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THE GERMAN GENERAL STAFF IN WORLD WAR I

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

MASTER OF MILITARY ART AND SCIENCE

by
LARRY D. BRUNS, CPT, USA
B. S., West Texas State University, 1972

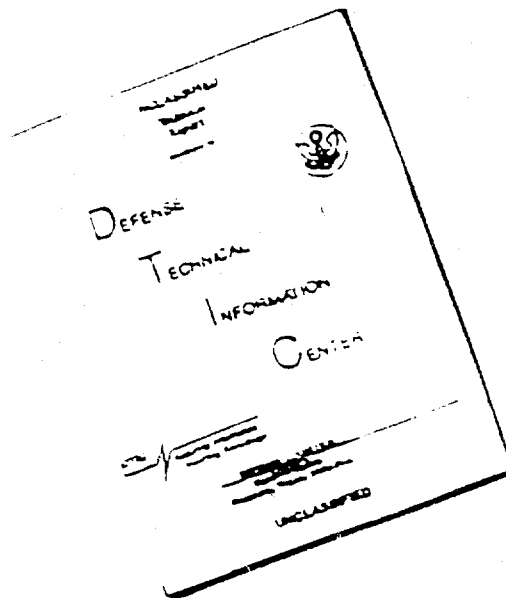
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This study reviews the problems of the German General Staff during the First World War in an attempt to highlight successes and understand failures. The investigation focused on the traditional staff functions of intelligence, operations, logistics and command, control and communications. To obtain a comparison, two epic battles on the Western Front were used, the Battle of the Marne in 1914 and the first spring offensive, Michael, in 1918.

This study revealed that the German General Staff did in an excellent job in staff thought, planning and execution. However, in the area of command, control and communications they were not as capable. The defeat at the Marne and the eventual failure of Michael were the result of command, control and communications problems which prevented the German General Staff from placing needed forces at a decisive point and time to obtain a strategic victory. These command, control and communications problems provide a constant underlying theme for the defeat of German forces in the First World War. The United States Army faces many of the same command, control, and communications problems faced by the German General Staff almost seventy years ago. This study highlights the German errors so that United States Army will not make the same mistakes.

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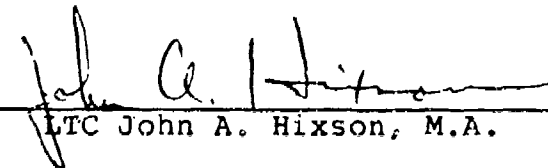
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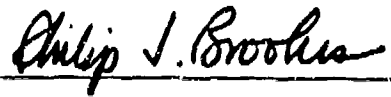
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The opinions and conclusion expressed herein are those of the student and do not necessary represent the views of the U. S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing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

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THE GERMAN GENERAL STAFF

IN WORLD WAR

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CHAPTER I

INTRODUCTION

The military staff has grown and evolved proportionately to the complexity of the expanding battlefield. The staff's importance to the commander in seeing the battlefield, evaluating, synthesizing and providing information for decisions is infinite. The staff is a combat multiplier, specifically serving the commander as an element which increases his capability to fight and win battles. The value of that multiplier can vary depending on the quality of staff product. This nation is confronted with "Economy of Force" contingencies throughout the world and is in constant need of developing and expanding combat multipliers. The staff serving the American field commander today may be the most important combat multiplier in our arsenal.

History has not dealt with the staff as an important factor in critical decisions on the battlefield. Traditional historical accounts have focused on the commanders, battlefield narratives, strategic direction and tactical execution. Thus lessons on staff procedures have been lost and relearned a number of times. Most staff officers are unaware of the historical significance of the position they

hold or the critical staff lessons which have been painfully learned. It is unthinkable that staffs today are reinventing the wheel or making the same mistakes which have plagued staffs for hundreds of years. This paper will review certain historical examples of staff planning, isolate key decisions and examine each for tactical and strategic lessons. The purpose is to insure that critical staff mistakes are highlighted, with the idea that once known they may be averted.

To narrow the field and look intensively at specific instances, the paper will study the German General Staff during the First World War. American military professionals shy away from in-depth study of the First World War. The reason may be that this war does not fit the mold of mobility conflicts which we consider our forte. The significant staff lessons from the war have been lost on modern professionals because of the prevailing belief that the stagnate nature of the war carried into staff planning and thought. Yet the strategic and tactical lessons from the First World War have substantial impact today. The Soviet Union views the results of the First World War as the start of the communist destiny. Much of its concern with chemical weapons and war stems from First World War experiences. Mass, rapid mobilization, use of reserve forces and movement of troops by railroad were all refined during war. The tank, airplane, submarine, and tactical transport were

designed, introduced and doctrinally developed during the First World War. Certain theorists speculate that the First World War was the start of a revolution which did not end until 1945. This revolution was as far reaching as its American, French and Industrial counterparts. World powers declined and new powers took their place, but most important was the shift in the center of world power from Western Europe to the United States and the Soviet Union.¹

The German General Staff was involved in a series of critical tactical and strategic decisions in 1914 and again in 1918. Two epic battles on the Western Front will be used to isolate tactical and strategic staff lessons.

In 1914, the Battle of the Marne saw the German offensive stopped outside the gates of Paris, ushering in a war of attrition. How was Germany halted, what led to the reverse, and what staff lessons can be learned? Military historians, both past and present, have tried to explain this critical turning point of the First World War. A detailed review of literature in the areas of staff preparation and staff conduct of the battle surfaces plausible reasons. Critical was the importance of the German General Staff to the German Army and the role of that staff as a combat multiplier or detractor during the battle.

The German Spring Offensives of 1918, sometimes called the Battle of France, took advantage of past tactical mistakes and of forces freed from the Eastern Front for one

last attempt to gain a strategic victory. What staff preparation made the offensive successful, why did it eventually fail, and what lessons, both tactical and strategic, were learned? This last desperate offensive of the German Army was packed with a series of strategic decision and tactical innovations. The German General staff was again pivotal in this last offensive. German staff planning and conduct represent some of the best planning and thought of the war. The impact of this offensive was not limited to the First World War. The offensive would demonstrate to both sides that tactical mobility could be achieved. The offensive was later studied by such students of mobility as Fuller, Liddell Hart, Guderian, De Gaulle, and Patton.

The critical German staff decisions of the First World War are well illustrated in these two battles. The tactical and strategic staff lessons learned are applicable today. Once exposed, these fundamental staff lessons need to be reviewed, analyzed, and updated to improve our staff planning, execution and operations. The study of this critical period of command philosophy will allow present staffs to increase their value as a combat multiplier.

1. L.L. Farrar Jr., The Short War Illusion. (1963), 207.

CHAPTER 2

BACKGROUND TO THE BATTLE OF THE MARNE

The German General Staff at the beginning of the First World War was the model for armies of the world. Understanding how the German General Staff obtained this stature can assist in explaining the tactical and strategic lessons of the First World War.

The General Staff had its beginnings during the Napoleonic Wars. The founders, Scharnhorst and Gneisenau were determined to prevent the future defeats like those suffered at Auerstadt and Jena in 1806. The specific purpose was to create a staff structure capable of anticipating, planning, implementing and meeting the contingencies in the realm of constantly changing complexion of war. It was with this basic premise in mind that the Prussian General Staff was developed.¹ Throughout the 1800's the General Staff matured, always focused on the founders' requirements for planning and intelligence collection and evaluation. The first tests of the staff's ability to adapt to political and military changes were the Danish War of 1864, the Austro-Prussian War of 1866, and the Franco-German War of 1870. The latter firmly established the apparent preeminence of the German General Staff. The rapid victories achieved over the Austrians and the French were a direct result of the planning and execution of the war plans prepared by the General Staff. The quantum distance between staff capabilities on the French and German sides was evident in their different mobilization efforts. The Germans mobilized twice the number of soldiers as the

French, having roughly equal populations. The skill at which large numbers of German soldiers were moved to assembly areas near the French border amazed observers and the French. These actions can not be accomplished through the leadership of a tactical genius but by a capable and organized staff. LTC Leonce Rousett, a contemporary French military historian, wrote:

The principal support of the high command was the General Staff Corps, recruited from the best officers of arms who successfully completed the War Academy. Its chief devoted to this staff a jealous care and constant attention which prepared it without remiss, for the business of war. Moltke directed this service in person, choosing his key officers from an elite from whom the mediocrities were carefully eliminated, assuring him of that fertile impetus which produced such great results in 1870.²

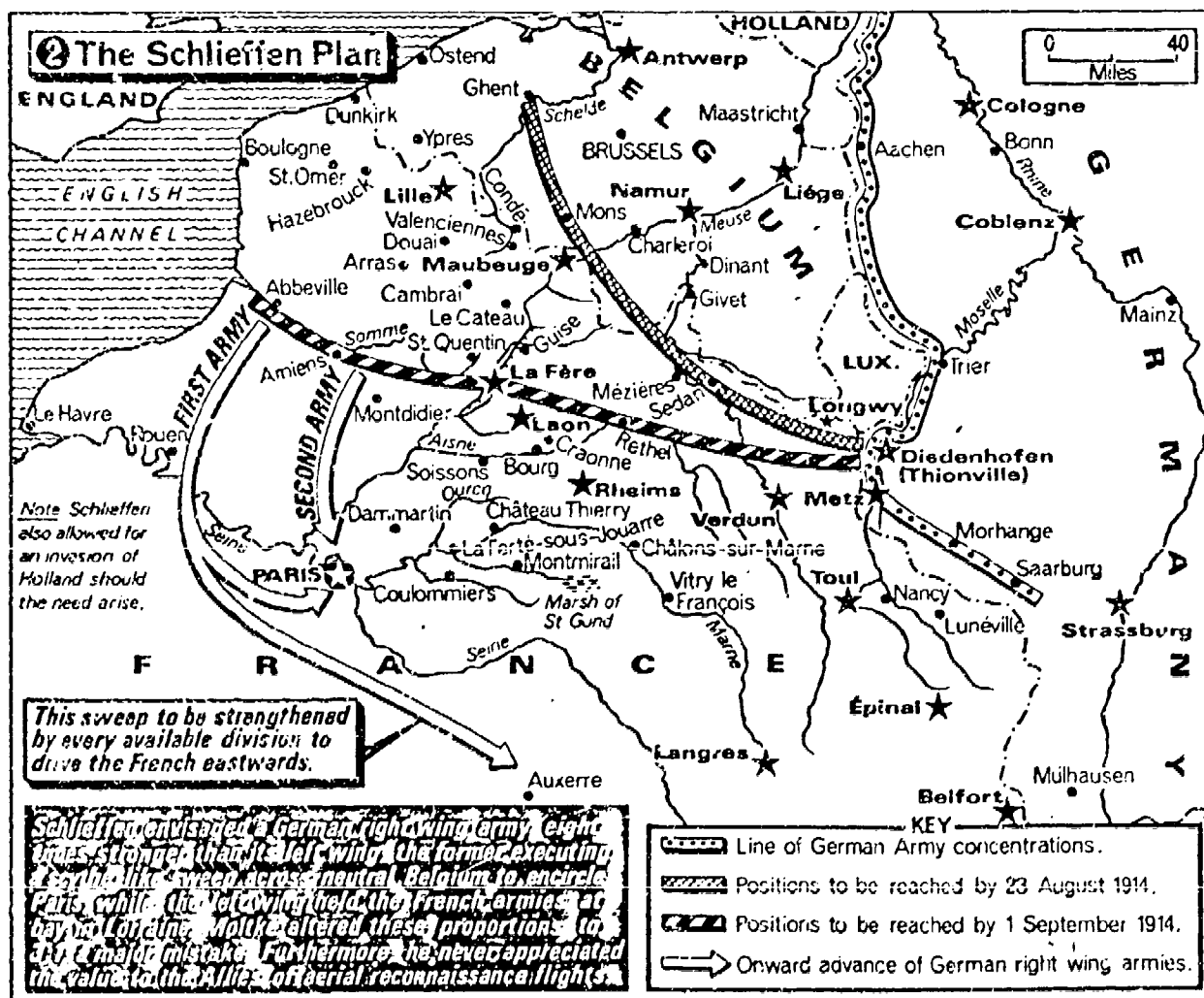
The major impact on armed forces organizations as a result of the the War of 1870 was the adoption of staff organizations similar to the German General Staff, but not necessarily with the same guiding spirit and philosophy. The French instituted reforms immediately after the War of 1870. The British made nominal changes, finally establishing a General Staff organization in 1907. The United States did not adopt a formal General Staff system until 1903 and had to rely on a modified French system to provide tactical staffs during the First World War.³ An illustration of the sophistication in staff thought and planning available to the German General Staff during this period is in the instructions given to the staff by the Chief of Staff Von Moltke. In 1870, Von Moltke directed the staff to begin planning for a two-front war involving the French and the Russians. Thus, war planning and staff thought for the First World War began in Germany 44 years before the fateful August in 1914.⁴ Yet with this apparent sophistication, there

were problems. The command and control system was suspect, and serious problems had surfaced. Still, the German Army had been graced with above average senior commanders. They defeated a French army which was poorly equipped and led. The impressive victory served to gloss over the weaknesses in the command and control system and in the General Staff; weaknesses which make themselves startlingly apparent in 1914.

No in-depth discussion of the Battle of the Marne can be conducted without at least reviewing the Schlieffen plan. The plan was named after its mentor, Count Alfred Von Schlieffen, Chief of Staff of the German General Staff from 1893 to 1906. He developed a plan which would allow the German Army to fight a two front war and win.

The Russo-Japanese War of 1904-05 confirmed Schlieffen's assumption that Russia would be very slow to mobilize at the outbreak of hostilities. His plan, therefore, called for a strong sweeping envelopment of French forces and an economy of force effort against the Russians. Once the French had been beaten, forces could be shifted quickly to the east to meet and defeat the Russians. This plan was diametrically opposed to all previous plans prepared by the General Staff, plans which had called for the main effort in the east.⁵

The original Schlieffen Plan (see map) specified an invasion of both Holland and Belgium, flanking French forces and forcing them into their own defenses in and near Verdun. There seemed to be little, if any, consideration given to the political ramifications nor the ill effects produced on world opinion by the invasion of these neutral countries. The final Schlieffen Plan was adopted in 1905 and was



wargamed repeatedly by the German General Staff with predicted success. However, it was never tried as a Field Training Exercise to see what command and control and logistics problems would be incurred. Critical to the plan were large forces massed on the right wing designed to turn the French flank. Schlieffen was so obsessed with this that his dying words were allegedly "keep the right wing strong".⁷ The Schlieffen plan was modified by his successor, Helmut von Moltke, commonly referred to as von Moltke the younger. His uncle, the real organizing spirit and director of the German General Staff, had led the German General Staff and the German Army to its impressive victories in 1864, 1866, and 1870. The younger von Moltke's concern with the growing French threat to enter the Rhineland through Alsace-Lorraine caused him to weaken the right wing and strengthen the left. The original Schlieffen Plan had envisioned 70% of German forces on the right wing, but Von Moltke's modifications allowed for only 53%.⁸ Additionally, Von Moltke dropped the invasion of Holland for political, economic and military reasons.⁹

The German Army and nation were totally dependent upon the modified Schlieffen Plan for victory in the First World War.

Other background points require investigation prior to an in-depth look at the Battle of the Marne. Deserving inquiry are the mindset of the German leaders during this period and the foreign policy predicament of the German nation.

Leaders on both sides had predicted that the next war would be of short duration. This short war illusion was based on the premise that modern trading nations could not stand the expense and economic dislocation caused by a protracted war. This widely accepted theory gave credence to the quick victory dimension of the Schlieffen Plan, causing

German political leaders to believe that a preemptive attack could and would win the war in a short period of time.¹⁰ The short war theory prevented the German General Staff from preparing for total national mobilization.

The term NUR SOLDAT, "only a soldier", adequately states the attitude of many of the German military leaders during this period.¹¹ They did not concern themselves with political or economic matters, considering only the military aspects of each. It was in this context the von Schlieffen looked at the invasion of Belgium as only a strategic military exercise:

If we were to attack along Belfort-Montmedy with blind faith in the sanctity of neutrality we would soon be effectively enveloped on our right flank by a realistic and unscrupulous enemy advancing through southern Belgium and Luxembourg...The maintenance of₁₂ neutrality is precluded by the right of German self defense.

The German nation was not well served by its foreign policy makers during the late 1800's and early 1900's. The English had unilaterally tried rapprochement during the period, a relationship that had obvious advantages. However, it was not consummated, so the British patched up their differences with the French in 1905 and established an alliance. The main point is that the German nation entered a crisis situation and had no options except to commit its armed forces. The central leadership of the German nation were 19th century men about to embark on a 20th century war, "both individually and as a group they were as ill equipped to lead this great machine as a 17th century coachman would be to drive a Mercedes Benz."¹³ The German alliance with the Austrian-Hungarian Empire meant that the road to war was controlled not by the German nation but by events at Sarajevo.

Under long practiced and well developed plans, the German Army

mobilized and prepared to carry out the Schlieffen plan, fully believing that Germany would be victorious in a short duration war. Perhaps the following from Gerhard Ritter's book The Sword and the Scepter sums it best:

...yet his (von Schlieffen's) plans partake in some measure of the enhanced confidence of the younger generation in Wilhelminian Germany--A generation too young to have fought for the achievement of German power in Europe under Bismarck. That power had been handed down ready made, and they stood in danger of misjudging its limitation, on land as well as at sea. They were, in a sense, prisoners of a powerful trend of the times, which none could easily escape. In the age of Bismarck it may still have been possible to envisage a strategy that might forego total victory on principle, leaving it to diplomacy, if need be, to bring to an end through understanding at the cabinet level a war but half fought. Half a generation later this was out of the question.¹⁴

A few administrative notes are required to avoid confusion and to assist the reader in fully understanding the battles and organization aspects of the German General Staff. There are five appendices which show the organization of the high and army staffs, examples of operations orders from the Marne Campaign of 1914 and the Michael Offensive in 1918, and a staff estimate completed prior to the Michael Offensive of 1918. Maps will be integrated within the text.

For consistency when addressing the various staff levels the following terms will be used throughout.

-Die Oberste Heeresleitung, hereafter known as the OHL. This term will be used to identify the High Staff, the staff of von Moltke in 1914 and Ludendorff in 1918.¹⁵

-Army, Army Group, and Corps Staff(s) will refer to those specific levels of command and control.

-German General Staff or General Staff will be used to refer to the aggregate body of the staff system.

¹ Walter Goerlitz, History of the German General Staff 1657-1945, (1953). The most informative work on the subject. From it have come a number of spin-off works, including T. N. Dupuy's A Genius for War.

² T. N. Dupuy, A Genius for War: The Germany Army and General Staff 1807-1945, (1977), 101. LTC Rousett's comments are liberally used in this text, but do reveal some of the stature that the German Army and Staff enjoyed during the late 1800's. Contemporary British thoughts on the German General Staff are expressed in an 1890 book by Spenser Wilkinson titled The Brain of the Army. This text is very sympathetic to the German system, praising all of its strengths and minimizing its shortcomings.

³ Russell F. Weigley, History of the United States Army, (1967), 324-325. This particular passage reflects the difficulties that the United States had in establishing a General Staff. The General Staff Act of 1903 established a General Staff along the lines of the German General Staff, although greatly modified and diluted. Upon entry into the First World War it was found that a General Staff With Troops was needed, and the United States Army adopted the French system.

