noted 'how many times individual soldiers were in the hospital, even where they enlist and the soldiers age'.⁶⁶ A significant amount of personal information was contained in their paybooks.

The introduction of green arm bands to the intelligence section of the 82nd Division was a unique innovation.⁶⁷ This feature was not found in any of the AEF intelligence regulations. Yet, the idea behind this function that allows a specifically trained soldier to search German soldiers and dugouts for any documents was a useful step in the development of the analysis of captured German documents. This step also reduced unauthorized soldiers from hunting for souvenirs, which was often observed in the 82nd Division. It demonstrated a priority for the use of captured German documents as a combat tactic.

Conclusion

The successful development of the analysis of captured German documents was in large part a result of the sharing of intelligence and the collaborative relationship between the British, French, and American armies. The Zeppelin documents, discovered by American soldiers, were useful to the British for strategic purposes. The filtration of intelligence by General Nolan helped the AEF study enemy combat tactics. Foreign born and educated American soldiers, such as PFC Julius, were the core of translation intelligence work in the AEF. The level of priority that the 42nd Division applied to captured German documents clearly demonstrated the influence of intelligence on the battlefield with the destruction of the 105MM Howitzer at Belle Assise farm.

Combat intelligence consisted of many different activities of which the collection, analysis and dissemination of captured German Documents was only one. The development of the use of captured documents aided in combat operations in the First World War by highlighting the enemy's weakness and allowing the Allies to exploit them. The AEF established

⁶⁴World War I Veterans Survey, 82nd Division, 325th Infantry Regiment, U.S. Army Heritage and Education Center.

⁶⁵Ibid.

⁶⁶Ibid.

⁶⁷Ibid.

an educational format to teach soldiers to be proficient in foreign languages. The study of the way the AEF used captured German documents allows historians to have a better understanding of the challenges the AEF faced, and the solutions used to overcome them. It also shows the influence captured German documents had on the momentum of battlefield operations.

Chapter Seven:

Scouting, Observation and Sniping

Intelligence operations carried out by specialists such as scouts, observers and snipers (S.O.S.) performed the deadliest type of work. The efforts of American scouts, observers and snipers represented the embodiment of the dangers faced by the AEF in securing accurate intelligence. Those tasked with scouting no man's land were the eyes of the AEF and path finders for raiding parties. Collection, analysis and dissemination carried out by scouts, observers and snipers, were interconnected. Observers mapped out enemy territory and kept artillery fire on target. Snipers kept the German daylight work parties limited and reduced German morale by eliminating enemy combatants. Researching the training and experience of scouts, observers and snipers will illuminate another aspect of intelligence work that will highlight how innovative training and valuable experience contributed to the development of combat intelligence during the First World War.

This chapter will examine three examples. Firstly, it will look at how Allied training of American scouts, observers and snipers both in the United States and in France influenced training development. Secondly, it will explore the contribution and influences of American Indians on the role of scouting. Thirdly, the role of observer and sniper will be studied to understand their function within combat intelligence and their influence on its development.

Intelligence in Action

When the United States declared war on the German Empire, the United States' allies sent 36 officers and 29 noncommissioned officers (NCO) to teach American soldiers¹. These were some of the best scouting, observing and sniping instructors that the Allies had available. The 32 schools set up across the United States would produce 500 trained snipers alone.² The following British case study highlights how intelligence specialist scouts, observers and snipers carried out the three core functions of combat intelligence: collection, analysis, and dissemination. The following example will illustrate how a well-functioning intelligence section operated.

American sniper teams were trained and operated in the same fashion as the British. Reviewing how British snipers were trained and operated will highlight American training. A pair

¹Major John Plaster, *Sniping in the Trenches* (Colorado: Paladin Press, 2017), pp155,162.

²Ibid, pp155,162.

of British sniper teams (one sniper and one observer) were at their post somewhere on the Western Front in 1916.³ The observer's job was to use a powerful telescopic sight which was more efficient than the sniper scope. The sniper found the target, a house cat laying on the top of unused enemy trench line.⁴ The sniper stated he would not fire in fear of giving up their post to the enemy; however, they did make a note of the position and time of day. After some time, the intelligence officer for the battalion came into their post. After a few minutes of the officer questioning the activities of the day, the pair brought up the cat. The observers and the intelligence officer looked through the sniper log book and noticed that the cat had been seen four times this week at the same grid reference point. The three soldiers discussed the high level of rat activity in the British lines and concluded that the German lines were the same.⁵ The intelligence officer and the sniper team felt that the cat was a luxury item and that a German officer had the cat as a pet in a nearby dug out to keep the rats out. Seeing that this part of the enemy trench saw no activity, it was sent up to Corps intelligence for the grid to be photographed by air assets. The very next day a copy of the grid was sent to the battalion intelligence officer stating that the grid photo revealed a German command bunker and that it would be bombed within the next few hours. A note from the Corps officer said that the area had been photographed not too long ago and nothing was identified.