⁴ Hermann von Kuhl, The German General Staff in the Preparation and Conduct of the World War, (1920), 354.

⁵ Ibid., 205

⁶ Philip Neame, German Strategy in the Great War, (1923), 22.

⁷ Hermann von Kuhl, The Marne Campaign, (1919), 311. There are many accounts of von Schlieffen's last words. While they differ in translation the right wing theme is constant. Hermann von Kuhl was a prolific writer during the inter-war years. He lived to be 102 years old passing away in 1956. He served as the Chief of Staff of the First Army in 1914 and ended the war as Chief of Staff of the Crown Prince Rupprecht's Army Group. Von Kuhl is a recognized expert on military operations during the First World War. He is a staunch defender of von Schlieffen, the General Staff and von Kluck. Throughout these footnotes an attempt will be made to identify the prejudices of the authors.

⁸ Dupuy, A Genius for War, 145. The right wing forces have been expressed in various forms to include ratios and strengths in numbers. The reference was used because it expresses those strengths as a percentage, which makes it easier to understand the changes made by von Moltke. It is also interesting to note that von Moltke was blamed for weakening the right wing forces prior to the war. He did not move forces from the right wing, per se. In the years between 1906-1914 the German Army grew, and those additional forces were used to strengthen the left wing

(Sixth and Seventh Armies) and the east (Eighth Army). Thus the percentage of forces dropped on the right wing in relationship to the rest of the German Army. Liddell Hart discusses the force change in the same manner. Many German texts will leave the impression that forces were moved when in fact they were not.

⁹ Von Moltke with Ludendorff's assistance can be credited for seeing a political problem with the invasion of Holland. However, it was von Schlieffen who suggested, in a continuing series of memoranda to Kaiser Wilhelm and von Moltke, that military and economic considerations now impacted on the original plan. Von Schlieffen was concerned that sufficient forces had not been made available by the government to accomplish the plans original aims. He also realized that Holland represented Germany's only window for exports in the event of a naval blockade.

¹⁰ L. L. Farrar, The Short War Illusion, (1968), 20-27. There was no plan for war other than that of von Schlieffen's. It was tailormade for the political and economic leaders of the German Nation and allowed them to think in terms which made war an easy alternative. This will be discussed again within the next chapter, pinpointing the short war illusions impact on the OHL.

¹¹ Harold W. Deutsch used this term in a lecture at Fort Leavenworth, Kansas, on 18 January 1983. Simply put, it best describes the mindset of German Military leaders during the period.

12 Gerhard Ritter, The Sword and the Scepter, The Problem of Militarism in Germany, VOLUME II, (1965), 195. Gerhard Ritter is a critic of the Schlieffen Plan, stating that it ignored political, economic, and logistical considerations. In his excellent work, The Schlieffen Plan (1958) he outlines and discusses the plan in detail.

13 Correlli Barnett, The Swordbearers, (1963), 5.

14 Gerhard Ritter, The Sword and the Scepter, 199.

15 Timothy T. Lupfer, The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War, (1981), vii.

CHAPTER 3

THE BATTLE OF THE MARNE

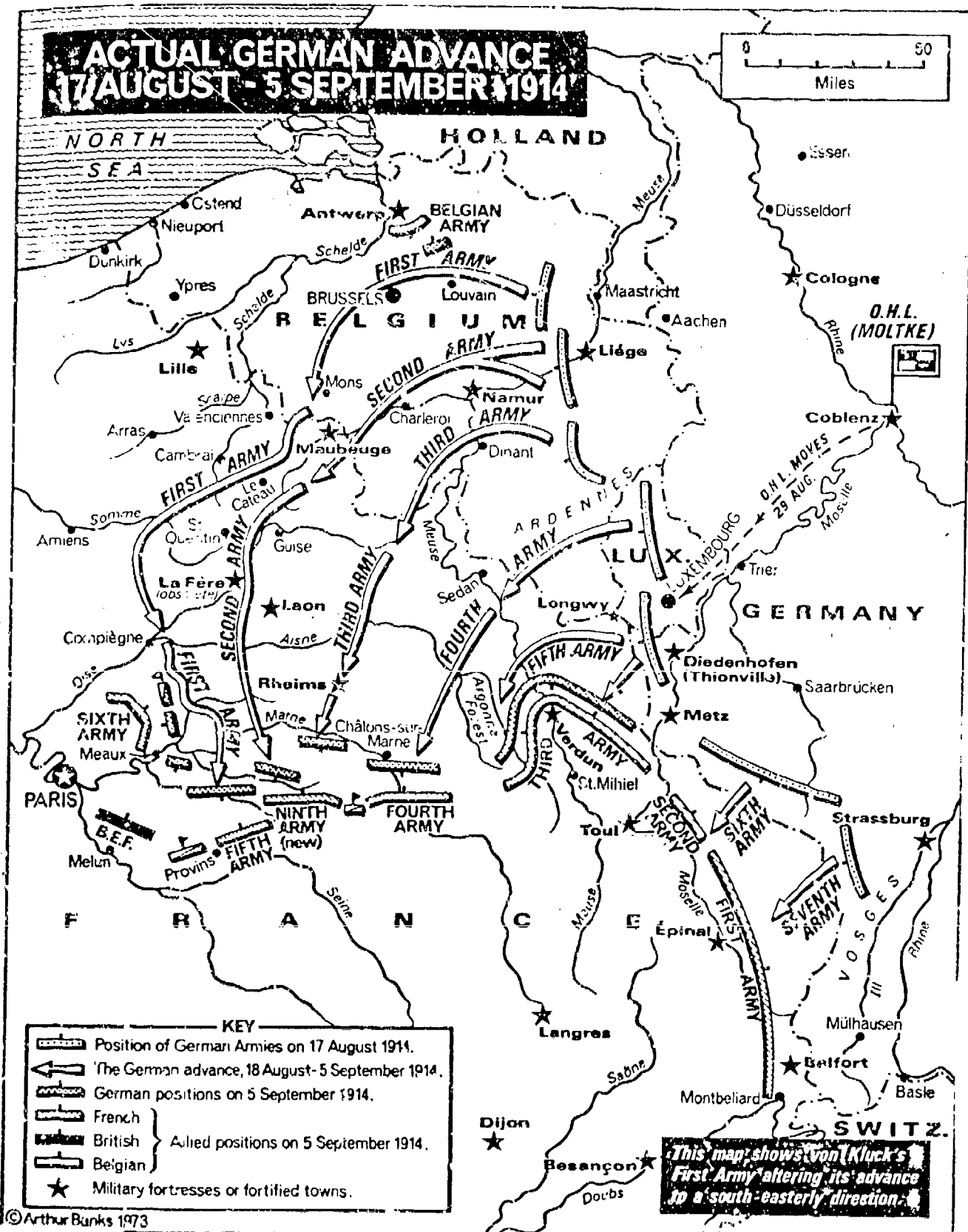
The Battle of the Marne began on 6 September and concluded on 10 September, 1914, with a general retreat of German Forces to the Aisne River. The initiative and momentum, so important to fulfillment of German war plans, had been lost and with them a golden opportunity to inflict a major defeat on the combined French and British forces. The Battle of the Marne signalled the end of movement and maneuver in the west and brought on four years of position warfare.

The Battle of the Marne is one of the most significant battles fought in recent history, and ranks with other battles which have changed the course of human events. The German Army, directed by the German General Staff, came within miles of changing the present face of Europe. The vaunted General Staff had prepared the German Army for a two-front war and had developed a strategic scheme of maneuver to win the critical battle against France, only to fail. A careful study of staff efforts, planning and mistakes of this epic battle will yield valuable staff lessons.

To evaluate the battle from the staff perspective requires an in-depth look at major staff functions. This study will review intelligence preparation and collection, command and control, communications and logistics.

The intelligence picture provided by the OHL of French, Russian and British forces gives insight into the capabilities of the staff and

ACTUAL GERMAN ADVANCE 17 AUGUST - 5 SEPTEMBER 1914



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sheds light on tactical as well as strategic mistakes. The discussion of intelligence effort will include estimates prepared by the OHL and the collection effort during the battle.

The OHL was broken into four broad functional sections, one of which was the intelligence section. Within this section were desks for each of the major countries, not unlike that found at modern day intelligence agencies. The OHL prepared yearly intelligence estimates on potential adversaries and allies alike. These lengthy reports were given wide distribution down to and including division. The last intelligence estimate provided by the OHL prior to the outbreak of hostilities was dated February 1914.²

The February review of French capabilities discussed the manpower requirements of the French Army. It was estimated that the French could mobilize 882,000 men under arms. There was considerable discussion of the fact that the French had gone to a three-year enlistment program and had called up two year groups for active duty. The estimate stated that the French could not maintain this high drain on personnel from the work force without an adverse effect on the French economy. The final comment was that the French would either have to go to war or rescind the policy within the next two years.³

This intelligence estimate also discussed the contribution of colonial troops to the French Army, including not only numbers but the potential of those forces in combat. The accuracy of this estimate appears to be close. The French were able to mobilize between 883,500 and 885,000 men. The colonial contribution was well stated and at least as accurate as the regular force estimate.⁴

The estimate discussed tactical employment of French forces. To

that end, it spoke accurately of the French elan in the attack.⁵ The scheme of maneuver, Plan XVII, was anticipated and it can be assumed that the OHL had reasonable intelligence information about the Plan's objectives.⁶ More importantly, the estimate discussed French actions during a delay and retreat. This portion of the staff estimate provided information which would be critical during the Battle of the Marne. The staff correctly estimated that the French would pull back forces while attempting to establish a creditable defense line. Once a line had been established, a violent counterattack would commence to gain the initiative.

An assessment of the French artillery and cavalry was made and both were considered to be superior to that of the Germans. Even an estimate of French air capabilities was included, stating that the French air arm was superior to anything in Europe. In conclusion, the estimate of 1914 spoke of French capabilities in the following terms:

The Frenchman is an able intelligent soldier, imbued with burning love of country, easy to inspire and to urge to great accomplishments.

The officers are for the most part zealous, unpretentious, and industrious in technical and theoretical, as well as in practical preparation.

The only reservation mentioned was the perseverance and stamina of the French soldier. The estimate stated:

The Frenchman is temperamental, his mood is easily changeable. To a prominent leader who could command his trust the Frenchman is willingly subordinate. It is doubted whether his discipline would stand up to reverses.

Thus the German Army and the OHL had an accurate picture of their most dangerous adversary, the French. There appears to be no over- or understatement of enemy capabilities.⁹ The assessment should

have served the commanders and staff well in the upcoming battles.

The Russian Army was to play a key role in the Battle of the Marne. Its rapid mobilization and movement into East Prussia caused the OHL to move forces needed in the west to meet the threat. It should be stated that these forces were not requested by Hindenburg, Ludendorff, or Hoffmann, the Commander, Chief of Staff and Operations Chief, respectively, of the Eighth Army in the east.¹⁰ The significance of these forces to the right wing of the German advance into Northern France will be discussed later, but what of the intelligence estimate of Russian capabilities? Critics of the Schlieffen Plan and the German Staff have stated that it underestimated the ability of the Russians to mobilize and launch an attack. A review of the intelligence estimate of 1914 on the Russian capabilities does not support that conclusion. Directives derived from the estimate and sent to the eastern corps show that the staff was aware of the threat. These directives, sent in late 1913 and early 1914, warned commands that the Russians had made a remarkable recovery from the disastrous defeat at the hands of the Japanese. Mobilization of sizeable units could take place in eight days. The final statement was the Russian Army was equal to counterparts of the other great European powers. ¹¹

The OHL had intelligence information on 26 July, 1914, which indicated that the Russians had nearly completed their mobilization. This was two days prior to mobilization of German forces.¹² Thus the Germans had a viable estimate of Russian capabilities, although it is possible that the Russians were more aggressive in mounting their attack than the OHL anticipated.

The British capabilities were not as accurately assessed as

those of the French and Russians. However, possible landing sites on the French coast were determined and the British Expeditionary Force's size and professionalism were accurately assessed. The intelligence estimate stated that it would take twelve days after mobilization for substantial British forces to arrive on the continent. This is consistent and accurately reflects the capabilities of the British, knowing that the first sizeable British forces arrived in France 12-14 August and engaged von Kluck in Mons Belgium area on 22 August 1914. The biggest concern was the British Navy and its well known capabilities. The OHL did not accurately estimate the impact of expanded British forces in a protracted war. It must be remembered that few thought the war would last more than a few months. The long term consequences were not assessed.

Next it is necessary to look at the strategic and tactical intelligence available to the German Army and Staff prior to and during the Battle of the Marne.

The sources of information available to the German Army in the First World War included the cavalry, troops in contact, German Secret Service, captured documents and prisoners of war, aviation assets and the press.

The German cavalry did not perform its intelligence mission well in the Battle of the Marne. There is little evidence that cavalry units reported information back to corps or higher headquarters, nor did those headquarters share information with each other. There are a number of reasons for this gap. The first appears to be the operational policy which guided cavalry units. General Bernhardt in his 1906 book Cavalry in Future Wars discussed the conduct of cavalry operations and the need

for intelligence and security missions. However, it is clear by the statement below that the real mission of cavalry was combat and not reconnaissance:

The whole consideration, therefore, leads me to the conclusion that the chief task for the cavalry consists in obtaining a victory over the enemy's cavalry in that direction which is of decisive importance for future prosecution of the reconnaissance as soon after the great operation as possible.¹³

Thus, German cavalry throughout the battles of August and September became decisively engaged and could not perform the intelligence mission to the degree required. This was the result of the doctrine established by Bernhardt and others of the German Army. This is not to say that the reconnaissance and information was not obtained and passed by the cavalry units. There appears to have been a distinct dividing line on the information to the cavalry division and from there to the cavalry corps. Squadrons passed on accurate information to the cavalry division and from there to the cavalry corps.¹⁴ At that level, however, the information flow seemed to stop. Each of the right wing armies (First and Second) had an attached cavalry corps. Significantly, there was no constant affiliation between the armies and these cavalry corps. During the advance to the Marne there were three changes made to the attachment of the First and Second Cavalry Corps. This had an impact on the quality of information when the needs of one army differed from those of the other Armies. As a result their reports back to the army headquarters were so general as to be of negligible use. For example, reports from the Second Cavalry Corps supporting the First Army were, "The enemy is in retreat toward Crepy En Valois", or "Enemy resistance has greatly increased", or "The enemy has sent forward reinforcements from Paris".¹⁵ Note that the Second Cavalry Corps had only recently been

attached to the First Army when these reports were transmitted. During the critical phase on 9 September, when the First and Second Cavalry Corps were filling the gap between the First and Second Armies, there was no sharing of information with adjacent cavalry corps or armies.

The Germans had foreseen the capabilities of the cavalry in an intelligence role and even equipped their squadrons with radios to report back information.¹⁶ However, procedural problems with reporting and the old traditions of cavalry engaging the enemy's cavalry or exploiting a success got in the way of that mission. The information flow from the cavalry corps headquarters to higher and adjacent units was lacking. This failure had a profound impact on the armies' need for information. The First and Second Armies could have developed schemes of maneuver to the flank threats cause by the French and British had the cavalry developed and reported the situation. The problems of sharing and passing information will be further discussed within command, control, and communications.

Troops in contact provided information which was immediately needed at division and below. There is no evidence that a consolidated intelligence estimate was forwarded up or down the chain of command. This became critical especially when the French began to move troops from the east to the Paris area in late August and early September. The commanders of the First and Fifth Armies, von Kluck and the Crown Prince, were aware of this movement. The Crown Prince informed the OHL, but that information was not disseminated to the First or Second Armies.¹⁷ The First Army realized what was happening when it learned that the attacks of the Sixth and Seventh Armies had not tied down French forces. The movement of these forces to the west allowed the

French to initiate the counterattack on the Ourcq River on 6 September 1914.

The German Secret Service provided little information to assist in the conduct of the Battle of the Marne. Espionage rings had been established in France and Russia and provided information about French deployment and the Russian mobilization. No information was provided on the movement of French forces from the east to Paris. The main effort of the Secret Service was to deny information to the enemy, and a strong Operations Security (OPSEC) effort was maintained throughout the war. This would have significance during the Spring Offensives of 1918.¹⁸

The airplane was to play a role in the Battle of the Marne. It provided long range reconnaissance not carried out by the cavalry. The German General Staff saw the potential of the airplane in 1911 and established a six plane section at army and corps headquarters strictly for rapid and long range reconnaissance.

Captured documents and prisoners of war during the early stages of the war provided additional information to the German Army. As with previous intelligence information passed to the OHL for processing or evaluation, it was not returned as intelligence to the armies.¹⁹

Finally the press played a key role in the information gathering scheme of the OHL. Ludendorff recognized in 1911 that monitoring of the press, especially the American Press, would provide valuable information on the movements of the enemy. The Belgian Press provided the First Army Staff with the state of deployment of the British Expeditionary Force (BEF), to include debarkation sites. The First Army did not forward this critical information to the OHL. Other press sources provided information on the French and Russian

mobilization efforts.

Thus, intelligence failures contributed to the defeat at the Marne. Von Bulow states in his report that the defeat at the Marne was totally due to the lack of intelligence. As noted above, the OHL had an accurate picture of the French prior to the start of hostilities that included an understanding of French tactical and strategic doctrine. By the end of August prisoners had been taken and equipment captured, but no decisive victory had occurred. The French were falling back in good order and in compliance with established doctrine, doctrine which was understood by the OHL. Yet there was no appreciation of the fact that the French were trading space for time until the Battle of Marne began. The strong counterattacks came as a surprise to the OHL despite all the indicators.

The role of command and control in the Battle of the Marne will occupy a large share of this chapter. The subject of command and control goes far to explain the defeat of German forces at Marne. Within this subject, this paper will discuss not only command relationships and how units were controlled, but information flow, communications, headquarters locations, and finally the operational level, the interface between strategic and tactical levels.

No investigation of command and control arrangements can be made without discussion of Helmut von Moltke. Von Moltke assumed the role of the Chief of Staff in 1906. From all accounts he was an intelligent, thorough staff officer with a precise Prussian military bearing. Yet he lacked self-confidence, and did not consider himself equal to the momentous decisions and trials that lay ahead. His self-confidence was to take a severe beating prior to the outbreak of

hostilities in a conference with Kaiser Wilhelm II.

On 31 July, a conference was held between General von Falkenhayn (Secretary of State for War), Grand Admirals von Tirpitz and von Mueller, General von Lyncker (Adjutant General to the Kaiser), von Bethmann-Hollweg (Imperial Chancellor) and von Jagow (Secretary of State for Foreign Affairs). The conference was hastily called to discuss a message received from the German Ambassador to Britain, which stated that Britain would insure French neutrality if no hostile acts were taken toward France. To the assembled members this was the last chance to save peace. When von Moltke arrived and was told of the message he was taken back by the attitude of the others. Based on the message, Kaiser, Wilhelm II wanted to shift the masses of the German Army east and suspend all operations in the west. The Kaiser directed von Moltke to make the changes, but von Moltke responded that too much had already taken place. Wilhelm's response was one that caused von Moltke considerable embarrassment and further eroded his confidence: "Your uncle would have given me a different answer." Thus the Chief of Staff of the OHL, the organization which provided direction to the German Army, had in his own words lost faith, and his confidence was shattered.²⁰

This episode is important, for it explains some of the command and control problems experienced during the Battle of the Marne and von Moltke's reluctance to command and make necessary decisions.