The sniper team demonstrated attention to detail and analyzed the data in front of them. That along with some critical thinking enabled the German bunker to be discovered. The British sniper team in this example demonstrated the three functions of combat intelligence: collection, analysis and dissemination. The goal of this case study was to demonstrate the level of efficiency the British intelligence specialist were operating on. The AEF intelligence section struggled to achieve synchronization between land and air reconnaissance. Yet, the foundation was in place as the next case studies will demonstrate.

Scouting, Observing and Sniping Training

American scouts mostly operated in no-man's land amongst enemies and reported on the enemy's location and strength. They also cut any identification off dead enemy combatants. They were trained on land navigation, with emphasis on trench knife and pistols for combat.

³Major H. Hesketh-Prichard, *Sniping in France: How the British Army Won the Sniping War in the Trenches* (Columbia, SC: Sharpe Books, 2018), p80.

⁴Ibid, p80, p121.

⁵Ibid, p80.

The scout's role could be categorized as offensive intelligence work.⁶ The observer's main function was to map the enemy's trenches, locate the enemy, and report activities such as troop movement or artillery locations. Observers were trained with a sniper rifle and a telescopic observation glass. Observers also served as the counterpart in the sniper team as a target spotter. Pairing a sniper with an observer increased the effectiveness of the sniper.⁷ Snipers had a dual role. In the trenches, their defensive role was to degrade the enemy's ability to wage war by afflicting as much damage as possible. Their role in offensive warfare included killing the combatants of a machine gun nests, stopping the enemy counter attack and serving as an early warning to the infantry troops to the rear.⁸ These jobs functions were clearly defined in the section on scouting, observing and sniping in the training manual, advocating initiative in their combat roles.⁹

Scouting and observers were not new to the US military. The Allied armies had to adapt, create and train specialists in a school for combat intelligence for scouting, observation and sniping.¹⁰ The AEF benefited greatly from the experience gained by the allies, specifically the British and Canadians, regarding scouting, observing and sniping work. Scouting, observing and sniping training was 16 weeks long in the British and American schools. In the United States schools, the head instructor was British Major Ernest Edward Godfrey out of Camp Perry, Ohio. Godfrey was instrumental in helping establish the British First Army sniper school under Major H. Hesketh-Prichard on 24 November 1916.¹¹ By the time Godfrey arrived at Camp Perry in late April 1917, the British had perfected scouting, observing and sniper training. Another instructor at Camp Perry was American Captain Herbert W. McBride, who later trained snipers for the 38th Division at Camp Shelby in America.¹² McBride, an American in the National Guard, resigned his commission at the outbreak of the First World War and enlisted as a Private in the Canadian army and served as a sniper. McBride returned to the United States after becoming injured at Vimy Ridge in 1917. The US Army utilized his experience and reinstated McBride to the rank of Captain. He remained in the US and took the position as a scouting, observing and sniping instructor. Godfrey and McBride had a well-balanced approach between theoretical and

⁶Major H. Hesketh-Prichard, *Sniping in France: How the British Army Won the Sniping War in the Trenches* (Columbia, SC: Sharpe Books, 2018), p82.

⁷Herbert W McBride, *A Rifleman Went to War* (Plantersville, S.C.: Thomas G. Samworth, Small-Arms Technical Publishing Co., 1935), p305.

⁸Major John Plaster, *Sniping in the Trenches* (Colorado: Paladin Press, 2017), p178.

⁹Intelligence Regulations. General Headquarters American Expeditionary Forces Papers. Second Section Reports and Regulations:1914-1918. Box 11 of 26. U.S. Army Military History Institute, Carlisle, Pa.

¹⁰Major John Plaster, *Sniping in the Trenches* (Colorado: Paladin Press, 2017), p155,157.

¹¹Ibid, p156.

¹²Ibid, pp160-161.

practical experience. The US Army simply lacked this level of experience. The AEF was very fortunate that they received these instructors and were adaptive enough to utilize their shared experiences.

Interpreting what was in front of oneself was the most critical component of sniping, scouting and observation.¹³ The ability to determine distance was more important than accurate shooting. Accurate shooting came with experience. Judging distance was a vital skill. Training schools for scouts and observers on determining distance consisted of large logs sticking out of the ground in two different fields. On the first field, the logs had numbers painted on them to help the scouts visualize distance. On the other field, the logs did not have the numbers on them. For them to pass the course, the scouts and observers had to tell the distance correctly. Snipers trained on this same course with and without their telescopes.¹⁴ Scouting, observing and sniping instructors in the British, Canadian and American schools strongly encouraged pairs of teams, either a sniper and an observer or a scout and an observer. This was not only a good idea for safety, but also for accurate target acquisitions.¹⁵ The foundation of this team work was based on accurately determining proper distance.