Von Moltke believed that it was the responsibility of the OHL to actively mobilize the German Army. Thus, when the order to mobilize was issued on 2 August, 1914 the OHL was deeply involved in the execution of the mobilization plan, including movement of forces to the

frontier. This is consistent with the command and control relationships handed down from the elder von Moltke and institutionalized by the staff. These relationships gave the General Staff the major responsibility for planning and deployment during the Wars of Unification. However, once the armies were in assembly areas on the frontier and the offensive was initiated, the tactical maneuver was left to the Army Commander. Von Moltke's (younger) view on this command and control relationship was that:

The Supreme Command can and must have a great aim, followed logically...only in this way can mind and will power conquer matter. But if the inevitable separate battles of different armies lead to a general loss of cohesion because each army follows its own objectives instead of working together, then the Supreme Command will have let the reins fall from its hands, it will not have known how to create²¹ the basic unity in the battles and maneuvers of separate groups.

This basic command relationship was one that had been successful for the elder von Moltke against the Danes, Austrians, and the French. Wargaming by the OHL had discovered no reason for change. However, in a report to Wilhelm in 1905 von Moltke expressed concern over command and control:

We have now thirty years of peace behind us, and I believe that our views have largely become peacetime views. Whether it is at all possible to control by a unified command the mass armies we are setting up and if it can be done nobody can know in advance.²²

Von Moltke and the General Staff were not able to resolve the issue. It was this facet of command and control which plagued the German Army in late August and early September 1914.

The Army Commanders were elder soldiers, Crown Princes or Dukes of the old German States. Only three were on active duty when the mobilization order was given. There is little evidence to suggest that any were even vaguely familiar with the strategic maneuver envisioned by

the OHL. However, this was not unusual. To insure that the Army had expertise in this area, each Army was assigned a Chief of Staff. This individual in all cases had served on the High Staff and wargamed and studied the operational plan. To assist the Chief were a number of General Staff officers of lesser grade who knew staff operations and the plan of attack.

To illustrate the power exerted by the Chief of Staff in each of the armies is the following from Crown Prince William's book, My War Experiences:

I was called in, and my father, looking very grave, said to me in the presence of the Imperial Chancellor, the Chief of Staff, the War Minister and the Secretary of War for the Imperial Navy: "I have appointed you the commander of the Fifth Army. You're to have LTG Schmidt von Knobelsdorf as Chief of Staff. Whatever he advises you must do".²³

It is interesting to note that von Knobelsdorf had been the Deputy Chief of the General Staff. Similarly, other key members of the OHL were parcelled out to the Army Commanders. This would appear to leave a void at the OHL at a time when institutional memory and expertise were most needed. However, this was a conscious decision which was required because of the composition and command structure of the German Army.

The Army Commanders have been accused of looking only for glory and medals.²⁴ Another charge was that Germany had developed a sophisticated structure to serve poor leaders, which was not far from the truth. The staff had been established to insure continuity and staff excellence no matter what the situation or commander. That premise manifested itself in the development of the stereotyped leadership found at the highest levels of German Army. Thus, the staff was designed to

make up for weak leaders and insure success.

The link between the armies and the OHL was essential to the success of the Schlieffen Plan. Von Moltke was aware of the need to maintain strategic direction over the armies as they moved through Belgium and France. Yet this is not what happened. The strategic direction broke down and the armies worked independently, allowing the decision on the Marne to be made by commanders who were not concerned or aware of the strategic objectives and plans of the OHL. The placement of selected Chiefs of Staff at the army level did not support the OHL plan because many of these individuals were opposed to the Schlieffen maneuver scheme or had decided on selected violations of the Schlieffen Plan.²⁵

There were several factors which contributed to the command and control breakdown. One is communications, which will be discussed later. Others include headquarters location, information flow, role of the OHL, and the need for an interface between the strategic and tactical headquarters.

During the early days of August the German Army pushed rapidly through Belgium and Northern France. The OHL headquarters was at Koblenz. The distance between von Kluck's First Army on the extreme right wing and the headquarters at Koblenz made communication difficult and liaison out of the question. On 28 August the OHL, including Kaiser Wilhelm moved to Luxembourg City. There are a number of reasons why this location was chosen. The safety of the Kaiser and the space needed for his court were part of the reason. There was a legitimate need to maintain contact with the Eastern Front, since the OHL was also responsible for strategic direction in that theater. Luxembourg City

provided for secure communications to Berlin and the east. This site also placed the OHL near the left wing, where von Moltke anticipated the French main attack. If the situation became critical he could easily control the situation from Luxembourg. Finally, it suited von Moltke's desire to avoid interfering with the army commanders prosecution of the tactical situation. Still, Luxembourg City was 230 kilometers from von Kluck's First Army and events on the right wing. Communication was difficult because the telephone service was interrupted and radio communication was swamped and unreliable.

The location of the OHL was unfortunate, for it did not serve the needs of the OHL to stay in control of the right wing. In retrospect after the war, the army commanders von Kluck, von Bulow, von Hausen and the Crown Prince made clear concise statements on the need for the OHL to be closer to the right wing action.²⁶ Von Moltke's fear of losing the reins was fulfilled because the of the location of the OHL. He was not able to provide timely strategic direction.

The army headquarters locations were selected based on the need to maintain contact with the corps. They moved frequently and were able to maintain contact by message or liaison officer. There is no indication that any army headquarters met the same predicament suffered by the OHL. However, we are looking at two different command functions, directing versus controlling.

The timely flow of critical information for decision making is a necessity to any operation. The flow of information between army level and the OHL was inconsistent and misleading. The reasons for this are found in the independence given and taken by the armies for maneuver and objectives. There was no requirement to pass information to higher or

adjacent headquarters. Thus, each army operated in a vacuum, not knowing what the others were doing. Evidence of this is the plight of the First and Second Armies. Each had made successful and rapid marches across Belgium and France. Both von Kluck and von Bulow assumed that the other armies had achieved similar victories. This of course was not the case. The Fifth Army had been slowed by the fortress of Verdun, and the Sixth and Seventh Armies had been stalled by the French fortress along the frontier. As mentioned, the French were capable of releasing forces from the latter sectors for action on the right wing.

Directives were sent to the field armies by the OHL but in many cases these orders could not be carried out. The best example was the directive of 2-3 September, calling for the First Army to echelon behind and to the flank of the Second Army. At the time this order was received the First Army was one day's march ahead of where the OHL assumed it to be.²⁷ Nor was the information from the army headquarters of any help in determining the armies' situation or location. The following is a synopsis of reports recieved by the OHL on 5 September 1914:

The First Army on the evening of 5 September merely reported that it was marching to the indicated area between the Oisne and the Marne (This was in accordance with OHL directive dated 4 September--author), yet at 0600 PM, it reported stiff fighting to the north of the Marne. The Commanding General of the 2d Army mentioned indecisive combat at Petit Morin. Reports from the Commanding General 3rd Army disclosed solely the fact that on his front also the fighting had begun.²⁸

The lack of information isolated not only the OHL but the Army Commanders. It caused each to act independently of and in cases against the design of the strategic maneuver. Because the OHL did not have adequate information on what was going on, on 8 September von Moltke dispatched a member of the OHL to determine the status of the right

wing. The man chosen was LTC Richard Hentsch, General Staff Corps. Much of the blame for the Marne reversal has been placed at his feet and the debate on his mission could fill a dissertation. However, the purpose here is not to discuss his role but to look at the situation that caused the need for that mission.

The reason for LTC Hentsch's mission was to determine the status of the right wing. The OHL and von Moltke had become concerned with the situation there. The scope and intensity of the French and British attack were not known nor was the true status and condition of the right wing armies. There was an indication that the French were massing for a counterattack and that it would be directed at the widening gap between the First and Second Armies. The final catalyst for the decision to send LTC Hentsch was an intercepted message from the First Cavalry Corps which stated it was under increasing pressure and would retreat to Dollau.

Why LTC Hentsch, the Intelligence Officer for the OHL, was chosen over von Tappen or von Dammes of the Operations Section is not clearly understood. Certainly LTC Hentsch was well known by von Kuhl, the Chief of Staff, First Army, and had worked for von Bulow, the Commander of the Second Army. His attitude and philosophy were close to that of von Moltke and from all accounts LTC Hentsch was a most trusted advisor. Von Tappen was apparently eliminated because of his personality and his caustic attitude in dealing with the army staffs. LTC Hentsch's selection and the fact that he departed without written instructions show the philosophy of command relationships. The fear that the OHL might be interfering with the Army Commanders preogatives compounded command and control problems. Yet at this stage of the battle 8-10

September, the right wing commanders were in need of firm control from the OHL.

LTC Hentsch began his mission on 8 September, visiting the 5th, 4th, 3rd, 2d and 1st Armies in that order. It is interesting to note that LTC Hentsch was not directed to visit the 5th, 4th or 3rd Armies, only the 1st and 2d. The OHL did not think enough of the visit to send a warning message of his visit so that the various army staffs could prepare for him.

If the OHL thought they would obtain better information from LTC Hentsch they were mistaken. He did not communicate with the OHL for a number of hours, and when he did his information was as general as that already provided by the armies. His report from the Third Army was, "The situation of the Third Army is favorable."²⁹

LTC Hentsch's visit to the army headquarters illustrates both von Moltke's desire not to interfere with the tactical situation and his need for information. The dispatch of a junior officer to the armies was von Moltke's way of attempting to get information without appearing to be meddling in the tactical maneuvers. LTC Hentsch was, however, a General Staff Corps officer, known to be serving with the OHL. This enhanced the impact of his mission and served as his necessary credentials.³⁰

Ironically, at the same time the army commanders desired guidance from the OHL but were not sure how to obtain it. As von Kluck remarked:

1st Army can only accept the heavy responsibility of decision that must be made in a perpetually changing situation if it is given regular information about the armies whose fronts seem to be in retreat in comparison to its own.³¹

The flow of information from the army to corps headquarters did not suffer from the same problems. A review of the army orders to attached corps indicates that the armies were in complete control of the situation which faced them. The armies had established procedures for the exchange of liaison officers. The staff officers from corps came on a regular basis to brief their counterparts at the army headquarters. Thus, there was a constant exchange of information between the corps and army. Only one time did this procedure break down. On 9 September the Second Army was in the throes of determining whether it should begin a general retirement. No attempt was made by the staff to determine the situation at the corps level. The corps, in fact, considered the situation most favorable, yet the retreat was ordered.

The fragmentary orders and prepared operations orders show a high level of staff sophistication and capability (A copy of the 2 September 1914 1st Army OPORD is at Appendix 3). This is reflected in the success which the German arms enjoyed prior to the Battle of the Marne.

LTC Hentsch's visit to the Second and First Armies on 10 September and the retreat orders which followed highlight another area of staff weakness. LTC Hentsch was perceived to have authority from the OHL to order a retreat. None of the army commanders questioned this authority. Based on verbal orders, the Second and First Armies began a retreat to Aisne River. LTC Hentsch was the only man in the OHL and the German Army who had the opportunity to correctly interpret the situation of the right wing. Thus a relatively junior officer, but one with the power and status of the General Staff Corps behind him, was the person who had immediate access to vital information from which to make a

timely and critical decisions, decisions which should have been made by von Moltke and the army commanders. This episode makes a strong statement on the command and control problems experienced at the OHL and the army level. The power of the General Staff Corps worked against itself, because no commander would direct a question to the OHL in regards to LTC Hentsch's mission. Von Kluck, whose army was flanking Maunoury's Sixth Army, quit his attack and disengaged, much to the surprise and relief of the French. Nowhere in his memoirs is there any consideration of contacting the OHL on the matter.

The control of millions of men over a large area with limited communications was something that the General Staff did not fully comprehend. Some problems had been experienced in 1866 and 1870 but no one, not even Napoleon or the elder von Moltke, encountered the problems that faced the younger von Moltke. He and the OHL had no means of controlling the battle once it deviated from the well established plan. The plan was never laid out on the ground in peacetime and practiced with maneuver units to identify problem areas. This leads to a critical point in the area of command and control, that being the interface between strategic and tactical command levels. In today's terms this interface may be labeled the Operational Command level.

The army commanders' memoirs revealed the need for what they called an Army Group Headquarters. It was envisioned that this headquarters would have controlled the First, Second and Third Armies. The advantages of this type of headquarters are numerous. First, the OHL could have remained in Luxembourg and maintained strategic direction over the Eastern and Western Fronts. An Army Group headquarters located, in, for example Laon France, or in Hirson as Groener suggests, could

have controlled the tactical situation and maintained the strategic objective of the OHL. Hindsight allows excellent observation, but such an intermediate headquarters could have made the difference in the Battle of the Marne. To the credit of the OHL, the Army Group concept was adopted later in the war and enjoyed success in the next.

Communications also played a significant role in the command and control problems experienced in the Battle of the Marne. The main means of communication between the OHL and the the armies were the telephone, telegraph and the radio. The philosophy of the OHL during the August and September 1914 is best expressed by von Schlieffen:

In these times, the commander is located well to the rear, in a building having ample office space, and where he has telegraph, radio, telephone and such signal apparatus available. He also has numerous automobiles and motorcycles available for distant journeys and missions. The modern Alexander will be found seated before a large table, and before him will be an operations map of the whole battlefield, staked out so as to give him, at a glance, the complete picture of the conflict. By means of his signal communications system, he issues his orders to and receives reports from, his army and corps commanders..., and thus keeps informed of the situation over the entire battlefield.³²

The OHL had envisioned that it could control the battlefield in much the same way as von Schlieffen had stated in 1905. The realities of 1914, however, prevented the OHL from using the backbone of the communication net. In pre-war exercises the telephone was always available to pass information. It allowed for rapid exchange of ideas and mutual expression of the situation. In 1914, the right wing moved with such speed that laying and repairing of telephone lines could not keep up with the movement of the army headquarters. Thus, the communication means preferred by the OHL and army level staffs was not available. This caused the OHL to lose control of the Battle of the

Marne. The telegraph was a victim of the same constraints as the telephone. The alternative means of communications was the radio. Each army and the OHL had one station to service its needs. When the use of telephones and the telegraph became a problem, the radio stations were extensively used and in a short time became swamped.³³ It often took 24 hours for a message to be transmitted from the OHL to the First Army.³⁴ Transmissions were interrupted by storms and even interference from the Eiffel Tower. The OHL had come to rely so heavily on the telephone and the telegraph that they had lost the fine art of liaison officers and dispatch messengers.

It also appears that the OHL did not exhaust all efforts to establish communications with the right wing. A priority of effort should have been given to the right wing. Yet communications by telephone and telegraph were first available with the Third, Fourth and Fifth Armies. One system which was overlooked was the use of railway circuits. The First Army supply service was in continuous communication with the Quartermaster General at the OHL. Additionally there was communication between the Chief of Field Railways and the headquarters First Army communications zone by a similar means. The irony of the communications problem during the Battle of the Marne is that one hour after the Second Army began its retreat, telephone and telegraph communications were available from its headquarters to the First Army and the OHL. One can only speculate on the decision that may have been made if von Kluck, von Bulow and von Moltke could have talked.³⁵

Logistics and logistics support of the Schlieffen Plan have received considerable comment from noted historians such as Addington and Liddell Hart. Such critics content that the plan did not take into

consideration the need for logistics nor the disruption of lines of communication by the advance into Belgium and France. Numerous German works leave the impression that a crucial logistics problem plagued the right wing armies, which was not the case.

Von Schlieffen reviewed the logistics problem in 1905. He concluded that the sweeping move through Belgium could be supported. This was not acquiescence to the wishes of von Schlieffen but an in-depth study of the road and rail networks. The study revealed that an offensive could best be supported by the rail and road networks in Belgium and Northern France. The existing networks in that location were better than those that existed from the German-French border towards Paris.

The OHL managed the supply system well, basically because of the efforts and capabilities of the Chief of Field Railways, then-Colonel Wilhelm Groener. The individual armies' resupply was moved by rail to a railhead. At the railhead it was off-loaded and carried forward by horse and cart. It was estimated that the railhead would need to be within 50 kilometers of the front units to maintain adequate supply flow. If there was a breakdown in the system it was at this last link. Some motor transport was used to speed resupply but there were insufficient numbers of trucks to overcome all the problems.

While there were shortages of ammunition and the cavalry units did not have adequate rations at times, there were no accounts of German units having to break contact or retreat because of a resupply problem. Much, if not all, the credit can go to the prior planning by the OHL and the army staffs. An illustration of the confidence in the system is the following from von Bergmann, who was the equivalent of a G4 in the First

German Army:

Nor would insurmountable difficulties have been experienced, had the outcome of the Battle of the Marne been favorable (for the Germans), and operations been continued to exploit the success. Supplies could have been forwarded by rail, but bringing up of replacements of men would have caused difficulty.³⁶

Two areas related to logistics did have substantial impact; the need to secure long lines of communications and the endurance of the soldier.

The army commanders and the OHL were surprised at the hostile attitude of the Belgian populace. There were repeated sniper attacks and acts of sabotage along the lines of communication. This caused the First and Second Army Commanders to hold forces back to maintain lines of communication. This coupled with forces required to reduce the fortresses at Maubeuge and Givet as well as Antwerp further weakened the right wing forces.

The summer of 1914 was particularly warm and that August was one of the warmest in many years. Men and horses of the First and Second Armies had been marching and in heavy contact for nearly 40 days when the Battle of the Marne began.³⁷ The German forces were near exhaustion. There were no reserves other than those available within the individual armies. Thus, the most important of all supplies, manpower, was short and stretched thin.

The continuing debate concerning manpower problems on the critical right wing will always be a "what if" question. Various writers on the German side have speculated that one to three corps would have been sufficient to succeed at the Marne. That becomes the symptom of a deeper problem; the diagnosis was that the Army and OHL staffs did not

recognize the need for additional troops prior to their eventual need.

The German loss of the Battle of the Marne has been blamed on a number of valid causes. The commanders involved point to each other and of course to LTC Hentsch. Others blame the Schlieffen Plan, and still others look to the weakening of the right wing by von Moltke. A closer look, hopefully from the text above, at the contributing factors surfaces a common underlying theme of command and control problems. The Battle of the Marne was lost because the OHL, army commanders and staffs did not envision the magnitude of their endeavor, and once started had no way of directing it towards the established strategic objectives. In this regard the OHL had not matured as a staff and had neither the experience nor the mindset to find a quick remedy.

Discussion of the staff lessons obtained from the Battle of the Marne will be held for the final chapter. However, the following certainly stand out from the discussion above:

- The need for an operational headquarters, serving both the tactical and strategic objectives;
- Effective and timely exchange of information and intelligence;
- Reliable and rapid communications;
- Staffs and commanders who expect the unexpected and be flexible enough to adapt to change

¹ Arthur Bank, A Military Atlas of the First World War, (1975), 22.

² Hermann von Kuhl, The German General Staff in the Preparation and Conduct of the World War, (1920), 12.

³ Ibid., 12.