Scouting, observing and sniping work was predicated on the time of day. Instructors conditioned the soldiers that daybreak and sundown were their most active times. At night, scouts went out into no man's land and relied on compass readings for navigation. During the daylight hours, a scout would lead soldiers to and from the trenches, and was used as a messenger or an observer. Observers and snipers needed to get into position before the sun rose because their position would be maintained all day long. Enemy snipers were equally active at sun up and sun down. Scouting, observing and sniping teams had to conceal their movements from the ever-watchful German eyes. At night, a sniper might go out in to no man's land for the next day's work. Equally, an observer might do this same work. The probability of being discovered in no man's land was higher than the probability of not being found. Camouflage was creative on both sides of no man's land for stealth.¹⁶

The scouting, observing and sniping school taught the construction of camouflage posts, sniper nests and trench loopholes for shooting. Scouts, observers and snipers were trained how

¹³Major H. Hesketh-Prichard, *Sniping in France: How the British Army Won the Sniping War in the Trenches* (Columbia, SC: Sharpe Books, 2018), p106; Herbert W McBride, *A Rifleman Went to War* (Plantersville, S.C.: Thomas G. Samworth, Small-Arms Technical Publishing Co., 1935), p299.

¹⁴Ibid, p103-106.

¹⁵Army War College. Scouting and Patrolling. Class #M9403-B15 Accession # 42308. Box4.

¹⁶Herbert W McBride, *A Rifleman Went to War* (Plantersville, S.C.: Thomas G. Samworth, Small-Arms Technical Publishing Co., 1935), p332.

to utilize each of these. The construction of a camouflage sniper post was instrumental in diminishing the enemy's ability to wage war. The observer would know how to spot one and the scout could navigate to and from observation posts. Most of the schools had an accurate scale enemy trench constructed from the sniper's position. The sniper was to score a hit off of a moving papier mâché mannequin's head on the training trench.¹⁷ The scout had to navigate to and from the trench both during the day and at night. The school's noncommissioned officers would occupy the trench while the scouts tried to approach from the flank or the rear. The observers had to write down any information that they could see. They also learned how to use, clean and align their powerful hand-held telescopes. This was the most important tool of the observer.¹⁸

One of the most important skills that Major H. Hesketh-Prichard and Herbert McBride articulated in their books was the need to have the sniper rifle combat ready. This was repeated by John L. Barkley, a sniper in the US 3rd Division, 4^h Infantry Regiment. The sniper rifle's iron sights and telescope sights must always be aligned or zeroed in for accurate sniping. The use of a telescoped rifle was a new and added technology that was needed to enhance the age-old sniping task. The iron sights of a rifle once zeroed in would require a lot of damage for the rifle to lose its accuracy. On the contrary, the telescope could easily become unaligned, thus, rendering the rifle useless. Great care was taken to teach the soldiers how to look after these scopes and to zero in the rifle, which was the method employed to accurately group the rounds from the sniper rifle. Most snipers had more than one rifle which they used for different kinds of shooting. The advantage of learning maintenance of the telescope for the observer and the scout was equally important because they relied on the telescope for their livelihood.¹⁹ McBride emphasized this point over and over because the time would come for the sniper to engage in open warfare or advance forward faster than time would allow to use the telescope sights. Mobile warfare would be the greatest use of the sniper. McBride said that a sniper in a forward position would allow troops to consolidate newly gained enemy trenches.²⁰

¹⁷Major John Plaster, *Sniping in the Trenches* (Boulder, Colorado: Paladin Press, 2017), p161.

¹⁸Major H. Hesketh-Prichard, *Sniping in France: How the British Army Won the Sniping War in the Trenches* (Columbia, SC: Sharpe Books, 2018), p105-6; Herbert W McBride, *A Rifleman Went to War* (Plantersville, S.C.: Thomas G. Samworth, Small-Arms Technical Publishing Co., 1935), p308-310.

¹⁹Herbert W McBride, *A Rifleman Went to War* (Plantersville, S.C.: Thomas G. Samworth, Small-Arms Technical Publishing Co., 1935), p305; John Barkley, *Scarlet Fields: The Combat Memoir of a World War I Medal of Honor Hero* (Kansas: University of Kansas, 2012) p318.

²⁰Herbert W McBride, *A Rifleman Went to War* (Plantersville, S.C.: Thomas G. Samworth, Small-Arms Technical Publishing Co., 1935), p330.

The scouting, observing and sniping school was important to the AEF soldiers because it established a routine and a daily pattern to follow for job-specific tasks. Pershing fully supported the schools located in France. Pershing described the schools as being indispensable because it gave the specialist a necessary advantage in tactical and technical developments that lacked in the stateside training.²¹ Pershing visited the training schools and found them to be making excellent progress and that the intelligence section was well organized.²² Training and talent development of enlisted soldiers and officers was important to Pershing not only for the war effort, but to further enrich the army.

Scouting and the American Indians Role

Historically, the US Army had employed Native Americans in prior conflicts such as the Civil War and the Pershing Expedition into Mexico to capture Pancho Villa.²³ Indian scouts were not a unique feature of the First World War. However, research data seemed to account for disproportionately high numbers of American Indians filling hazardous and dangerous combat tasks in the intelligence section of the AEF.²⁴ This section will review American Indian combat scouts with statistical analysis of AEF combat divisions.

Issues of race in the AEF during the First World War had been under researched until the last 25-30 years. Thomas Britten discussed in his book, *American Indians in World War I* (1997), the issue of race, specifically American Indians, in the AEF. The American Indian during the First World War had a five percent death rate compared to a one percent death rate for all other races that made up the AEF.²⁵ This high death rate could be attributed to a racial bias. The American Indians were mainly used as scouts, which is an inherently dangerous job. The American Indians had a long and complicated relationship with the US Army. So, it should be no surprise that when the United States began registering males for the draft in 1917 that 17,313 Indians had applied for military service.²⁶ This number does not count the number of Indians who volunteered for military service. Furthermore, this accounted for one third of the eligible Indian male population. Around 6,509 American Indians saw combat on the Western Front.²⁷

²¹John J. Pershing, *My Experience in the First World War* (New York: Da Capo Press, 1995), p154.

²²Ibid, p117.

²³Lieutenant Colonel Phillip Stevens, *Search out the Land* (Chicago: Rand McNally & Company, 1969), pp117-118.

Thomas Britten, *American Indians in World War I* (Albuquerque: University of New Mexico Press, 1997), p10.

²⁴Thomas Britten, *American Indians in World War I* (Albuquerque: University of New Mexico Press, 1997), p82.

²⁵Russel Lawrence Barsh, 'American Indians in the Great War.' *Ethnohistory*, Vol 38, No. 3 (Summer 1991), p278.

²⁶Ibid, p277.

²⁷Ibid, p277.

In 1891, the US War Department published army regulations, 'American Indians as Battalion Scouts', on establishing how and to what degree American Indians could be employed.²⁸ This was the first official manual on the employment of the American Indians. After reviewing the regulations, it can be inferred that Indians were only seen as being capable of doing one job in the military, which was scouting. The racial bias toward American Indians by officers during the First World War was culturally and socially accepted. However, it was distinctly different than racial bias towards black Americans. White officers treated black Americans like they were second-class citizens; whereas, American Indians were treated as an expendable warrior caste. A post First World War veteran survey was sent out to 1,200 combat Indian veterans. According to the survey 744 were infantry, nine were officers, and 195 were non-commissioned officers.²⁹ While this survey did not represent the entire Indian military population, there was a clear indication that their role was primarily at combat or support staff, such as ambulance drivers, medics and quartermaster.³⁰ This role was inherently dangerous due to the nature of warfare.³¹

The dangers faced by American Indians as scouts can be readily demonstrated. The 42nd Infantry Division 167th Infantry Regiment intelligence section war diary recorded that they sent out their Indian scout out into no man's land 21 days in a row before he was killed.³² This seems to be excessive when looking at the paper strength of an infantry division. There were 28,000 soldiers in an infantry division and each division had 180 scouts. It stands to question why they would send the same scout out 21 days in a row.

The 36th Infantry Division 142nd Infantry Regiment had 20 North Dakota Indians as scouts out of 45 scouts according to the Table and Organization of Equipment.³³ This example indicates that the AEF intentionally integrated American Indians into one division. Casualty rates by race for this division are not available. Therefore, it was not possible to determine the casualty rate of the American Indians in this division. However, the 36th Infantry Division progressed 21 km in over 23 days of combat with 591 killed and an additional 2,119 wounded.³⁴ This averaged out to about 26 soldiers per day of active combat. This casualty rate was on the

²⁸Thomas Britten, *At Home and at War* (Albuquerque: University of Mexico Press, 1997), p103.

²⁹*Ibid*, p102.

³⁰*Ibid*, p102.

³¹*Ibid*, p103.

³²*Ibid*, p82.

³³Russel Lawrence Barsh, 'American Indians in the Great War.' *Ethnohistory*, Vol 38, No. 3 (Summer 1991) p282; John Votaw, *The American Expeditionary Forces in World War I*. (Oxford: Osprey Publishing, 2005), p27.

³⁴United States. War dept. General staff. [from old catalog]. (1919). *The war with Germany: a statistical summary*. Washington: Govt. print. off. p117.

low side (the third lowest) when compared to other divisions. When one considers that this division had the largest number of Indians, we can conclude that the disproportionate number of American Indians killed in action were in positions that were more hazardous such as scouting.

John Lewis Barkley served with and wrote about his American Indian friend Jessie James who was a scout in his company. He recounted an incident in his memoirs. On 21 July 1918, the allied counter attack on the Marne River stopped the German offensive just to the west of Reims.³⁵ The previous week, the 3rd Division progressed slowly. The battalion intelligence officer ordered scout James to progress as far into the German rear lines as possible during the night and bring back all information that he could gather.³⁶ Barkley volunteered to go with James. Barkley itemized their weapon load for their scouting mission: each had a trench knife; James had a shotgun and Barkley had a hand pistol. They were able to advance 300 yards beyond the American frontline. After a short period of scouting, the pair bumped into a German patrol and Barkley was impaled with a bayonet in the side and James was slightly wounded by a gun shot. The two made it back to the American lines where James gave a full report to the battalion intelligence officer and Barkley received medical aid.³⁷ The information provided by the scout James enabled the division to realign itself against the enemy's main line of resistance and allowed the 3rd Division to strengthen their own line by knowing the location of the enemy.