⁴ Pascal M. Lucas, The Evolution of Tactical Ideas in France and Germany during the War of 1914-1918, (1923), 23. This book was a report to the French Senate Army Commission, which in 1914 estimated that the strength of the French Army at the outset of the War was 883,500. General Baut, The German Army during the War of 1914-1918, (1920), States that the French Regular Army in August of 1914 was about 910,000.

⁵ LTC Louzeau de Grandmaison can be credited with fostering the elan for the frontal attack in the French Army. He served as the Chief of Training on the General Staff. It was at his urging that Plan XVII was adopted over other plans which called for a defensive posture. Plan XVII played into the hands of the OHL and the concepts expressed in the Schlieffen Plan. Von Schlieffen hoped that masses of the French Army would try to penetrate the German defenses in the Alsace-Lorraine region. In von Schlieffen's plan it was intended that certain German armies would retreat, further enticing the French to press home their attack, thus enhancing the flanking movement in Belgium and Northern France. LTC de Grandmaison was killed in 1915 while leading the type of attack he had designed for the French Army.

⁶ Wilhelm Groener, The Testament of Count von Schlieffen, (1936), 9-12. Von Moltke had correctly anticipated the French attack in the Alsace-Lorraine region. While it cannot be proven conclusively, the decision was probably based on information on Plan XVII and French operations from intelligence sources. Like von Kuhl, Wilhelm Groener was a staunch supporter of von Schlieffen. He severely criticized von Moltke and the OHL during the Battle of the Marne. Groener was at the time

Chief of Field Railroads, and a large measure of the success enjoyed during the initial days of the war can be attributed to him. He became the First Quartermaster General after Ludendorff's resignation in 1918.

⁷ Hermann von Kuhl, The German General Staff, 47.

⁸ Ibid., 47.

⁹ There is considerable comment that the German Army underestimated their enemies, especially the Russians. The referenced intelligence estimate is a statement of enemy capabilities. It is in fact fairly accurate. However, once the personalities of commanders are involved it could be used to serve any prejudice. In fact, many commanders underestimated the Russian capability, although the estimate did not.

¹⁰ Max Hoffmann, The War of Lost Opportunities, (1924), 34-35. Both Ludendorff and Hoffman are adamant on this point; each made specific statements on the calls received from the OHL (von Tappen of Operations) on the subject. A review of literature confirms their statements.

¹¹ Hermann von Kuhl, The German General Staff, 134-138.

¹² Ibid., 127-130. There have been many critics who have stated that the Germans underestimated the Russian capability. Most staunch and one whom many quote as a reference is Admiral von Tirpitz. In his book My Memoirs (volume I, page 310) he states that intelligence showed the the Russians could not launch an attack until 1916. This statement, in light of the information in the text, appears to be in error. However, the fact that the German Army was aware of the Russian threat does not mean that they shared that information with the Navy.

¹³ Frederick von Bernhardi, Cavalry in Future Wars, (1906), 32.

Von Bernhardt was the Chief of the Historical section in the General Staff prior to the war. He had a tiff with von Schlieffen and was dismissed. His writings after the war are predictably critical of the Schlieffen Plan and of von Moltke's efforts.

¹⁴ Max von Poseck, The German Cavalry in Belgium and France, 1914, (1923), 10-50.

¹⁵ Ibid., 237. In von Hansen's memoirs he speaks highly of the First Cavalry Corps' reconnaissance for his Third Army. In fact, he credits much of his early successes to the efforts of this unit. When the First Cavalry Corps was attached to the Second Army, much of the spirit of cooperation was lost. Von Bulow in his report on the Marne does not mention the cavalry's contribution.

¹⁶ Ibid., 226.

¹⁷ Groener, The Testament of Count von Schlieffen, 19.

¹⁸ Wilhelm Nicolai, The German Secret Service, (1924), 299.

¹⁹ Otto von Bulow, My Report on the Marne, (1919), 18. In this passage von Bulow reports the capture of an attack order of the French 5th Army which he states was at once sent to the OHL. The attack order gave information about an attack toward St Quentin. There is no evidence that the First Army, whose sector was most threatened, was ever warned by the OHL or the Second Army staff.

²⁰ Correlli Barnett, The Swordbearers, (1963), 7. There are several accounts of this conference, however, the one provided in this text is by far the best. Von Tirpitz's account portrays von Moltke as a warmonger and others are not as specific on the content. The degree to which von Moltke lost confidence is hard to measure. However, it did have substantial impact on his self esteem and solidified his own relief

that he was not capable of the job.

21 Ibid., 61

22 Gerhard Ritter, The Schlieffen Plan, (1958), 54.

23 Crown Prince William, My War Experiences, (1923)., 4. This excerpt is dramatized, but it does reveal the status of the General Staff and the power of the Chief of Staff position.

24 The crisis in leadership within the German Army in 1914 is well documented. Both Ritter and Groener speak caustically of the leadership void at the highest levels of the German Army Command.

25 A case in point is the Fifth Army under the Crown Prince and his Chief of Staff, LTG von Knobelsdorf. The Schlieffen Plan called for the Fifth Army to hold as the pivot for the right wing. If, by some maneuver, it could cause the French to commit further forces in that area. The maneuver was based on von Schlieffen's obsession with the Battle of Cannae. However, the Fifth Army attacked as if in complete ignorance of the battle plan. Feigning ignorance is hard to justify when one looks at von Knobelsdorf's position on the General Staff prior to his appointment to the Fifth Army.

26 Alexander von Kluck, The March on the Paris and the Battle of the Marne, 1914, (1920), 98, Baron von Hausen, Memoirs of the Marne Campaign, (1920), 169-170, Otto von Bulow, My Report on the Marne, (1919), 27-29, and Crown Prince William, My War Experiences, (1923), 97-99.

27 Von Kluck chose to ignore this order and continued the advance. He did agonize over the decision and finally forwarded a message to the OHL identifying the situation. The question can be posed

why he did not provide that information earlier.

28 Wilhelm Mueller-Loebnitz, The Mission of LTC Hentsch on September 8-10, 1914, (1921).

29 Von Hausen, Memoirs of the Marne Campaign, 256.

30 The use of junior officers was a General Staff Corps tradition. An axiom within the General Staff Corps was that staff officers should train at one to two levels above their grade in peacetime. Thus, when war broke out they could easily step in and assume the position. To place the grade structure in perspective the Operations Chief of the OHL is roughly equivalent to the United States Deputy Chief of Staff for Operations (DSCOPS). The DSCOPS is a LTG billet as compared to a LTC billet in the OHL of 1914. Throughout the OHL structure, major positions of responsibility were staffed by field grade officers.

31 Von Kluck, The March to Paris, 133. This in fact is part of the message that von Kluck sent to the OHL on 4 September alerting them to the situation in respect to the First Army.

32 Groener, The Testament of Count von Schlieffen, 5.

33 An additional reason for the overloaded communications system were the long "ata boy" messages that Kaiser Wilhelm dispatched to the Army Commanders. These apparently had precedence over operational traffic of the OHL.

34 Mueller-Loebnitz, The Mission of LTC Hentsch, 2. These delays in communications are one of the reasons that LTC Hentsch was dispatched to the right wing.

35 Theodor Jockim, Operations and Rearward Lines of Communications of the German First Army During the Battle of the Marne, 1914, (1933), 140-142. There is no indication that, even after telephone

and telegraph communications were established, von Bulow made any attempt to communicate with the OHL or von Kluck in reference to his decision. Captain Jockim's book, along with von Bergmann's which is in the same vein, provide a good look at the German supply system. It must be noted that both authors were encouraged by von Kuhl to write in their area of expertise. Each shared von Kuhl's enthusiasm for von Schlieffen's original plan and the condemnation of von Moltke.

³⁶ Walter A. von Bergmann and Hermann von Kuhl, Movement and Supply of the German First Army During August and September 1914, (1929), 42.

³⁷ The Infantry Journal, Infantry in Battle (1939), 94-95, provides some insight to the exhaustion that some German units were experiencing in early September 1914. Units of the II Corps part of von Kluck's First Army marched 27 consecutive days for a total of 408 miles, an average of 15.1 miles per day. This period included eleven days in combat and no rest. During the period of 7-8 September, when von Kluck was attempting to outflank the French Sixth Army, portions of this corps marched 43.7 miles.

CHAPTER 4

INTERLUDE 1914-1918

The conclusion of the Marne action on 10 September saw a rippling retrograde of German forces towards the Aisne River. Started by the German Second Army, it soon included the First, Third and Fourth. It was not the rout that the Entente had hoped for, but an organized action which ended in a stabilization of lines. Jarred from his headquarters by the reverse at the Marne, von Moltke visited the right wing headquarters on 11 and 12 September. The retrograde, like the offensive action, was largely conducted by the Army Headquarters with minimal guidance from the OHL. The lower level staffs performed admirably during the retrograde. Corps supply trains which were moving forward on 9 September were moving to the rear on 10 September, to establish a creditable supply base.¹ The masses of men in the First and Second Armies were maneuvered with skill, thereby preventing a disaster to German forces. Much of the credit for this effort can be given to the Chiefs of Staff and to von Moltke's decision to subordinate the First Army to von Bulow's Second.²

On 14 September 1914 von Moltke was relieved for health reasons.³ His replacement was Erich von Falkenhayn, who had been the Prussian Minister of War. The character change was dramatic, from a man who was unsure but technically competent to one who was very self-assured but technically incompetent. However, von Falkenhayn immediately saw the need to move the OHL to a more centralized location.

The OHL was moved to Mezieres, France, on 17 September. This placed the OHL in the center of the right wing and in an ideal location from which to control the critical actions of late September 1914. He also saw a need to solidify command relationships in the east and made the venerable old soldier von Hindenburg the Commander in Chief East.

The fall of 1914 saw both sides engage in a so called race for the sea. It may have been better described as a race to find a flank. The OHL was left without a plan to regain the initiative and did not have the staff capability to generate a new plan. The easiest way out of the situation was to go on the defensive. Rosinski's book, The German Army, addresses this problem and adds a new twist to the importance of the aftermath of the Battle of the Marne:

The deadlock in the trenches, which was the result of von Falkenhayn's decision, destroyed the immense advantage in training and leadership with which the German Army had entered the War, it made a speedy victory in the old style impossible, it gave the allies time to bring their overwhelming reserves of manpower and material to bear upon German forces, exhausting them, until their last belated effort to regain in 1918 the mobility which they had renounced in 1914, the German command suffered a signal setback through the breakdown of its famous plan of campaign, it is the 15th of that month, the morning which Falkenhayn decided against a return to the mobile strategy of the first weeks, that may be considered to be the real turning point of the war.⁴

With trenches stretching from the coast to Switzerland, the war in the west became one of static lines, despite several attempts by the allies to regain mobile warfare. Von Falkenhayn and the OHL realized in 1915 that massive attacks against an in-depth fortified trench system integrated with machine guns and concentrated artillery could not achieve a breakthrough. The Entente, while trying various alternatives of the same frontal assault technique, never came to the same conclusion. Thus the German Army in the west went on the defensive, improving

positions and developing a defense which would hold against repeated French and British frontal assaults. Von Falkenhayn titled this strategy Ermattungsstrategie or a steady attrition of the enemy.⁵ This overall strategic concept for the Western Front worked well until it was changed to accomodate the Verdun offensive.

Von Falkenhayn was faced by problems different from those of von Moltke, immense problems that had never been faced by commanders and staffs. During von Falkenhayn's tenure (1914-1916), the war which had been confined to Central Europe became a World War, the first in mankind's history. The OHL and von Falkenhayn were responsible for directing a land campaign which stretched from the English Channel to what is now Syria. Perhaps the biggest problem facing von Falkenhayn was which front should receive priority of effort. The leaders of the German Army lined up into different camps supporting a western strategy (von Falkenhayn) or an eastern strategy (von Hindenburg and Ludendorff). This internal tug-of-war would plague von Falkenhayn until he resigned in 1916.

Flush with the victory over the Russian First and Second Armies at Tannenberg, von Hindenburg and Ludendorff began a relentless effort to obtain more forces for the war against the Russians. They had substantial public and political support. Von Hindenburg and Ludendorff logically argued that the war in the west had become stalemated with no foreseeable victory. The east still remained a mobile war in which the Germans were the acknowledged experts. Once the war in the east was won, forces including the Austrian-Hungarian Army could be shifted to the west to launch an attack. Von Hindenburg and Ludendorff had become heroes and had given the German Nation a much-needed decisive victory

over the Russians. Thus, the Hindenburg and Ludendorff consortium became important factors in influencing OHL strategic decisions, through direct pressure on von Falkenhayn or indirect pressure through discussions with Kaiser Wilhelm.

During the next two years of the war, these men waged a constant battle for manpower. The result was a frequent changes in strategic direction, switching from east to west based on which camp saw the Kaiser last or which one offered his resignation over an important issue. Seeing an erosion of the influence of the OHL and the Chief of Staff, von Falkenhayn swung toward more centralized control from the OHL. This included moving the OHL to the Eastern Front to control an operation in 1915.⁶

Notwithstanding the von Falkenhayn and von Hindenburg battles, the German Army was at this period closer to victory than the Entente. In the west the German Army using Ennattungsstrategie had withstood several offensives causing massive casualties. Successes in the east included the capture of Warsaw and the defeat of the Australians and British in the Dardenelles. Yet the desired result--lifting the burden of a two front war--had not been achieved. The Kaiser did little to influence the situation. As before, he crossed the Chief of Staff, not supporting him on critical decisions with von Hindenburg and Ludendorff. The years 1915 and 1916 could be characterized as a period of substantial German defensive victories in the west and offensive victories in the east, but no strategic guidance with which to win a war.

To describe the German situation in the west as simply a defensive effort does not accurately portray events. Two offensives were

conducted by German forces in the west. They offer insight into the command, control, and communications aspects of the various staffs.

Some of the lessons of command and control learned during the advance to the Marne had not been lost. The German Army had organized into Army Groups. These largely solved many of the problems experienced during the early stage of the war. Comprised of two to three of the old field army organizations, these groups were flexible and tailored toward mission requirements. When the mission or need for troops changed, the Army Group organization could and would change.

Communications on the Western Front became easier due to the static nature of action. Miles of redundant and hardened telephone and telegraph lines were laid on the Western Front to insure reliable communications.

Because of the shortage of manpower, von Falkenhayn centralized control of the scant reserve forces. Conservation of these limited assets became a high priority with the OHL. The use of these reserves and centralized command and control over them were to have significant impact on the two offensives launched by the German Army on the Western Front.

The first German offensive on the Western Front after the fall of 1914 was at Ypres, Belgium on 22 April 1915. It is significant for it is the only large scale German western offensive of 1915, and was the first use of gas. The new technical advance caught the French Colonial defenders by surprise and opened a four and one-half mile gap in the Entente line. Yet the German forces failed to exploit the situation with sufficient reserves to return the war to a mobility stage. Von Falkenhayn and the OHL failed to grasp the magnitude of the breakthrough

and move the reserves which they alone controlled to exploit the situation. S. L. A. Marshall in his book, World War I, makes specific comment on this failure by stating:

Only German local reserves were thrown into the attack that came after the gas cloud. No strength had been stacked up rearward in anticipation of a breakthrough. The oversight typified the German way of war: All perfectly laid on, only to miss at the decisive point.

Thus, while significant changes had been made in the command and control relationships, the problem of identifying critical events was still escaping the OHL and the Army Group staffs.⁸

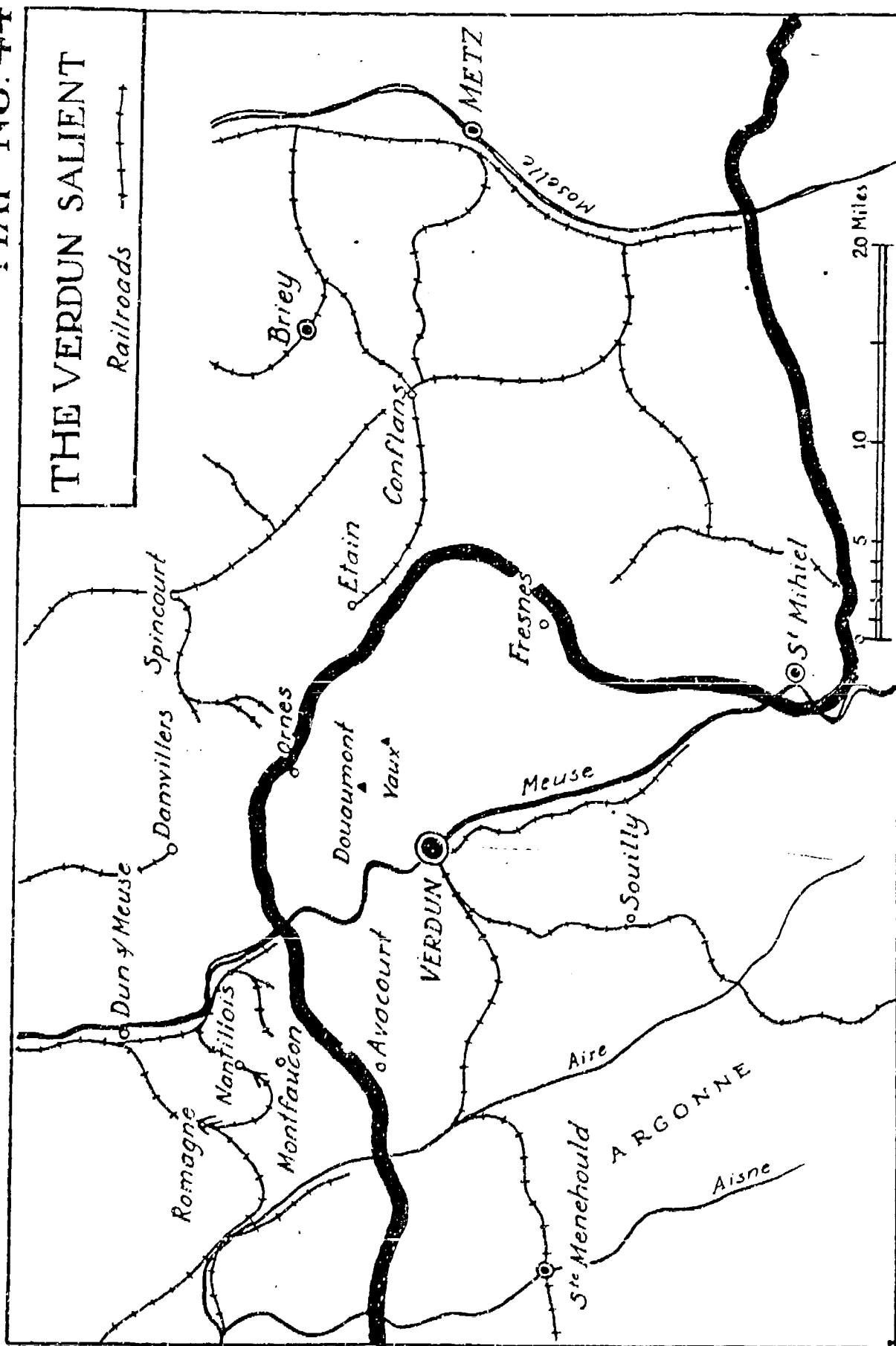
The second German offensive came in the year 1916. It was a by-product of the stagnate nature of the war which permeated the planning and staff thought of the OHL. Von Falkenhayn envisioned an offensive which would draw the French into a decisive attrition battle, the aim of which was to bleed the French white. The British had become the main enemy. In the German view, continued French resistance was due in large part to the British presence and continued support. This underlying reason is illustrated by von Falkenhayn:

The upshot of this discussion is that the attempt to seek a decision by an attack on the English front in the west cannot be recommended, though an opportunity of doing so may arrive in a counterattack. In view of our feelings for our arch enemy in this war that is certainly distressing, but it can be endured if we realize that for England the campaign on the continent of Europe with her own troops is at bottom a side-show. Her real weapons here are the French, Russian and Italian Armies.