The AEF had an illogical expectation of American Indians to be elite warriors in close quarter combat and have natural born abilities for scouting activities. The disproportionately high number of American Indians serving as scouts revealed a racial bias that placed them in hazardous combat roles. The AEF clearly viewed the American Indians as the gatekeepers to the role of scouting and allowed them to develop the function of scouting without major interference from higher command within the AEF. Furthermore, the AEF set the expectation of a scout's role and allowed the soldiers whom filled these positions to carried out the duties with a great level of latitude.

Observation

Observing the enemy's movements while hidden away in a camouflaged post on an active front was exciting and nerve racking at the same time. Observation tasks on a quiet front

³⁵Michael Neiberg, *The Second Battle of the Marne* (Indiana: Indiana University Press, 2008), p138.

³⁶John Barkley, *Scarlet Fields: The Combat Memoir of a World War I Medal of Honor Hero* (Kansas: University of Kansas Press, 2012), p105.

³⁷Ibid, p107.

could become mundane and routine. Observers, while working with a sniper in an active role, would spot targets with their telescope or periscope. While working in teams, observers mapped out each section of their front in a grid like fashion. Observers could also operate in a passive role in which they would observe the enemy without giving away their position. The observer carried a log book to note anything out of the ordinary. Attention to detail was certainly a life skill for the observer. The difference between an active and passive observation post depended on two key aspects. First, a passive post produced a greater level of intelligence. There was no sniping work done at this type of a post and travel to and from was limited to night. Second, an active post was when the enemy was actively attacking. In the case of an active post, reports were sent back to the battalion intelligence officers by runners. If an enemy was retreating, the observers would remain in a passive mode and tended to build posts with phone lines to communicate with battalion intelligence officers. Standard operating procedures from the intelligence regulations for observations were clearly defined and set with an easy to follow routine, which helped soldiers establish target priority.³⁸ The following example will demonstrate observation task work from the 3rd Infantry Division.

The 3rd Division offers a useful example of observation work. 31 May 1918, the 3rd Infantry Division stopped the German offensive at the bridge leading to Château-Thierry. Barkley was rushed to the bridge and from an elevated position, utilizing natural coverage observed the attack and counterattack over the course of three days. Barkley kept battalion intelligence informed using runners. After the German counterattack failed, the 3rd Infantry Division dug in and improved its position. The Germans set up their observers and snipers to eliminate the American observers. Barkley nicknamed this observation work 'the suicide club'.³⁹ It can be inferred that Barkley's information that was sent back was accurate because he was given a phone to relay information instead of a runner. This meant that his position was secure. The regimental intelligence officer stated 'Don't be deceived by this apparent calm. This is the time when the Intelligence has its greatest opportunity'.⁴⁰ There were a great deal of observers who went out that never came back.⁴¹

A well-placed observer, in a passive post, could cause a great deal of destruction by relaying troop strength and movement to the intelligence officer. The intelligence officer then

³⁸Intelligence Regulations. General Headquarters American Expeditionary Forces Papers. Second Section Reports and Regulations:1914-1918. Box 11 of 26. U.S. Army Military History Institute, Carlisle, Pa.

³⁹John Barkley, *Scarlet Fields: The Combat Memoir of a World War I Medal of Honor Hero* (Kansas: University of Kansas Press, 2012), p75.

⁴⁰Ibid, p70.

⁴¹Ibid, p71.

relayed that information to the artillery to possibly bomb that location. In an active post paired with a sniper, enemy combatants risked immediate death from the watchful observer with their telescopic lens. Observation work should be considered defensive because one would not want their enemies to know their intentions nor activities.

Sniping

The technology behind the telescopic scope and the various ammunition (weight and kind) was a new element to enlisted soldiers as a sniping specialist. Sniping can be utilized in offensive and defensive warfare. During siege warfare, snipers stalked the enemy's trenches 200-400 yards away with the single purpose of eliminating enemy combatants. Also, snipers engaged in counter sniper work. Snipers can be utilized in open warfare. Both Prichard and McBride articulated that the role of the sniper was enhanced in open warfare. One well-placed sniper with an accurate aim could greatly reduce the enemy counterattack. McBride and Prichard both advocated that a sniper could cause the maximum damage to a machine gun nest. On 30 July 1918, the 110th Infantry Regiment's sniper confirmed in a single day twelve enemy soldiers killed.⁴²

On 16 August 1918, members of a National Guard unit with the US 35th Infantry Division, 138th Infantry Regiment, Co. H, sniper Sergeant George O Vonland accompanied by his battalion scout and observer, were ordered to eliminate an enemy sniper that was attacking their soldiers. Regimental intelligence observers narrowed the enemy's sniper's position to a grid located within the enemy's lines. A nearby two-story structure, shelled heavily by the Americans, was chosen as their destination. The three-man team crawled across no-man's land making it to the structure. On the night of the 19th, they located the sniper after spending thirty-five hours within enemy territory. The observer spotted the enemy sniper and Sergeant Vonland then synced his shot with that of the enemy's sniper to disguise the noise. The scout that was with them snuck into the enemy's sniper position and removed his sniper rifle, helmet and shoulder straps. These were later used to identify the sniper as a member of the 27th Bavarian Regiment.⁴³

This three-person team format illustrated all the combat intelligence tactics of scouting, observing and sniping. The goal of tracking, identifying, and eliminating the enemy was the foundation of scouting, observing and sniping. The tactical advantage of even one sniper can

⁴²Major John Plaster, *Sniping in the Trenches* (Colorado: Paladin Press, 2017), p195.