The German offensive on 1916 was launched against Verdun and is perhaps one of the strangest battles in modern history. The objective was not the capture of a city or land mass which could serve as decisive terrain, but the attrition of the French. Von Falkenhayn's plan was to threaten, not necessarily secure, the forts of Verdun, thus causing the

THE VERDUN SALIENT

Railroads —+—+



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French to commit large elements of the French Army. These troops would be destroyed by the largest concentration of artillery ever assembled. Verdun was chosen because it was the one place outside of Paris that the honor of the French Nation was at stake.¹¹ Ironically or perhaps by intent von Falkenhayn named the Verdun operation Gericht, "meaning place of execution."¹²

Perhaps von Falkenhayn's rationale can best be described in his own words:

...the strain on France has almost reached the breaking point--though it's certainly borne with most remarkable devotion. If we succeeded in opening the eyes of her people to the fact that in a military sense they have nothing more to hope for, that breaking point would be reached and England's best sword knocked out of her hand. To achieve that objective the uncertain method of mass, breakthrough, in any case is beyond our means, is unnecessary. We can probably do enough for our purposes with limited resources. Within our reach behind the French sector are objectives of which the French General Staff would be compelled to throw in every man they have. If they do so the forces of France will bleed to death--as there can be no question of a voluntary withdrawal--whether we reach our goal or not. If they do not do so and we reach our objectives, the moral effect on France will be enormous. For an operation limited to narrow front, Germany will not be compelled to spend herself so completely that all other fronts are practically drained. She can face with confidence the relief attacks to be expected on those fronts, and indeed hope to have sufficient troops in hand to reply to them with counterattacks. For she is perfectly free to accelerate or draw out her offensive, to intensify it or break it off from time to time, as suits her purpose.¹³

The Battle of Verdun has spawned numerous accounts. Its tactical design has been studied and critized, yet it was not planned to be a tacitcal success. German writers, including Hoffmann and the Crown Prince, emphatically state that the attack should have been launched against both sides of the Meuse River.¹⁴ This would have insured greater success, but this was not the aim of von Falkenhayn and the OHL. Von Falkenhayn controlled the reserves which were available to the Crown

Prince's Army Group. He allowed their commitment only as a vehicle to draw more French forces into the meat grinder that became Verdun. In fact, there was a disjoint between what was perceived to be the objective at the Army Group and what OHL intended. The Crown Prince and his Chief of Staff von Knobelsdorf planned to secure the forts and the town of Verdun. They were not aware of von Falkenhayn's strategic view of the situation and planned based on their own perceived assumptions. Von Falkenhayn disapproved the plan based on the grounds that it required too much manpower, never explaining the real reasons for denial. Centralized control over an army or army group, unheard of in 1914, was commonplace in 1916.

The Battle of Verdun, although a German defeat on a large scale, did accomplish some of von Falkenhayn's intended objectives. The French responded and lost large masses of men. The Entente launched a series of futile counterattacks from the Somme in France, Isonzo in Italy and in the east. Each expended large amounts of manpower to accomplish little.¹⁵ The French General Staff accommodated von Falkenhayn's design and rotated most of the French Army through Verdun, exposing the French Army to the despair and defeatism which permeated the Verdun sector.¹⁶ This in part was the reason for the large scale mutinies of 1917 in the French Army, mutinies which saw the French taken out of war for six months as an offensive element of the Entente.¹⁷

The Battle of Verdun continued until the fall of 1916, but von Falkenhayn was not to see its conclusion. He was dismissed as Chief of Staff on 29 August 1916, and spent the remainder of the war as the Chief of Staff of the Turkish Army. There were numerous reasons for his removal. Von Falkenhayn's version in his book, The German General Staff

1914-1916, states that he resigned over the issue of the power of the Chief of Staff to plan and direct the German Army. This of course refers to his running battle with von Hindenburg and Ludendorff over the strategic direction of the war. There were, however, political and public pressures which also played a key role in his dismissal. Two years of total war with sacrifices by the German people and an effective British blockade had manifested themselves in growing discontent and political pressure for a change in direction. Von Moltke and von Falkenhayn and failed to produce the dramatic victory which would end the war. Public opinion felt that only one German was capable of producing that victory and that was von Hindenburg. Kaiser Wilhelm was backed into a corner. Knowing the consequences of selecting von Hindenburg, he asked the old soldier to become the Chief of Staff and Ludendorff to become the First Quartermaster General. This ushered in a period of German history called the silent dictatorship.¹⁸

Von Hindenburg, by all accounts, was a front for a more forceful, dynamic and ambitious Ludendorff. It was Ludendorff in concert with von Hoffmann who had planned and executed the successes in the east, and it was Ludendorff who would dictate the strategic direction of the war and create the silent dictatorship. This saw a new era where the OHL would become intimately involved with political and foreign affairs of state.¹⁹

Von Hindenburg and Ludendorff tried to change the strategic aim of the war. However, they soon became convinced that the final victory would have to come in the west. Yet, unlike von Falkenhayn, they decided to pursue that end differently. The main effort of the OHL and the German Army during 1916 and 1917 was to conclude the war in the east,

conduct and offensive against Italy to support the Austro-Hungarian ally and return to the Ermattungsstrategie in the west with dynamic modifications. The German army was able to soundly defeat the Russians, and internal dissent and revolution began a change which would eventually lead to Russia's exit from the war.²⁰ The offensive in Italy had destroyed the Italian 2d Army at Carpoletto. The German army had thwarted the main offensive of the Entente by establishing in-depth defenses and conducting a strategic withdrawal to the Hindenburg line.²¹ This well-timed withdrawal took the impetus out of the Nivelle Offensive and led to mass mutinies in the French ranks.

New Year's Eve 1917 saw neither side closer to a victory, but the German fortunes under von Hindenburg and Ludendorff were slightly brighter than those of the Entente. At the encouragement of Ludendorff the German Navy began unrestricted submarine warfare in February, 1917. Coupled with the infamous Zimmermann Telegram, this brought the United States into the war. This new source of manpower meant to Ludendorff that the German Army must win a decisive victory in 1918 or the war would be lost.²² As with the Schlieffen Plan the OHL was about to plan for an offensive with all the resources and effort in one main attempt to win the war.

It is interesting to look at Ludendorff's and the OHL's thought process in deciding where the decisive offensive would be launched. On the strategic level, courses of action involving a continued attack on Russia into Macedonia were considered and rejected. An offensive effort into Italy was considered, more seriously, but rejected for a lack of strategic goals. Finally the Western Front was decided on because it was this theater that the war was to be won or lost. Efforts in other

theaters would only serve to diminish the prospects for victory. The selection of the offensive area in the west also received considerable study by the OHL as well as the Army Group staffs. The lure of Verdun had not left the strategic and tactical thought of the German Army. Von Wetzell, the Operations Chief of the OHL, and the Crown Prince's new Chief of Staff, von Schulenburg, recommended another attempt be made to secure the Verdun area. Von Kuhl of Crown Prince Rupprecht's Army Group recommended an offensive against the British in Flanders. The premise was to use the ocean, which was north and west of the British forces, as a vehicle to roll up the flank. This action would separate the two allies and place the German Army in a position to defeat each in detail.

To illustrate the planning which went into the Spring Offensives are the following notes of Ludendorff made at an 11 November 1917 conference. The conference held in Mons, Belgium, was attended by Ludendorff and his OHL operation staff and the Chiefs of Staffs from Crown Prince Rupprecht's Army Group and Crown Prince William's Army Group.

The situation in Russia and Italy will probably enable us in the new year to strike a blow in the Western Theater of Operations. The alternative proportion of strength of the belligerents will be approximately equal...The means will be sufficient for one offensive only, a second offensive to be launched simultaneously as to divert the enemy's attention will not be possible.

Our general situation requires that we attack as early as possible, if practicable at the end of February or at the beginning of March, before the Americans with the aid of strong forces will be able to turn the scales.

We must defeat the British.

It would seem that an attack near St Quentin offers promising prospects. After reaching the line of the Somme, to advance the attack still farther in a northwestern direction and thus eventually roll up the British flank.²³

Ludendorff stressed that success of the operation was based on

the capability of long range artillery and bomber squadrons to interdict railway stations to prevent the timely arrival of the strategic reserves.²⁴

Thus, this early planning effort set the stage for the Spring Offensives. However, there are elements in the early planning effort which must be understood to totally appreciate, this final offensive effort by German forces.

It has been accepted that the war against Russia ended and masses of German forces were rapidly transported to the west to take part in the Spring Offensives. A little known fact is that shortly before and after the Treaty of Brest-Litovsk German forces continued their march deep into the Soviet Union, occupying lines which roughly resembled the deepest penetrations of the Wehrmacht in 1942.²⁵ Thus, not all available German forces were used to launch the Spring Offensives. Nor was help requested from the allies, Austria-Hungary or the Turks.²⁶

New infantry tactics had been developed and were tried with overwhelming success at the Battle of Riga and again at Caporetto.²⁷ This tactical doctrine would be the mainstay of offensive thought during the upcoming battles. The final piece to the puzzle is that Ludendorff envisioned a series of battles, one of which, he believed, would find a weak point to exploit.

Thus, the stage was set for the largest and last offensive of the war.

¹ Theodor Jockim, Operations and Rearward Lines of Communications of the First German Army During the Battle of the Marne,

1914 (1933), 40-43. This passage graphically discusses the problems which the supply services incurred during the period 9-10 September. The fact remains that despite the difficulties experienced the bulk of the supply system was able to establish itself to support the German Army at the Aisne River.

² Much has been said in print about the subordination of the 1st to the 2d Army. Some authors point to the fact that this move showed the OHL's disappointment in von Kluck's actions in and near the Marne. In this author's way of thinking it indicates that von Moltke was still unsure how to proceed with command and control relationships and this was an expedient means to gain control over the right wing.

³ Von Moltke suffered what in modern day terms would be a nervous breakdown. The catalysts leading to the breakdown probably began with mobilization and that fateful conference with Kaiser Wilhelm on 31 July. A sidelight to this story is that von Falkenhayn was only supposed to be a temporary Chief of Staff until von Moltke regained his health. That never happened and von Moltke died in 1916. The German press was not told of his relief at the time because that, coupled with the reversal at the Marne, would have given the wrong impression of the state of the war.

⁴ Herbert Rosinski, The German Army, (1940), 148.

⁵ Ernährungsstrategie is a term which was found in Martin Kitchen's book The Silent Dictatorship, (1976), 19.

⁶ The move of the OHL was von Falkenhayn's way of attempting to reestablish the control of the Chief of Staff and the OHL. This is one of many barbs used by both headquarters to get even with the other.

⁷ S. L. A. Marshall, World War I, (1964), 164-165.

8 A critical event in American military terms is a critical action or event which when identified causes a specific reaction by the commander, staff or both.

9 Erich von Falkenhayn, The German General Staff 1914-1916, (1920), 244-245

10 Charles Howland, A Military History of the World War, (1930), Map No. 44.

11 There were other considerations taken into account. One was the proximity of Verdun to a major German railway LOC which serviced a large part of the German Army in France. Another was the protection of the mineral resources of the Woivre Plain. However, these are secondary or perhaps tertiary to von Falkenhayn's main objective.

12 The German word Gericht has several meanings. In Alstair Horne's book The Price of Glory Verdun 1916, (1962), 47, he states that the word can mean a tribunal, or judgement, or more rarely execution place.

13 Von Falkenhayn, The German General Staff, 249.

14 Max von Hoffmann, The War of Lost Opportunities, (1924), 130-131. Crown Prince William, My War Experiences, (1923), 166.

15 The Russian attack against the Austro-Hungarian Empire netted 200,000 prisoners and as usual the German Army of the east came to the rescue. As with many Russian offensives it fizzled with time and distance because of the sorry state of the Russian supply system.

16 French figures indicate that 75% of the French Army units were rotated through Verdun. The Germans did not rotate, leaving the same units but replacing casualties. Lt Guderian was a participant in the Battle of Verdun and noted that the next war would not be fought the

same way.

17 A curious note is that certain Russian units were on the Western Front. They were permeated with communists and in fact inspired some of the mutinies of French units. It became so bad that the French General Staff isolated these Russian units in the rear away from the French units.

18 The term "Silent Dictatorship" is used from a book of the same title written by Martin Kitchen.

19 In Martin Kitchen's book The Silent Dictatorship, (1976), 22-23, he addresses this point well by saying: "This interaction of social, political, economic and military forces makes the politics of the High Command under Hindenburg and Ludendorff unusually complex".

20 To illustrate the depth to which Ludendorff became involved in foreign affairs, he conspired to have Lenin brought out of exile and sent to Russia.

21 The strategic withdrawal was called Operation Albericht. German literature calls the Hindenburg Line the Siegfried Line.

22 Ludendorff did not change his mind on the subject after the War. In the German periodical Militar-Wochenblatt, December, 1922, he states, "If we were unable to achieve victory in 1918, we would have to succumb".

23 Hermann von Kuhl, Execution and Collapse of the German Offensive in 1918, vols I & II, (1927), 6-7. In the quotation Ludendorff speaks of one offensive versus two. In context, he is speaking of offensives in different theaters. As we shall see he envisioned more than one effort in the Western Theater.

24 This concept of hitting the enemy follow on forces is still

viable in the thinking of the modern American Army. The term "deep battle" has surfaced in recent terminology. It's design is not so much different than that Ludendorff proposed in 1918.

25 Ludendorff could not trust these eastern units because they had been infiltrated by communists. Additionally these units were tied up fighting a guerrilla war.

26 The new German tactics have been described in western literature as being initiated and designed by von Hutier. Thus the familiar terminology of Hutier Tactics. German literature never credits Hutier, nor does it refer to the doctrine in his name. Addition information on this subject is available in article by Dr. Laszlo M. Alfoldai in Parameters The Hutier Legend vol V No 2 1976, 69-75.

CHAPTER 5

THE MICHAEL OFFENSIVE

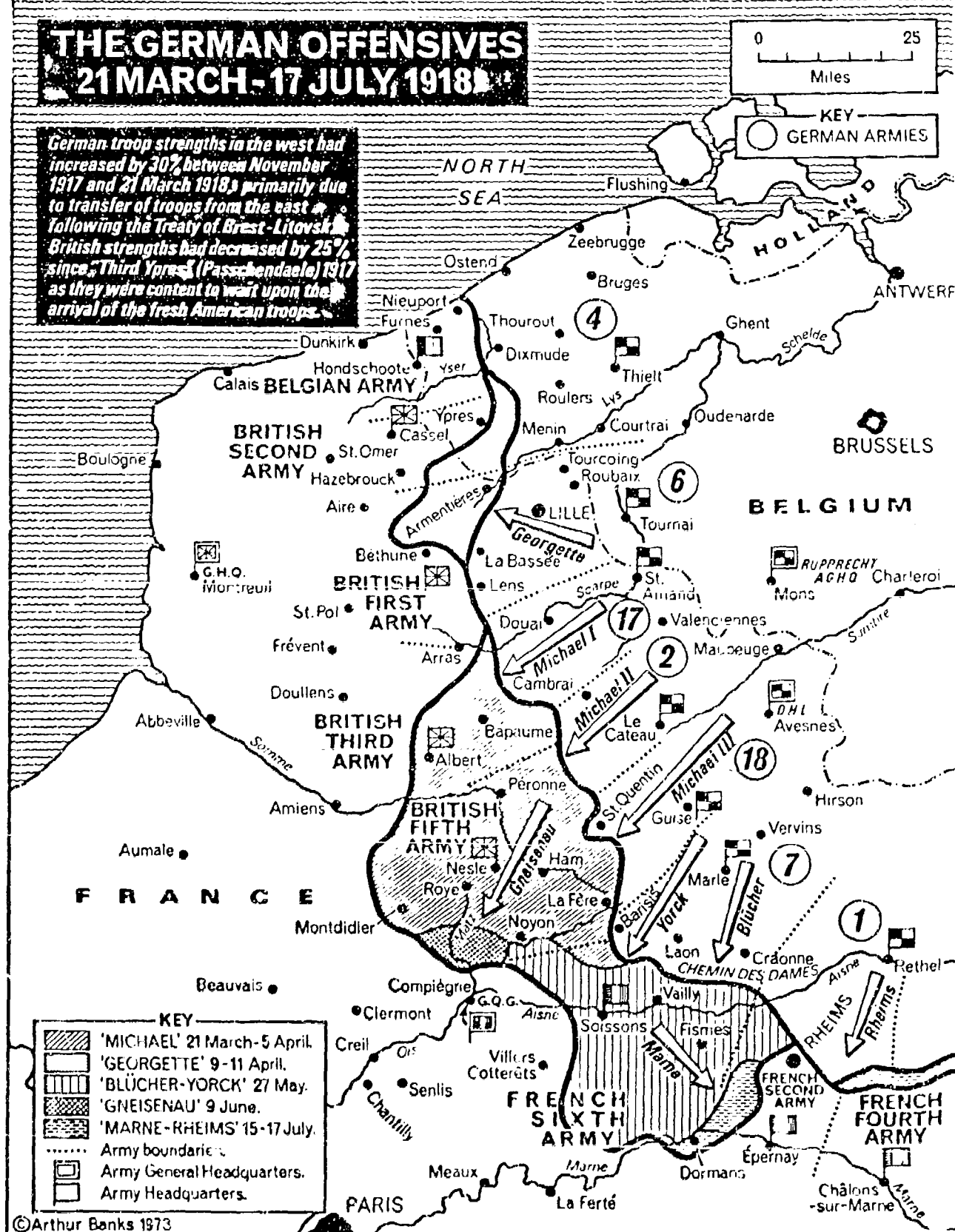
The bulk of the discussion on the German Offensives of 1918 will center on the first offensive (code name Michael), which was launched between Arras and La Fere, France (see map). It began on 21 March and culminated on 4 April 1918. It was Michael which stood the best chance of success for the German Army and which offers significant lessons in staff planning, thought, and execution. This massive offensive operation should be noted not only for the tactical lessons, but for the staff preparation, command, control and communications, training, intelligence, and logistics aspects and their application to modern warfare. As in 1914, the OHL developed a comprehensive and workable plan. The plan used most of the resources of the German Nation in an all-out attempt to achieve a modern Sedan over the Entente.

As with Chapter Three on the Battle of the Marne, comments will be made in areas of intelligence, command, control and communications, and logistics. These areas will be expanded to include training, artillery, and politics, all of which played a major role in the conduct and outcome of the Michael offensive.

After the 11 November, 1917 meeting between Ludendorff and the Chiefs of Staff from Rupprecht's and William's Army Groups, serious staff planning began at all levels. Each staff prepared in-depth proposals supporting the plan of attack they saw unfolding. There was an unprecedented exchange of ideas on how and where the offensive should be conducted. Notable was the estimate provided by LTC Wetzell, Chief of the Operations section of the OHL. The total estimate is included as Appendix 4 and illustrates the planning

THE GERMAN OFFENSIVES 21 MARCH-17 JULY 1918

German troop strengths in the west had increased by 30% between November 1917 and 21 March 1918, primarily due to transfer of troops from the east following the Treaty of Brest-Litovsk. British strengths had decreased by 25% since Third Ypres (Passchendaele) 1917 as they were content to wait upon the arrival of the fresh American troops.



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capability of the OHL. To summarize, LTC Wetzell envisioned two simultaneous attacks, one against the British and the other against the French. The main effort would come against the British after a supporting attack had drawn away the French reserves lying behind the British Army.² LTC Wetzell's overall plan was rejected because of the lack of forces and resources available to the German Army.

After considerable staff planning and at least two additional high level meetings with the respective Chiefs of Staff Ludendorff made the decision on 21 January 1918. The effort would be made not later than 20 March and would fall between Arras and La Fere.

In his guidance Ludendorff ordered preparation for other offensives to continue. There were several valid considerations which drew Ludendorff to this decision. The foremost was the appearance of the American Army. While untested and technically incompetent, its continued arrival in Europe in increasing numbers would soon shift the strategic balance in favor of the Entente. Yet, there was considerable pressure within the staff to wait until late April or May to begin the attack. This would allow for drier weather, especially in the Lys Valley, and provide additional time for training and preparation of the offensive. Ludendorff dismissed these ideas, choosing an early attack which favored his balance of forces. Although the American Army had not yet reached France in large numbers, its impact on OHL planning had been felt.³

As mentioned above, weather was also a factor. The Lys valley attack proposed by Rupprecht's Chief of Staff, von Kuhl, was very dependent on weather. In Ludendorff's thought process, this attack provided an attainable strategic objective. However, the low-lying terrain could and would be modified by the wet weather usually experienced in early spring. This attack

could not safely proceed without good dry weather, which would not occur until late April or early May. The window of opportunity, in Ludendorff's estimate, would be significantly narrowed if the main effort waited on the weather. In the other recommended offensive, in and around Verdun, the hilly ground and terrain favored the enemy's defense and the prospect for a breakthrough was negligible.

The final piece in Ludendorff's calculations was the status of Entente along the front. The 1917 British offensive in Flanders had moved most of the reserves of the British Army to that sector. The French had requested that an adjustment of lines be made to release French divisions to other threatened sectors. While this was hotly contested, the British GHQ ultimately acquiesced and the Third and Fifth British Armies took over French lines. The British Fifth Army under General Sir Hubert Gough had just come out of the Battle of Ypres and by late January, 1918, held 42 miles of front.⁴ Ludendorff became aware of this, and it became a significant factor in his decision.

There has been critical comment on the selection of the Arras to La Fere effort. The basis for comment has been the strategic objectives of the OHL and Ludendorff. What Ludendorff saw as an objective, relative to what critics say were his objectives, will be addressed as a major part of command, control and communications.

Once the decision had been made, a massive staff effort was begun to prepare for what von Hindenburg called the Battle of France. Part and parcel of that effort was the propaganda and foreign policy effort. Ludendorff called the series of offensives in 1918 the Peace Offensives. He envisioned a series of offensives which would wear down the Entente, causing the hard line politicians (Lloyd George and Clemenceau) to resign. This would place Germany in an advantageous position to conclude the war through negotiation or

continued offensive actions. Ludendorff, through his Propaganda Chief Colonel von Heaften, sent a memorandum to the Imperial Chancellor. In Ludendorff's book, Ludendorff's Own Story, he stated:

Nothing of importance was done (in the propaganda and foreign policy area, author).

The Imperial Chancellor was perfectly acquainted with our intention of attacking the west...He knew the enormous importance we attached to this offensive. Further I had him informed of the date it was to begin. Germany could make the enemy inclined to Peace only by fighting.

There has also been criticism of the propaganda effort against the war-weary Entente. A well managed program might have magnified the impact of the offensive. In the quotation above, Ludendorff gave the impression that the Imperial Chancellor was to blame for the apparent failure. Testimony from the civilian government heads leads one to the conclusion that they were not as well informed as Ludendorff claims.⁶ Regardless, at this point in time there were serious disconnects between the OHL and the civilian government. They missed an opportunity to subvert the cohesion of the Lloyd George and Clemenceau. The impact of Michael offensive on the civilian population was significant. Depression had set in, especially in England. An effective German propaganda campaign certainly would not have adversely affected Ludendorff's Peace Offensive. In fact, while Ludendorff does not admit to it or perhaps not seeing its importance, an effective propaganda campaign was an integral portion of the Michael offensive which was not planned nor executed.

The constant denominator for the Michael offensive was the element of surprise. A massive effort was made by the OHL to ensure surprise, and the staff preparation in both tactical and logistical areas was preoccupied with this principle of war.

Intelligence was key to the effort to ensure surprise, first to identify the weakest enemy area, second to create plausible deceptions, and

most important to deny hostile intelligence the location, scope and time of the offensive.

The OHL intelligence estimate of the Entente situation reflected a good appreciation of the capabilities of the British, French and incoming American Forces.

In an estimate completed just prior to the 11 November conference, a complete review of French, British and American capabilities was produced. This estimate assisted Ludendorff in making his final decision in favor of the Michael offensive. The estimate considered defeat of the British key to victory in the west. Elimination of the British would cause the French to sue for peace on German terms. The estimate listed the numbers of British Division, the internal order of battle including a recent change from 12 to 9 battalions per division, and strategic capabilities. It characterized the British as set and unimaginative in offensive tactics but tenacious in defense. Specific statements were made concerning the superiority of the individual German soldier. The French were considered to have the edge over the British in innovative offensive tactical doctrine, and French Artillery was still considered premier on the battlefield. Yet there was doubt as to the effectiveness of French forces after the mutinies of 1917. As with the pre-war estimate, the French were considered emotional and incapable of standing against repetitious defeats. The Americans were an unknown. They were fresh, tactically naive, but the true tactical impact could not be known until faced by German units. A realistic projection was made on the American build-up and how it would impact on future German operations. Finally, the estimate established that the initiative had shifted from the Entente to Germany. This estimate, while not often referred to, had significant impact on Ludendorff's decision-making process.

Another element of the intelligence picture which came to the forefront in 1918 was a deep appreciation of terrain, weather, and terrain modification. Again, this intimate knowledge was a vestige of Germany's long experience in positional warfare, but the Michael offensive was chosen in part because of terrain and weather conditions. Behind the selected British front, the old Somme battlefield was known as an obstacle, and staff elements from operations to supply took it into consideration.⁷ Yet with this knowledge there was a weakness in identifying what was key and decisive terrain. This weakness would have significant impact on the Michael offensive when Ludendorff and the OHL attempted to determine a strategic objective. This aspect will be discussed indepth in command, control and communications.

The tactical intelligence picture was aided by the specter of trench warfare which saw no surprises in tactics other than that of Cambrai.⁸ Front line units were aware of who they faced, and it was not difficult to detect when an Entente offensive was about to begin or where the main effort would fall. Thus, at the tactical level the OHL had an excellent picture of British Third and Fifth Armies, their strengths, weaknesses and vulnerabilities. These factors were paramount in the selection of the site for the offensive. They also became important when discussing command and control. The German Army actively patrolled these lines, and began trench raids in early January. These raids gathered information from the prisoners and enabled the OHL and the Army staffs to map out strong points in the Third and Fifth Army areas. It is interesting to note that the Commanding General of the Fifth Army, General Gough, said later that this was the first indicator of the German main effort in his area.

The aircraft had matured and was providing excellent information, usually in the form of photographs. The reconnaissance flights not only

located strongpoints but were significant in the registration of and planning for artillery.

The OHL had a fair idea of the strength and location of the reserves of the Entente. This included time phasing of when the reserves would reach the area of the offensive. This portion of the intelligence situation was not difficult to ascertain, since protection of the ports and of Paris were vital to the success of the Entente.

There were no enemy surprises for the OHL. It had an excellent intelligence picture of the enemy, from the tactical as well as the strategic view. The OHL was aware that it had the initiative and a time window during which that initiative would remain in their favor. The strengths and limitations of each antagonists were known and appreciated. The OHL was better served by its intelligence effort than ever before.

Perhaps because the OHL stressed surprise and the lessons learned during Operation Gericht (Verdun), the Operations Security (OPSEC) effort for Michael stands as an outstanding staff planning feat.⁹ As a backdrop the Entente was fully aware that the German Army would make an offensive effort on the Western Front. The British and the French had given up the initiative which they had held since late 1914. Their strategic scheme was to hold the German offensive, wait for the American Army and, using tanks and new doctrine, smash the Germans in 1919.¹⁰ Thus there was no surprise that an offensive was coming, the only questions to be answered where, when and with how many divisions? The Entente had always begun large offensives with obvious buildups of troops, artillery and supplies. Days beforehand a massive artillery preparation was fired. In 1918, the Entente expected little different from a German offensive effort. Through excellent OPSEC measures and deception the OHL was able to completely surprise the British. The following

illustrates the importance of surprise to the operation:

The surprise therefore constituted a factor of utmost importance. It had to be obtained by exercising the greatest secrecy with respect to all offensive operations. Even our troops had to be kept as long as possible in almost complete ignorance of plans.¹¹

To show the extent of the OPSEC effort is the following from von Kuhl's Execution and Collapse of the German offensive in 1918.

During the preparation period, no changes were allowed to be made in the garrisons of the front line, no information about the prospective offensive was given out to the troops in the trenches, no traffic was permitted during the daytime...All detraining was effected far to the rear and distributed over a wide area. All major troop movements were conducted at night. Moreover a comprehensive organization was created with the object of maintaining secrecy...Instruction was imparted to the men repeatedly on the subject of secrecy; besides, a special control of all personal mail was instituted.¹²

To further enhance this secrecy system, which can be termed OPSEC, a security officer was established at the Army and Division level. His duties included regulation of road traffic, telephone security, limiting the use of wireless, planning for the concealment of all new installations, behavior of staff officers on reconnaissance, and civil-military interface. Considerable innovation and thought was placed into his duties, as can be seen from the following:

The Security Officer, moreover, had to watch over the execution of the measures that had been adopted within his sphere of control. In this duty centered all his activities. To this end, he was assisted by liaison offices provided with motor cars, airplane observers with photographic apparatus, and balloon observers...He was able to examine from the ground as well as from the air the behavior of the troops, traffic at day and night, the timely concealment of military installations from enemy air observers, the illumination of shelters at night. He watched over and examined into telephone service and caused the Secret Service of the Military Police to exercise inconspicuous surveillance over the behavior of the men on railroad trains, in railroad stations, in inns in regard to conversations about preparations for the offensive.¹³

Even the air and artillery were given consideration in this secrecy

effort. New squadrons were not introduced into the area of the offensive until just before the effort. Reconnaissance of the area by air was done at a normal pace in an attempt to mislead the British. The artillery efforts will be discussed under that subheading.

The OPSEC effort heretofore mentioned represents for the first time a calculated staff effort to disguise the main offensive effort, to ensure security and maximize the impact of surprise. Many of these principles have recently been revived by United States forces with the same objectives in mind.

Deception was required to ensure surprise and the CHL directed this effort with the same skill and planning as that found in the OPSEC effort above. The deception effort was primarily directed toward the French, and its specific targets were Petain and the French GOC. The French reserves near Paris and those behind the British lines in Flanders had to be fixed to allow a full measure of success for Michael. To accomplish this with minimum resources, the deception plan called for a series of demonstrations along key sectors of the front. The British were to perceive that the Germans were going on the defensive. Visible efforts were made to improve defensive works and indepth positions were prepared, especially in the Ypres area. In front of the French an offensive demonstration was prepared. The main effort was to appear to be along a front from Rheims to Argonne and at Verdun, with a secondary attack along the Aisne and in Alsace-Lorraine.¹⁴ For security and the impact of the deception, the German troops were told that they were taking part in the offensive no matter where they were in relation to the front. The staff prepared a script for these demonstrations, with divisions as the actors. These well thought-out scripts were followed on a specific timetable right up to the Michael offensive.

The impact of this deception plan on French and British forces achieved what the OHL intended and perhaps more. The French were sure that the offensive was directed against them. They held their reserves in key areas to protect Verdun and Paris. The British with minimal reserves were not sure where the attack was coming, but felt that it would aim to secure the channel ports. The deception plan played well against the command and control of the Entente, which had no centralized commander. Each army was concerned with its own front and decisive terrain. Thus, the deception plan was targetted at the appropriate level, it bought time by fixing the enemy reserves, and most important it deceived the British and French High Commands as to the exact location of the German main effort.

The Operations Security effort coupled with the deception plan used by the OHL and carried out at various levels of command and staff ranks with similar efforts carried out before Normandy in 1944. The OHL planning and execution in these areas certainly enhanced the impact of the offensive and ensured its initial success.

Training became a problem which had to be addressed and planned by the OHL. One may question what training had to be done for an army which had been at war for four years! The battles on the Western Front for the most part had been defensive battles for German forces. The offensive nature of war had been lost for soldiers stationed on the Western Front. To overcome this training deficiency, the OHL directed a training program to instruct officers and soldiers in offensive operations. Selected units were pulled well to the rear and instructed in storm troop tactics. These soldiers would be the basis for the new offensive tactics used in the Michael and follow on offensives.

These new tactical doctrines called for the initial attack of infantry to be preceded by a well planned but short artillery preparation.

The infantry would be light, carrying only organic weapons, flame throwers, and light machine guns. These storm units would search for weak points and by-pass the strong points. These tactics have been equated to the effect of a river or tide which selects the easiest way to flow. Perhaps the following sums up this tactical philosophy

In the fall of 1917 Ludendorff assembled a group of carefully selected young officers with combat experience and put them to work devising new offensive tactics for the conditions of static warfare...The previous emphasis on weight gave way to a new emphasis on flexibility. There would be no elaborate preliminary bombardment but only a short, whirlwind barrage...The fighting line would not consist of wave after wave of carefully aligned attackers advancing shoulder to shoulder; instead, it would be kept thin but would be fed constantly from behind. As had been done for the defensive, manpower was to be replaced as much as possible by machine power. A new tactical formation, the infantry group, would be the basic unit and would consist of only a few riflemen and a light machine gun. This would confer a greater degree of articulation on the attacking formations; instead of a closed fist smashing the opposition, innumerable tentacles would reach out and explore the enemy's soft spots...The new German offensive tactics thus abandoned the concept of the battering ram, pounding heavily and head-on against a fortified line, and substituted in its place the principle of pervasiveness, by which the attackers, like flood of water, would penetrate the defense, flow around and isolate obstacles and centers of resistance, and move by a thousand routes into the enemy's territory.¹⁵

56 divisions were trained in these new tactics and all were ready for the Michael offensive. This is no small feat, the staff effort was immense, from determining which units were to be trained, to finding training areas and resources, and to adapting training schedules to meet the timetable set for the offensive. Tactical doctrine was supplemented by planning and staff thought to speed the supply effort and integrate the air assets into a ground support role. The air assets were divided into what is today called Close Air Support (CAS) and Battlefield Air Interdiction (BAI), supporting troops in contact and deep battle targets.¹⁶ Thus, the new tactics about to be used by the Germans

integrated all arms of combat and included thought into service support that the offensive would require.

To support the new tactical doctrine and the requirement for surprise, new and more effective artillery support had to be developed. This new support was all encompassing. The scheme of maneuver required planners to think not only of the initial preparation but how to support fast moving infantry formations after a breakthrough, and how to quickly move assets to support follow on operations at various sectors of the front. The man singled out for this planning effort was Colonel Bruckmueller, who had been Hutier's Artillery Chief during the Battle of Riga.

The artillery preparation had always been a given in any offensive on the Western Front. The Entente believed in long preparation prior to an offensive which always signaled the beginning of a major offensive. The Germans, having learned early, simply moved a majority of their defenders to the rear out of range and waited for the infantry to attack. Initial strong points slowed the offensive and second and third defensive belts stopped the offensive. The OHL was determined not to commit the same mistake as the Entente.

The artillery preparation was to be intense but of short duration. No pre-registration rounds were to be fired. Artillery fire planning included saturation of front trenches, disruption of command and control and neutralizing British artillery. To obtain the desired results, a new system of artillery planning and targetting was developed. The following from Ludendorff's book, Ludendorff's Own Story, explains the German Artillery effort:

We had, therefore, to discover a way of dealing with this situation and insure an adequate effect without ranging. During

the defensive battles we already endeavored to do this without constantly checking the barrage. The errors of the day (due to wind and atmospheric density), as well as the gun errors (due to size of chamber caused by wear, and other changes in the bore and carriage), were permanently determined and allowed for when firing. A system was most carefully elaborated, the artillery meteorological service was regulated on a general plan in combination with the General commanding air forces. In this way all batteries could be informed of the errors of the day with least possible delay. All guns were tested for individual errors behind the front. In this way it was possible to determine, by means of simple tables for any gun at any time, how much should be added to or subtracted from, the normal elevation for any target. It was, of course, a necessary condition that ranges were accurately measured. Faultless maps, trigonometrical and topographical determination of all battery zero points on the ground, and the greatest care in marking targets on the maps, as determined by sound-ranging, field survey, and aerial photography--these were the necessary preliminaries, and an enormous work it was.¹⁷

Included in the fire planning for Michael was the liberal use of gas. The gas was fired on the hostile artillery to reduce their efficiency. Gas on the front lines was used to hold the British infantry in their strong points and prevent movement. The gas attack included a variety of agents from phosgene to lachrymal agents. This compounded the problem of British gunners, observers and infantrymen.¹⁸

To support the infantry in their advance a creeping barrage was required. The idea, which was not new on the Western Front, saw the infantry closely following a moving barrage. The advantages were great. The hostile force was pinned down while the friendly force advanced, thus allowing the friendly force to close rapidly and reduce casualties. It had first been used by the British at the Battle of the Somme in 1916, where it met with marginal success. There was no way to control the fires and often as not the infantry fell behind, negating the effectiveness. The Germans modified the creeping or rolling barrage and gave it a timetable which the gunners, observers, and assault troops

knew and understood. The speed at which the German barrage would move would be one kilometer an hour. The German infantry simply had to maintain a steady pace and the barrage could be used to full advantage. As one can see, this is very inflexible and situation dependent, however German units which were able to maintain the advance rates were much more successful than those which did not.

At 04:40 on the morning of 21 March 1918 the German artillery began its preparation fires. Thick fog hung over most of the area but did not affect the German systematic attack.¹⁹ With precision all known British artillery and command and control centers were hit with a mixture of gas and high explosives, causing immediate casualties not only to British soldiers but to the entire command and control system of the Third and Fifth British Armies. Soon every echelon was isolated from its higher and lower. At 09:40, exactly five hours after the artillery fires had begun, a shift was made to front line trenches. A creeping barrage was undertaken by trench and medium and light artillery. Heavy artillery concentrated on the British artillery positions with a variety of gas and high explosives. The German infantry followed the creeping barrage. Light artillery at once began its move to support the infantry as it progressed through the British lines.²⁰

This scenario was followed to various degrees along the front. The success enjoyed by the 18th Army (Hutier) can be attributed to the infantry staying close to the barrage, the established timetable and the fact that the light artillery quickly advanced to support the infantry.