⁴³*Ibid*, p227.

produce intelligence on an enemy's activities in the forward trenches or identification of enemies through the telescopic scope. Simultaneously, the sniper stalked enemy combatants to reduce enemy troops and affected the enemy's morale.

Conclusion

The most hazardous aspect of combat intelligence was scouting, observing, and sniping work. Scouting, observing and sniping had overlapping responsibilities. The combat tactical benefit from a well-organized and trained scouting, observing and sniping intelligence section was the production of a tactical landscape of the enemy's position with the ability to verify this information and attack it. While the AEF struggled with synchronization between operations and the intelligence section before the armistice, coordination within the intelligence structure of a division continued to improve each day of the war.

The scouting, observing and sniping school established a daily job pattern and routine, which were important to the AEF intelligence soldiers. Working in pairs increased the combat effectiveness of the intelligence personnel. All soldiers at the scouting, observing and sniping school were trained in all three functions of combat intelligence. The cross training of soldiers increased the combat effectiveness of combat intelligence because it allowed soldiers to think and analyze critically.

The role of the scout was to locate enemy combatants and to have an intimate knowledge of no man's land in their operating area. During the war, it was found that there were a disproportionate number of American Indians in scouting roles, which were hazardous combat roles. The American Indians developed the scout's function and role without interference from the AEF's higher command.

Observers informed the AEF of enemy movement, which allowed combat intelligence to take a decisive action against the enemy. The 35th Infantry Division, 138th Infantry Regiment three-person team format illustrated all the combat intelligence tactics of scouting, observing and sniping. Tracking, identifying, and eliminating the enemy was the foundation of scouting, observing, and sniping. The sniper produced intelligence on the enemy's location and activities in the forward trenches. The sniper acted to reduce enemy combatants and to decrease troop morale.

Chapter Eight: Conclusion Intelligence and the Future

'The First World War has the justified reputation as one of the most brutal wars in history.'¹ The United States entered the First World War unprepared for the challenges of peer-to-peer warfare. Innovation and adaptation were necessary catalyst for development. Development for the intelligence section of the AEF was a journey not a destination. The adaption and innovation that was so important to the development of the intelligence section for the AEF was nothing short of a herculean task. 'The Americans proved faster learners than the Allies had earlier in the war.'² They (Americans) also proved far more willing to pass tactical lessons and solutions up the chain of command.'³ It bears repeating that the development of combat intelligence occurred simultaneously as the Americans were fighting a world war on an industrial scale. The AEF intelligence section in the First World War represented 'a great leap forward; the intelligence section was organized from nothing in the space of seventeen hectic months'.⁴

In chapter two, we reviewed general orders of the AEF, intelligence training and dissemination. From the general orders, the historical dates of development can be established, such as the creation of the intelligence section and corps section, to the establishment of a school system. The establishment of a school system at both divisional and army level formations paved the way for the education of intelligence specialists. The professionalization of AEF officers at intelligence schools, such as Langres, was the single most important achievement for the growth and development of combat intelligence. The training of enlisted soldiers and specialists at divisional HQs demonstrated the number of resources that were allocated to create intelligence specialists for long term conflict. The school at Langres also underscored the need for military linguists. At Langres, we observed how the AEF established language training both hands on at the army interrogation cages or in the classroom.

Chapter two also covered the statistical number of soldiers, officers and specialists that were tasked with gathering and executing combat intelligence functions. Having only 1.4% of

¹Williamson Murray, *Military Adaptation in War with Fear of Change* (Cambridge: Cambridge University Press, 2011), p74.

²Ibid, p115.

³Ibid, p115.

⁴John Patrick Finnegan and Romana Danysh, *Military Intelligence* (Washington, D.C.: Center of Military History, United States Army, 1998), p40.

the total available manpower of a combat division tasked with intelligence duties, underscores the need to make these soldiers and officers highly trained professional. The function of the summary of intelligence reports had real world tangible influence on the intelligence section which overcame operational obstacles such as poor communications. Chapter two's case study of American Indian code talkers' communication in the clear was a quantum leap forward that no other belligerent army could match or decipher. Chapter two demonstrated the importance of the establishment of schools and training programs for specialists and the creation of an intelligence professional.

Chapter three showed that the development of POWs procedure centered around collection, analysis, and dissemination, which were the core functions of combat intelligence. General Nolan, drawing on the best parts of American pre-war manuals and the French and British intelligence training manuals, wrote the most important training manual for the intelligence section of the AEF, 'Intelligence Regulation 1917'. No other training manual before or during the First World War had more influence on the development of American combat intelligence than 'Intelligence Regulation 1917'.