Artillery planning and execution had never reached such a refined state as in the 21 March offensive. It completely surprised the British and allowed a penetration to open in the Fifth British Army

sector. Like the efforts in intelligence, Operations Security, and training, the OHL and lower staffs had produced a coordinated plan which seemed flawless in execution. It completely supported the commander's desires and caused a penetration, which allowed a battle of movement, something not seen on the Western Front in nearly four years.

The staff planning effort for Michael so far has been one of unique staff planning and thought which culminated in new innovations in several staff areas. With this wealth of seemingly endless staff capability, why and how did the Michael offensive miss at winning the war? There are two sound reasons: one is logistics, including the German National capability to continue the war and the other, which plagued them at the Marne and again at Verdun, was command and control.

To look at the command and control relationships and understand the problems, one must look at von Hindenburg and Ludendorff as we looked at von Moltke and the Battle of the Marne.

Unlike his predecessors, von Hindenburg while nominally the Chief of Staff, did not provide the overall direction to the OHL or German Army. Having a final say in all matters, he left most of the thought, planning and execution to his First Quartermaster General, Ludendorff. As on the Eastern Front, Ludendorff was the spark plug for many of successes. The relationship can easily be compared to the relationship between the Chiefs of Staffs at the various levels of command to that of the Commander.

Ludendorff was self-confident and competent in his profession. He had vast experience, was a thorough planner and a tireless worker. He had all the characteristics needed to be an excellent Chief of Staff, characteristics which had been missing in von Moltke and von Falkenhayn.

His perfectionist attitude spread through the OHL and moved that organization a quantum higher. He believed in centralized control from the OHL. This came in part from his personality and in part from the experience on the Eastern Front. This centralization not only included military matters, but spilled over into areas which marginally affected the military.

Ludendorff's strategy and thus Germany's strategy for 1918 was based on the added strength that Germany had on the Western Front as a result of Russia's exit from the war. As stated previously, Ludendorff knew he had a narrow window of opportunity. The Americans would make their presence felt in increasing numbers before the year was out.

We have discussed the selection of the location for the attack based on terrain and the Entente situation, but we have not looked into the strategic reasoning behind that attack.

The strategic objective of Michael was the first disconnect in the operation and would plague it from the start. The 10 March order prescribing the attack plan reads as follows:

The Group of Armies of Crown Prince Rupprecht will, as its first important tactical goal, reduce the Cambrai salient now held by the British, and thereafter advance north of Omignon Creek to the line Croisilles-Bapaume-confluence of Omignon Creek and Somme River. In the event that attack of the right wing (Seventeenth Army) makes favorable progress, the Seventeenth Army will advance it beyond Croisilles. The Group of Armies has the further mission to push forward in the direction of the line Arras-Albert, to hold with its left wing on the Somme at Perrone and, by shifting its main effort to the right wing, to force the British back also in front of the British of the Sixth Army, and thus release for additional forces, hitherto engaged in position warfare. To this end, all divisions now in the rear of the Fourth and Sixth Armies will be employed, should the contingency arise.

The Group of Armies of the German Crown Prince will first of all gain the line of the Somme and Crozat Canal, to the south of Omignon Creek. In the event of the Eighteenth Army's making a rapid progress, it will capture the passages across the Somme and the Canal. In addition the Eighteenth Army will be prepared

to extend its right wing to Peronne. The Group of Armies will see to it that the left wing of the Eighteenth Army is reinforced by divisions from the Seventh, First, and Third Armies.²¹

The order is provided in full to demonstrate that the instructions to both Army Groups made no mention of a strategic goal or objective. Reading the post-war memoirs of the principals indicates that there was no agreed-upon strategic objective at the start of the offensive.

Ludendorff stated the following:

It was necessary to place tactical considerations above pure strategy. The latter was feasible without tactical success. A strategy which disregards it is condemned to failure from the start.²²

This statement surely grows from the many Entente attempts on the Western Front which had sound strategic goals and objectives but relied on unimaginative and obsolete tactical doctrine to achieve their ends. Thus Ludendorff focused on the tactical aspects of the attack, assuming that a tactical success would open a strategic opportunity to win the war. This is certainly supported by the massive OHL effort to perfect the tactical aspects of the Michael offensive. In his book, The Great War, 1914-1918, Schwarte summarizes this concept:

...The prospect of an assured tactical victory, however, was paramount in any case, since it alone would bring strategic liberty of action.

...and yet, the great strategic objective -- Liberty of Action -- had not been obtained.²³

It was the lure of having freedom of action that was Ludendorff's strategic objective. The thought of 1914 and the belief that the German Army in open, mobile warfare was superior to any of the Entente led Ludendorff to neglect the strategic objective. It was

perhaps a vain hope that once the penetration had been made quick staff thinking and timely orders would obtain a strategic victory. To complement this logic is a more precise strategic objective stated by Ludendorff after the fact:

...That a great strategic success could be obtained, if we separated the majority of British forces from the French and then₂₄ forced the British back in the direction of the coast. (see map)

This general statement was made to support the logic for the Michael attack. As we have seen earlier, Ludendorff selected the area on the basis of terrain, weather, and enemy situation. These three variables ensured him a good measure of tactical success and with tactical success, he could realize freedom of action.

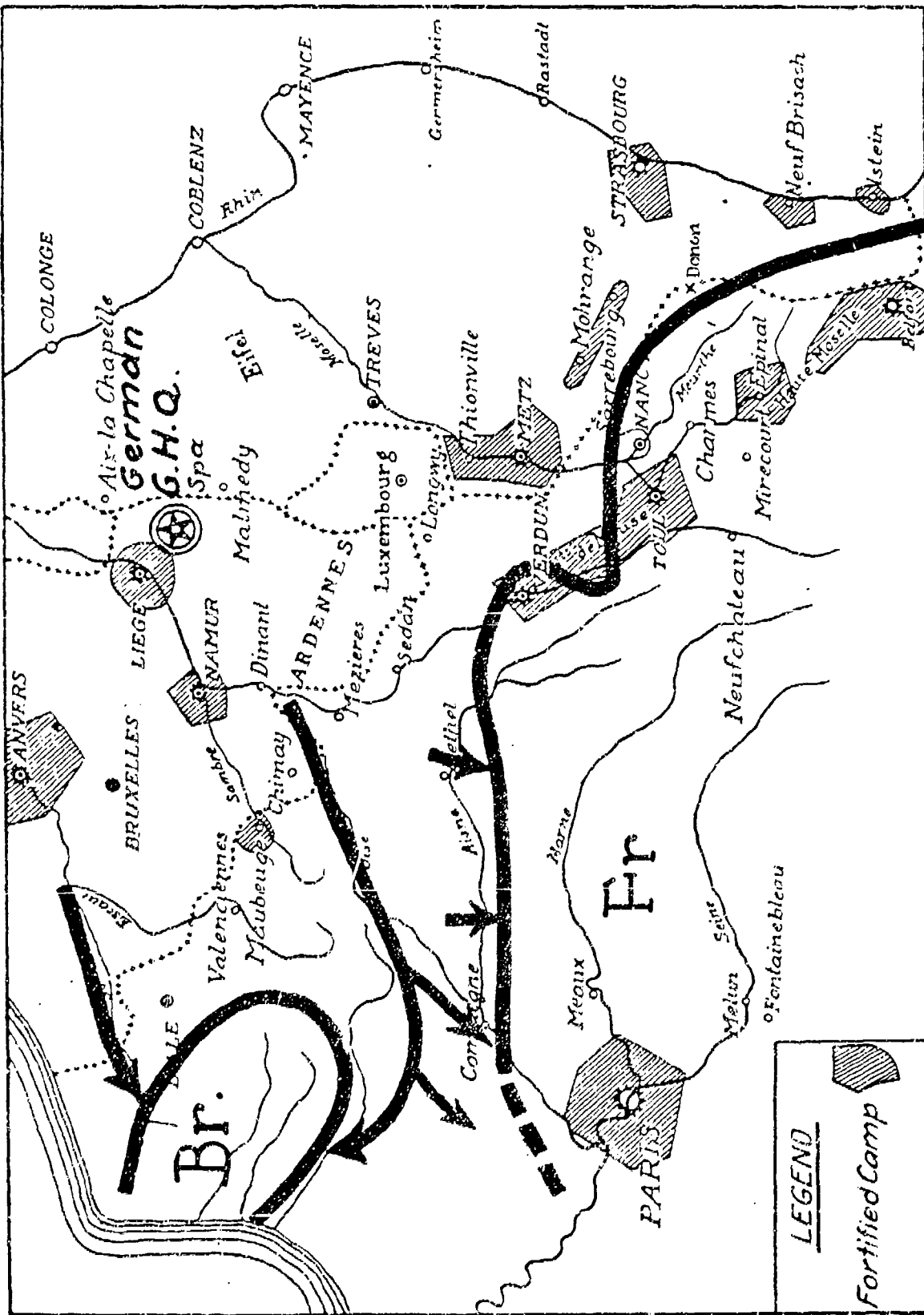
If the true strategic objective had been to divide the British from the French and secure the coast, then the plan (code name: St Georg) submitted by von Kuhl, Chief of Staff of Crown Prince Rupprecht's Army Group, would have received the main effort.²⁵

However, while Ludendorff's plan seemed not to have firm strategic objectives the tactical phase was successful. The attack with the two Army Groups moved quickly through British lines. The Second and Seventeenth Armies (Crown Prince Rupprecht) met more resistance from the British Third Army and were slowed. The Eighteenth Army (Crown Prince William's Army Group) overwhelmed the British Fifth Army and made a large penetration. The relative advances and the unpredicted success of the Eighteenth Army caused Ludendorff to make a change in the overall plan.

On 23 March the offensive reached a critical juncture. The Eighteenth Army had secured all of its objectives ahead of schedule and

VON HINDENBURG'S PLAN 1918, 2^D PHASE

WESTERN THEATRE OF OPERATIONS MAP No 80



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in fact had secured objectives which were given it if it achieved a greater success than anticipated. The Second Army was stalled, the Seventeenth had made progress but had not secured all of the objectives planned. Ludendorff had to make a decision to follow the success of the Eighteenth, which had achieved liberty of action, or to reinforce the effort of the Second and Seventeenth Armies. Again the question arose as to what was the objective. Perhaps sensing that tactical victory had allowed strategic maneuver, Ludendorff chose Amiens as the objective.

Amiens was critical to the Entente. It served as a rail center which connected the coast of France with Paris. All the major rail and road Lines of Communications (LOC) truncated into Amiens. Control by either side ensured control over a large portion of France. More importantly, if taken Amiens would place the entire British Expeditionary Force (BEF) in jeopardy. Thus, after three days of intense battle in which precious resources were used at an alarming rate the OHL and Ludendorff finally selected some decisive terrain as a strategic objective, decisive terrain which would allow freedom of action and a chance to isolate and destroy the BEF.²⁷

This is not to say that Amiens as a strategic objective simply developed because of the tactical battle played to date. Its value was certainly recognized by the British and the French, who rapidly moved reinforcements toward the area. The Entente was at a critical stage. Petain was sure that the British were defeated and that France was next. The situation was only saved by the fact that a centralized command was formed and that they realized the decision value of Amiens before the OHL and Ludendorff. Still, to say that the OHL was ignorant of the strategic value of Amiens is not true. Von Seeckt recognized the

importance of Amiens and had briefed von Falkenhayn in 1915.²⁸ An attack in that direction was contemplated but rejected for lack of forces.

The Michael offensive continued into April. It never reached Amiens. The Michael offensive was and still is considered a major tactical success however, it missed the strategic goal. Like von Moltke before him, Ludendorff failed to establish a strategic objective based on decisive terrain.

There were other considerations in the strategic realm which impacted on the command and control policy of Ludendorff. There was a serious question as to the unity of effort. As stated in Chapter Four, Ludendorff pictured a series of battles like Michael. He expected that one would be successful and of course win the war. As a result assets, especially artillery and specially trained storm troops, were held out for other planned offensives which followed in early April, late May and mid-June. Von Hoffmann in his book, The War of Lost Opportunities, criticized this diffusion of assets and power. It even appears that Ludendorff had not adequately expressed his idea to the Chief of Staff, von Hindenburg, for he later stated:

According to my conviction we possessed the necessary strength and proper aggressive spirit to try conclusions in a last pitched battle with a view to bringing on a decision...What I had in mind as a military ideal from the start was, of course a complete breakthrough of the hostile lines, a breach that would unlock for us the gate leading to operations in the open. This gate was to be opened along the line Arras-Cambrai-St Quentin-La Fere.²⁹

Thus Ludendorff, while not admitting it until after the war, based the ability to achieve liberty of action on a series of offensives and not one effort. This of course placed Ludendorff and the German Army in July of 1918 in a worse position than they had found themselves prior

to 21 March offensive.³⁰

A closer study of command and control reveals other curious notes on the Michael effort. Ludendorff divided the Michael offensive between two Army Groups. Originally the Second, Seventeenth and Eighteenth Armies were under the control of Crown Prince Rupprecht's Group. Ludendorff moved the Eighteenth to the German Crown Prince's Army Group for two reasons. He felt that it was only fitting that the Crown Prince take a major part in an offensive which could win the war. However, the fundamental reason was to ensure that the OHL could direct and control the action. Traditions die hard and like von Moltke, Ludendorff would not violate the independent authority of an Army Commander. Thus to allow the direction of the offensive by the OHL, the attacking armies were divided. The impact of this appears on the surface to be minimal, however under a single Army Group Commander a different tactical maneuver might have been used. Michael attacked across a wide front. The OHL reserve was only three divisions. Thus there was no real reserve to push toward a strategic objective. What was accomplished was a penetration in which the shoulders were held but no follow-on force could exploit the situation which had developed. As at the Marne in 1914, there was no reserve which could exploit a very favorable situation.

The weight of the various armies within the Army Groups also seemed at odds with what was to be accomplished. The Second Army consisted of 18 divisions, the Seventeenth 17 divisions, and the Eighteenth, 24. The Second and Seventeenth were making the main effort, yet the most powerful army and perhaps the best trained and led, the Eighteenth, was making a supporting attack. This again illustrates that

the recognition of strategic objectives caused a weakness in the tactical employment of units. Since Ludendorff and the OHL had not selected an objective, the power of the offensive was wasted. Fewer divisions in the Eighteenth Army could have accomplished the mission of holding the shoulder. The Second and Seventeenth, who were to be the main effort, did not receive the forces needed to accomplish the mission. If Amiens had been the original objective then the whole offensive would have been aligned in that direction. Given surprise, training and number of forces available, Amiens was attainable. Thus without a viable strategic goal it was impossible to correctly align forces. Ludendorff and the OHL thought that the strategic objective would simply appear once a tactical victory had been achieved.

To control the battle Ludendorff moved the OHL headquarters from Kreuznach, Germany to, Spa, Belgium. Then just before the battle he, von Hindenburg and Kaiser Wilhelm moved to an advanced OHL headquarters at Avensnes, France. At this forward headquarters were sufficient communications and transportation for von Hindenburg and Ludendorff to control and monitor the battle. The only staff section there was the operations section under LTC Wetzell. Ludendorff did not remain in the headquarters but was in and near the front lines repeatedly during the Michael offensive. Thus he interjected and provided positive command and control.

There was again the problem of the operational-level headquarters, a problem discussed at length in Chapter Three. While the German Army and the OHL had recognized the need for an intermediate headquarters between armies and the OHL, they still had not solved the basic problem of interfacing the tactical and strategic realm.

Ludendorff and the OHL had become totally engrossed in the tactical effort, leaving the strategic consequence almost to fate. The Army Group commanders were also totally engrossed in what happened immediately to their front and had little appreciation for the overall campaign. Thus, as before no headquarters served as the critical operational level interface watching both the tactical and strategic portions of the battle. Even the OHL had lost sight of the strategic significance of the offensive and concentrated on the tactical aspect. Without the ability to control the operational sphere the German Army, while obtaining a tactical success, was unable to convert it to a strategic victory.

Operations orders at the Army level were unique and well prepared. At Appendix 5 is a copy of the Eighteenth Army's order for Michael. It is interesting in that it gives no objectives for the day. This was opposed to the custom in the German Army at the time. It does show the length commanders went to ensure continued mobility. Hutier was concerned with the effects of position warfare on the troops. He did not want objectives of the day because he feared that once stopped, the troops would revert to the trench warfare syndrome.

Communications during the Michael offensive were provided by the same means as found in the Battle of the Marne. However, positional warfare ensured that telephonic communications were available along with scheduled liaison, runner, and messenger service. In this regards, Ludendorff would not experience the problems of von Moltke. This was possible because of centralized command posts and telephonic communications with the Army Groups, supported by an effective liaison officer system. The situation at the front lines was passed to the rear by the effective use of runners, homing pigeons, messenger dogs, and

aerial observers (aircraft and balloon) using telephones or dropping messages. Thus Ludendorff had redundant communications with the echelons which he wanted to control directly.

The command, control and communications of the German Army had significantly improved over four years of war. The mistakes which had been made in 1914 had largely been corrected by 1918. Certainly the strong centralized control which characterised Ludendorff was a factor in this evolution. The staff work, planning and preparation which went into Michael can be easily equated to successful efforts of the Second World War. The OHL and the entire German General Staff system were at their best during Michael. Yet these laudatory comments do not explain why Michael did not achieve its strategic objectives. There was a continuing fundamental weakness within the OHL's command and control framework. This weakness, or perhaps omission, was the identification of decisive terrain at the operational and strategic level. Throughout the war on the Western Front the OHL did not successfully comprehend the importance of this procedure. Additionally, the OHL did not realize the need for an operational-level headquarters. Finally, and this point relates to the two above, the OHL was overly concerned with tactics, in the hope that superior tactical doctrine would provide a strategic victory.

The British blockade of World War I was one of the most efficient in modern history. The German Nation was slowly burning at both ends. The blockade cut off 90%-95% of sea imports and exports. Critical food items were in short supply and this had deepening impact on the German civilian populace. Front line units were obtaining 75% of needed rations. Efforts to obtain the Ukraine wheat crops were only

marginally successful. Horses, the mainstay of the farm economy and of the supply and transport service of the army, were in short supply. Fodder for those was short. While arms industries were capable of making sufficient arms and ammunition, a decision had to be reached whether to build either submarines or tanks. The submarines were built, the tanks were not. Manpower was critical and decisions were being made daily as to the need for manpower in industry or on the battlefield.

Thus, the strategic logistical situation was not favorable. Yet there was hope that the newly conquered areas of Poland and the Ukraine would modify the situation. The submarine offensive was taking a toll, and with more and better types the British might be placed in a similar predicament. Nevertheless, the OHL was able to concentrate a large logistics base to support Michael. It was an all-out effort to stockpile equipment, rations, and ammunition to support the final offensives of the war.