In chapter three, we reviewed German prisoners of war. The development of POWs procedure occurred because the AEF maintained a consistent approach to handling of POWs intelligence. In a more general statement, the development of POWs procedures was another sub-topic of combat intelligence that the AEF had to establishment to operate on an equal footing as the other belligerent armies. This level of efficiency was reached through interpersonal relationships and the summary reporting system. The skill that fostered the process was time-management, sound judgment and a team player mentality. These skill sets not only made the POW process consistent, but also successful.

In chapter four, we reviewed how the AEF trained and executed a trench raid. The principal factor driving results was derived from senior AEF leadership and an individual commander's initiative. Tactical procedure merged with initiative and flexibility was how the AEF produced results from trench raiding. These two concepts drove change that led to more consistent results from trench raids. Trench raiding developed into a system that the AEF could produce intelligence. By engaging in self-diagnosis, the AEF was able to produce more consistent results from trench raiding that helped develop combat intelligence. Chapter four highlighted the need for successful trench raiding, which then enabled the intelligence section to carry out the functions of combat intelligence, collection, analysis and dissemination.

In chapter five, we reviewed the order of battle section. The establishment of an enemy formation tracking system highlighted development from a nuts-and-bolts point of view. The path to development of the intelligence section established the AEF engaging in peer learning from its French and British allies on how intelligence worked. Part of the enemy unit identification process was the summary of intelligence and the summary of information. The creation of a forum or reporting system, such as the summary of intelligence and information, was a tool to keep all combat formation on the same page and informed of the enemy activities. The 21 March 1918 offensive from Hubbard's viewpoint provided a wider discussion in the academic setting on the First World War because it illuminated the British order of battle tracking system through an American view point. A benefit from this dissertation was the contribution to a wider discussion in the academic setting on the First World War as it pertains to the British and American order of battle section.

In chapter six, we reviewed captured German documents and the role of linguists and translators. The chapter highlighted three main areas that contributed to the development of the intelligence section and also underscored the continued theme of collection, analysis and dissemination throughout the dissertation. First, the intelligence section of the AEF was greatly aided in its development by the collaborative effort of coalition-warfare, a mixture of peer learning and mentorship on the part of the British and French. A further example was the establishment of a school to teach American soldiers to read and understand German, and the creation of an entire section devoted to reading captured enemy documents. Second, captured German documents, once translated correctly, could change the momentum of the battlefield. Third was innovation. The establishment of American linguist, translators and a procedure for handling captured documents was an important part of the journey of developing an American intelligence section. Formal schools such as Langres and informal training at divisional training areas were examples of learning that reinforced independent thinking.⁵ The American learning culture for continuing education proved to be invaluable to the establishment of intelligence training such as linguist and translators. The innovation of an intelligence section for the AEF began to change units and their functionality. The education system to train intelligence specialists fundamentally and permanently changed the units and formation of the AEF.⁶ Innovation changed the manner in which American military formations functioned in the field. According to Foley, innovation was 'significant in scope and impact and leads to greater military

⁵Robert Foley, 'A Case Study in Horizontal Military Innovation: The German Army, 1916-1918', *Journal of strategic Studies*, 35:6, 799-827, p815.

⁶Ibid, p816.

effectiveness'.⁷ Innovation of specialist both formally and informally permanently changed the military structure of the AEF. The innovation of an education process for intelligence training created a permanent paradigm shift for the AEF.⁸ The AEF at the beginning of the First World War was not the same as the one at the end the war on many different levels significantly because of the innovation and integration of intelligence.

In chapter seven, we explored the training and functions of intelligence specialists. Scouting, observing, and sniping were the nuts and bolts of combat intelligence work. Intelligence specialists were not only trained to perform their own jobs, but also the functions of the other two specialists. This was possible due to the training from allied instructors, which led to a direct contribution to the development of combat intelligence. Scouting, observation, and sniper training schools located in the United States were greatly aided by the Allied specialist instructors. The tactical expertise from British instructors greatly contributed to the development of the American intelligence specialist by providing them with the necessary education of their specific specialty and real-world experience. Also, the American Indians had a clear and direct influence on the development of the intelligence section, from scouting to code talkers.

The path of development, which the intelligence section underwent, was one of multiple layers. One layer we can observe was the creation of the intelligence section through the general order and the creation of the 'Intelligence Regulation 1917'. This layer should be considered the foundation that all other layers are built upon. The next layer was the creation of self-sufficiency. The following layer should be considered the experience of specialists, individual initiative, and leadership or the human factor for the development of the intelligence section. Roosevelt's initiative and the leadership of Gowenlock and Bullard each contributed to the development of combat intelligence and the intelligence section. Included in this layer was the innovation and adaptation of Captain Hubbard's creation and establishment of the order of battle section within the intelligence section. The next layer was the school system from divisional training areas to the establishment of the intelligence school for officers at Larges, France. The final layer of development can be observed in the educational and collaborative relationship between the American army and the British and French military. The influence of British and French instructors cannot be underscored enough. Thus, by viewing each layer we

⁷Robert Foley, 'A Case Study in Horizontal Military Innovation: The German Army, 1916-1918', *Journal of Strategic Studies*, 35:6, 799-827, p802.

⁸Thomas Kuhn, *The Structure of Scientific Revolutions*, (Chicago: The University of Chicago Press, 2012).

can easily see the path of development that combat intelligence and the American intelligence section underwent.

The following areas may serve as avenues for future research on the intelligence section. First, the development of linguists and translators. Second, the development of intelligence between the two world wars, 1919-1939. Third, the impact and influence of British and French instructors on the American warfare. Fourth, the American Indian. Fifth, professionalization of intelligence.

The history of combat linguists and its development and incorporation has much to offer historians. The First World War witnessed the birth and growth of foreign language as an intelligence asset that continues to this day. The same can be said of the role of translators. The need for literate readers of German was vital for the translation of enemy captured documents. The ability to speak and read the language of your enemy cannot be underscored enough. The history and influence of, linguists and translators not only in the AEF during the First World War, but across all the belligerent participants, is an area that could repay more attention. The history of its development awaits to be written.

The second future potential area of research from this dissertation was the development of American intelligence in the interwar years, 1919-1939. The major themes that emerged from this period was the sharing of intelligence within the American military and the development of combat intelligence for land power-based units such as the United States Army and the Marine Corps. There seems to be a total void of research on any intelligence development for the period of time for these military branches. Indeed, the field would seem open to exploratory scholarly research.

The third, area of future research on the influence of British and French instructors both in the US and in rear training facilities in France offer future research opportunities by exploring how different militaries learned and collaborated from one another as teachers and students in coalition warfare setting. Fourth, the influence of American Indians on military adaption and innovation, is an under-researched area that seems to offer potential for future academic study. Fifth, exploring the training, education and professionalization of these unique intelligence specialist positions has the potential to add to our understanding of the military history of the war, but also its social and cultural history as well. Clearly, the American intelligence section of the First World War still has future research opportunities. Now we should turn our attention from the future to the conclusion of this dissertation.

Beyond the First World War the long-term implications of combat intelligence for the AEF were the innovation and integration of a completely new military branch comparable with the future creation of airpower. The American army general staff add a new and permanent position, that of G-2 intelligence. The inter war years were a low point for American military intelligence due to budget cuts and career path for officers. However, with the beginning of the Second World War, the single most important lesson learned was that of the use of American Indians for code talking. The most fundamental long-term implications for the American army were collection, analysis and dissemination of intelligence as a permanent function that is common practice in the modern US Army.

Appendix A- Divisional Intelligence Personnel

	Infantry Battalion	Infantry Regiment	Machine Gun Battalion	Infantry Brigade	Artillery Regiment	Artillery Brigade	Divisional HQ	Headquarters Company
Colonel							1-Asistant Chief of Staff	
Captain		1-Regimental Intelligence Officer		1-Brigade Intelligence Officer		1-Brigade Intelligence Officer	1-Intelligence Officer 1-Topographical Officer	
Lieutenant	1-Battalion Intelligence officer		1-Battalion Intelligence Officer		1-Regimental intelligence and information officer		1-Asistant Intelligence Officer with Linguistic Qualifications	1-First Lt.
Battalion Sergeant Major							1	
Sergeant				1-draftsman/clerk 1- interpreter/desk	1-draftsman and clerk	1-draftsman and clerk	2- Clerk/Interpreter	6
Drafting: Master Engineer							1	
Drafting: Sergeant							1	
Drafting: Corporal							1	
Drafting: Private							2	
Private First Class				2-orderlies		2-orderlies		
Scout: Sergeant	1		1					
Scout: Corporals	4		2					
Scout: Privates	28		14					
Observer: Sergeant	1	1	1				1	
Observer: Corporals	2	2	1				2	
Observer: Privates	12	12	7				12	
Staff: Sergeant		1-draftsman/clerk 1- Interpreter/clerk						
Staff: Private		1-orderly						
Snipers	8						96	
Total	57	19	27	5	2	4	123	7

Appendix B- Units of a Division

Division

Infantry Brigade	2
Infantry Regiment	4
Infantry Battalion	12
Infantry Brigade Mg Bn	1

Appendix C- GHQ Rank Chart

General Headquarters

Colonel	1-General Staff Officer
Lieutenant Colonel	1-General Staff Officer
Majors	2-General Staff Officer
Captains	7-General Staff Officer/ Interpreter
First Lieutenant	1-Interpreter
Field Clerk	3
Battalion Sergeant Major	2- Clerks
Sergeants	18- 3 Interpreters/1 Chauffer/2Clerks/12 Special Intelligence police
Corporals	3-1 Chauffer/2 Clerk
Private First Class	18-8 Motorcycle/1 Chauffer/ 9 Clerks
Privates	13
Horse rider	4
Closed Car	1
Touring Car	1
Light Car	1
Motorcycles with side car	3
Motorcycles	5
Bicycles	8
Pistols	17

Appendix D

Division questioning of prisoners

1. When and where taken: company, regiment and division
2. When arrived in the line
3. Regiment relieved by them
4. Order of battle
5. How many battalions in the line and in support
6. What other units seen and where
7. Meaning of signals
8. Under what orders operating.

Division question of prisoners.

1. Circumstances of capture
2. Order of battle
3. Troops seen
4. Enemy intentions (orders received)

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