Logistics planning, like that in other areas, was handled in precise and exhaustive detail. The staff efforts ensured the provisioning of 16-20 days' rations, new narrow gauge railroads were built to the front, and plans were made to ensure that the supply system could move with and support the infantry. A total of 36,000 men were specifically assigned to ensure supply mobility. This required stockpiling of bridging material, and equipment and material to construct roads and railroads. This was a special consideration because of the estimated impact of the old Somme battlefield on logistics mobility. The movement of artillery rounds to the front and the stockpiling of rounds for the preparatory fires was no small feat. All of this supply effort was initiated after the decision of 21 January to

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make the attack. This may seem like a long time to prepare for a battle in the supply area; however, this was on top of normal supply requirements for a 400 mile front. Even water had to be of concern especially for the Second and Seventeenth Armies. Many of the wells in the region had been contaminated during Operation Albrecht and during the Somme battles.

As at the Marne, manpower was critical. The quality of troops was suspect. Certainly their endurance was reduced because of the food situation. There was a difference between the well-trained assault troops and the trench units. New recruits were not as enthusiastic as the troops of 1914 nor as well disciplined and stout as those of 1916. Dissention was becoming apparent. However the promise of going on the offensive coupled with the hope of ending the war was sufficient to temporarily bandage these problems.

During the Michael offensive some of these problems came to bear in the Second Army, which did not perform well. There are repeated accounts of indiscipline, especially when it came to capturing British supply areas. The training of this army was not on a par with that of other armies in the attack. Yet the Second Army was given the most difficult portion of the British line. However, its dismal effort was in part due to the impact that four years of war had on the German Soldier. The attacks of Michael had to be concentrated toward a rapid conclusion, the stamina of the German Army could not stand a sustained offensive. Thus when the command and control system failed to recognize the critical objective, the logistics and manpower aspect could not maintain the effort to correct the mistake and carry on the offensive. This would characterize every offensive effort of the German Army until 18 July,

when the Entente was able to counter-attack and regain the strategic initiative. The OHL simply let the German Army punch itself into logistical and manpower fatigue, so that it had nothing to meet the Entente effort.

Logistics became critical for the OHL because the immense offensive was tightly wound for one effort. That offensive had to succeed because the logistics could not change or effectively support another effort. It became an all or die proposition. The OHL did not realize that the strategic logistics are as important as the strategic objective.

The last days of World War I saw the German Army moving in an orderly fashion through France and Belgium not in advance but in retreat. An army which was well trained, well equipped, and guided by a capable staff structure had lost a desperate gamble. It had fought well and its adversaries recognized that in many areas it was much their superior. However, at critical times and places it had not been guided well, and had failed to take advantage of the strengths it possessed. The conclusions that can be drawn and lessons learned will be addressed in the final chapter. However, from the failure of 1918 would come a myth that the army had not been beaten and that it had been stabbed in the back. This myth would grow and fester, and coupled with the humiliating Treaty of Versailles provide a cause for new radical groups spawning in Germany. The First World War ended not in a peace, but an armistice. That armistice would break down on 1 September 1939. It would take almost six years of continued warfare to finally settle the issues begun in August 1914.

¹ Arthur Banks, A Military Atlas of the First World War, (1975), 180.

² General Buat, The Chief of Staff of the French General Staff and British commentators, having reviewed LTC Wetzell's plan after the war, stated that if followed this offensive plan could have won the war. There was indepth consideration of the plan at the OHL level and full attempts were made to achieve the necessary manpower. However it was not possible because in March 20 divisions were still tied up in the Ukraine.

³ Hermann von Kuhl, The Execution and Collapse of the German Offensive in 1918, (1927), 6. Ludendorff is quoted "Our general situation requires that we must attack as early as possible, if practicable at the end of February or at the beginning of March, before the Americans with the aid of strong forces will be able to turn the the table".

⁴ General Gough's book The Fifth Army provides a detailed review of the front which he occupied. He cites a reluctance of the British staff to provide sufficient laborers to build three defense lines in-depth, little or no preparation by the French prior to their departure, and time as the main reasons for German success against his defense lines. Nowhere on the Western Front were the defenses as poor as those occupied by the British Fifth Army. When the attack commenced on 21 March, little of the Fifth Army's wire communication was buried and as a result most of the headquarters were isolated within a few minutes.

⁵ Erich Ludendorff, Ludendorff's Own Story, (1919), 224-225.

⁶ Ralph H. Lutz's book The Causes of the German Collapse in 1918 provides excellent background into the situation which existed

between Ludendorff and the political leaders of Germany. It appears that both sides share responsibility. However, in major General Wetzell's testimony it is evident that Ludendorff and the OHL made a conscious effort to keep the government informed. It is true on the other hand that Ludendorff did not inform the political leaders when it served his purposes.

7 The staff sections at the OHL were deeply concerned with movement over the old Somme battlefield. So intense was the artillery preparation that few if any roads existed. This coupled with the German Albrecht operation to the Siegfried Line did not leave the OHL with many alternatives. Hence the decision to divert resources to build road and narrow gauge railroads to support the Michael attack.

8 Cambrai saw the British Army attack with approximately 160 tanks. The attack caught the Germans by surprise and opened a three mile gap in the lines. It was not exploited and a successful counterattack reestablished the lines. The OHL made two assumptions from the Cambrai attack. First that a short artillery preparation could achieve surprise. Second, that tanks were not important and could be disposed of by trained infantry and the development of light antitank weapons. The first assumption proved to be of value, the second in error, since there was a conscious decision not to build tanks as a result of the OHL's and Ludendorff's perception of the importance of Cambrai.

9 Operations Security (OPSEC) is a modern term used to discuss the security program of the OHL in recognizable terms. This OPSEC effort deserves indepth study since many of the basic principles of OPSEC were first developed and incorporated into the operational plan.

10 For a better appreciation of Entente strategic and tactical

plans for 1919, see the offensive plan drawn by Colonel J. F. C. Fuller. A basic description is provided in Kenneth Macksey's book Tank Warfare. This was the plan that the British intended to break the deadlock and win the war in 1919.

¹¹ Von Kulh, Execution and Collapse, 26.

¹² Ibid., 26.

¹³ Ibid., 27.

¹⁴ The demonstration in the Rheims area actually served two purposes. One as mentioned was to deceive the French and hold their reserves. However in Ludendorff's plan for additional offensives, the preparation at Rheims would not be wasted and in fact was in June and July 1918.

¹⁵ D. J. Goodspeed, The German Wars 1914-1945, (1977), 247-248.

¹⁶ Again as with the term OPSEC, familiar modern terms are used to caveat German tactical doctrine. The OHL plan incorporated various air assets into Michael. This included Close Air Support of the advancing armies. Bombing of strategic rail centers to include Amiens and interdiction of reserves as part of recognized deep battle effort. The final part was active reconnaissance effort coupled with an air superiority mission. The OHL did not fail to incorporate all available assets into the plan.

¹⁷ Ludendorff, Ludendorff's Own Story, 206. There was considerable opposition to the artillery plan. Ludendorff required all high level commanders to attend a demonstration to prove the artillery plan and theory.

¹⁸ The gas effort against the British artillery was crucial. Ludendorff at one point considered a postponement because of prevailing

winds. However, after a conference with the OHL meteorologist, Lieutenant Doctor Schmaus who provided detailed weather information Ludendorff decided to go with the attack.

19 The fog which covered the battlefield until late on 21 March has been used by both sides to explain away failures. The British histories make specific mention, stating that the fog greatly assisted the German offensive and limited their cohesive defense. Ludendorff on the other hand stated that the fog interrupted the command and control of small units and delayed the attack. Certainly, the fog was a factor and its impact lies somewhere in between the two extremes.

20 The surprise factor of the short artillery barrage can not be underestimated. General Gough was awakened at 04:50 hours and told of the artillery preparation. He went back to bed concluding that this was the start of an extended preparation. He did not arrive in his headquarters until 09:00 hours, and by that time the entire command, control and communications system of the Fifth Army had been shot away. In Herbert Sulzbach's book With German Guns, the author relates the support provided by light artillery in the Michael offensive. It is interesting to note that the light artillery moved with the infantry at 09:40. Sulzbach's battery supported the 18th Army (Hutier) and was near and at the front for a majority of the Michael operation

21 Von Kuhl, Execution and Collapse, 22.

22 Ibid., 28.

23 Max Schwarte, The Great War, 1914-1918, (1934), 46 and 50.

24 Ludendorff, Ludendorff's Own Story, 474.

25 Von Kuhl thought that the main effort should be from Armentieres toward the coast. He reasoned that time and space were on

the German side. If the coast was secured, the British would be placed in a difficult situation. Long range guns near the coast could even bombard Britain as the Paris gun was doing to Paris. Additionally he envisioned better protection for the submarine campaign which used the ports along the Belgian Coast.

26 Charles A. Howland, A History of the World War, (1933), Map No 80.

27 The value of Amiens as a strategic objective did not diminish. The Wehrmacht realized its importance in World War II, the occupation of which spelled the doom of France and caused the eventual evacuation of the BEF. Had the Michael offensive had Amiens as the original objective in combined effort in may have been reached. There is no reason to suspect that its capture would have had less of an impact on this war than it did in 1940.

28 At the time von Seeckt provided the study of the Amiens offensive serious consideration was being given to Operation Gericht at Verdun. Von Falkenhayn vetoed the effort for manpower reasons stating that it would take more corps to take that objective than to accomplish the objectives at Verdun.

29 Marshal von Hindenburg, Out of My Life, (1920), 330.

30 General Buat in his book Hindenburg and Ludendorff as Strategists, makes a point that the offensive effort placed the German forces on extended lines and at the end of their resources. The situation was much worse than it had been before the offensive. Without a strategic victory the German effort was vulnerable to an Entente offensive.

CHAPTER 6

CONCLUSIONS

When this project was begun I was specifically interested in those procedures of the German General Staff which provided for success and caused failure. I little expected to find the diversity in ideas on the causes of the German failure in the First World War. Each author of the time seems to have a valid explanation of why the German Army came close a number of times but did not succeed. From the participants' memoirs, personality conflicts enter and cloud the issue. Then of course there is the Schlieffen Plan, with two camps each manipulating the plan to meet their desired theory. Even the French and British contribute their ideas on the fate of the German Army. Some are extremely prejudiced in favor of the Entente cause while others take a more professional and moderate view. Recent commentators have also ventured plausible reasons for failure, citing logistics, manpower, a two front war and tactical blunders. Certainly all of these contributed. Yet if all these reason caused the defeat of the German Army it would seem that Germany was incapable of waging a successful war at all. Few nations in recorded history have launched wars which they thought were suicidal and had no chance to win. Germany certainly had at least two opportunities to win the First World War.

Many of the aspects which have been critized fall into specific staff areas of responsibility. Logistics, tactics, intelligence, and manpower have all been cited by researchers as areas which caused or contributed to the failure of German arms. One could draw a conclusion

that the German General Staff was not prepared and could not shoulder the responsibility of fighting a total war. This does not wash, simply because the OHL did an excellent job throughout the war in normal staff functions. If any credence be given at all to the thoughts of the Entente on the subject, one has only to look at the Versailles Treaty which barred Germany from possessing its most potent weapons, the ocean going submarine, the Fokker D-VII fighter, and the German General Staff.

There are a number of valid outside reasons why the German Army did not win the war. However, there were two specific battles which if conducted correctly could have won the war for Germany regardless of these outside influences. Those two battles have been reviewed in depth by mountains of literature and in this paper. It is in these two battles that one can find a single thread which led to German defeat.

There was a common denominator which caused the German Army to come very near a strategic victory only to miss taking advantage of the enemies' weakness or vulnerability. I have suggested that this indicates problems in the command and control structure of the OHL, a structure that had significant ramifications on the German conduct of the war.

To prove my observation, two critical battles on the Western Front were studied from various staff aspects in the attempt to discern the real impact of the command and control problem. The two battles selected were ones which the Germans had a reasonable chance at winning and as a result concluding the war. The reasons why they failed point directly to major problems in command and control within the OHL.

The Battle of the Marne in 1914 has been reviewed by the Germans, French and British in an attempt to understand what happened. It was regarded by the French as a sacred miracle and by the Germans as

a loss of the vital initiative and a forecast of final defeat. Yet, could it have been won by the German Forces?

The battle was certainly a near thing from all accounts. In fact, German corps in contact were gaining the upper hand over the French Sixth Army. A great tactical victory was at hand when the withdrawal began. How could an army which was as well trained and staffed as the German Army of 1914 fail to recognize that a victory was at hand and begin a withdrawal? It was caused by the lack of an adequate command and control system. Von Moltke could not control his right wing armies to achieve a strategic objective. For most of the battle he had little if any information. This was caused by inadequate communications facilities, poor information flow, and the lack of a centralized command and control effort to guide the right wing armies (Operational-Level Headquarters).

The command and control failure was the proximate cause of the reverse at the Marne. The situation was at its most critical juncture and the OHL had no way of determining what was going on, the status of their armies, their location, or their estimates of the situation. Allocation of forces, certainly a command and control element, was suspect, and the OHL found itself with no reserve to follow the great advances of the right wing. The battle might have been won if an operational-level headquarters had been established to control the right wing armies. This headquarters could have concerned itself with both tactics and strategy and ensured that the strategic objectives outlined by the OHL were adhered to or modified to take advantage of the tactical situation. Just as advanced technology made pre-war tactical doctrine obsolete, command and control suffered from a perception which fit the

1870's rather than 1914. The first decisive battle of the war was fought by 19th Century men in a 20th Century war, a war in which they were not capable of understanding the necessity for adequate command and control.

Various reasons can be given for the reverse at the Marne, but when weighed and compared, the command and control issue stands above the rest. A proper command and control relationship could have provided the German Army the ability to take advantage of vulnerabilities of the French and British and get inside their "decision cycle". The margin of victory or defeat rested on command and control considerations. The effect of such considerations on the outcome cannot be overestimated. If the OHL had been able to effectively control the battle on 8-10 September 1914, the history books would read differently.

If there are any rules for command and control, von Moltke and the OHL broke the following:

- Effective communications.
- Effective information flow between higher, lower and adjacent headquarters.
- Effective operational-level headquarters.
- Determination of critical decision points.
- Flexibility of offensive action.

The interlude between the Marne battle and the Michael offensive is in fact an interlude in offensive action for the German Army on the Western Front, an interlude which saw the initiative on the side on the Entente. Yet even during this interlude the tendencies which were apparent in 1914 had not been resolved. At least twice the OHL and the German Army failed to take advantage of situations which could have made a considerable difference in the outcome of the war. At Ypres,

where in 1915 gas was used for the first time on the Western Front, the OHL failed to anticipate the gap and assemble forces to take rapid advantage of the situation. The war may have been returned to a war of movement had the OHL been prepared to provide command and control at a decisive place and time.

At Verdun in 1916 the objective was unlike any before, a simple battle of attrition, with no set objective. Perhaps command and control of forces reached its lowest ebb during the costly battles before Douaumont and Vaux. There was no command and control since all that mattered was to ensure that the French forces were continually lured into the caldron of Verdun. After initial successes the OHL withheld reserves. Success was measured in the number of French dead, not in the capture of Verdun.

The 1918 Michael Offensive was a gamble, a gamble which would required finesse, intense preparation, firm centralized command and control and an identifiable and attainable objective to force the war to a rapid end. The OHL and Ludendorff were able to obtain three out of four. It was the fourth that doomed the offensive to failure. Again, as at the Marne, the missing ingredient fell within the area of command and control. The objective of the Spring Offensives was to gain freedom of action, a freedom which could only be achieved by a finding a way defeat and exploit a well entrenched enemy.

Ludendorff's "Peace Offensive" included new and innovative thought on infantry tactical doctrine, on artillery and on logistics support for rapidly moving formations. To cover and protect the plan of the offensive, elaborate deception plans were devised and implemented. Security planning reached a new high. This all led to the surprise of

the British Third and Fifth Armies. This principle of war was foremost in the mind of the OHL and especially Ludendorff. The offensive was a surprise. It completely caught the Entente off guard. Staff preparation and new doctrine had returned the war to one of movement. Thus the objective of the OHL was to obtain freedom of action and it had been realized, yet no strategic victory had been obtained. No decisive terrain had been secured which would have caused the fragmented Entente to give up the war. That is not to say that it was not attainable nor recognized, but the OHL never set such an objective for the offensive. However, once engaged with dissipating resources, an objective (Amiens) was determined which would have placed the Entente in a desperate situation. Thus, the failure of the command and control structure to identify an objective from the outset cost the German Army its last chance to obtain a victory. Virtually all other problems experienced in that offensive can be traced back to the problem of command and control. If command and control rules again existed the Michael offensive may have violated the following:

- Determining a strategic objective
- Effective operational-level headquarters

What are the implications of the German experience for modern conduct of battle and war? It is not enough to say that we must learn from their mistakes, we first must understand those mistakes and apply that understanding to our situation and time. The staff thought, planning and execution completed by the OHL was comparable to any staff effort in modern times. New staff planning and thought innovations were developed and used by the OHL. Certainly in the areas of pure tactical doctrine the German Army and the OHL had been able to accomplish more

than the combined effort of the Entente. Yet with all the successes, effective command and control eluded the OHL, perhaps the German mindset could not grasp the significance of this question because it was not an exact science. Conceptual command and control is difficult. One cannot simply say that he has effective command and control. It has variables which cannot be measured, variables which include personality, morale, experience, conceptual understanding and leadership.

Do we find ourselves in a similar situation? Certainly we have difficulties with communications, we are faced with a deluge of information which is just as bad as too little, we are not certain how to command and control the integrated battlefield, and we have trouble with deciding the role, function and impact of an operational-level headquarters. The lessons we must grasp in the near term are: First, that command and control of forces is as important as the tactical doctrine. Second, technology must be understood for its capabilities, limitations and impact on tactical doctrine. Third, the interface between tactics and strategy must take place at a headquarters which is able to synthesize the information and provide guidance and rapid direction for tactical elements. Finally, communications are the key to effective command and control.

This study has perhaps raised more questions in my mind than have been answered. It has certainly made the problems of a high level staff controlling a mass of men over a large area more real. It has piqued my interest in the command and control issues which face our Army. We must learn from the German mistakes, for to do otherwise would betray our profession. The time to learn about command and control problems is in peace-time exercises, not in combat. The lessons have

been painfully learned; all we have to do is avoid the same mistakes.

APPENDIX 1

The structure of the OHL remained constant throughout the war except for the one position which was created for Ludendorff when von Hindenburg became Chief of Staff, that position being the First Quartermaster General. The last time that there had been a First Quartermaster General was in the Napoleonic Wars when Scharnhorst became the First Quartermaster General to Blucher. The structure below represents the OHL configuration in the First World War.

Chief of Staff
First Quartermaster General (Ludendorff only)
Operations Section
Political Section
Personnel Services and General Business
Information Section
Intelligence Service
Quartermaster General
Intendent General
Director of Munitions in the Field
Chief of Staff Air Service
Director of Field Railway Services
General of the Foot Artillery
General of the Engineers and Pioneer Corps
Director of Medical Services

APPENDIX 2

The following is the staff organization of von Hansen's Third Army which fought in the early battles of 1914. This staff organization was consistent with other Army staffs which fought at this time. Little change was made to this organization and it remained the same until the end of the war.

Commander in Chief
Chief of the General Staff
Quartermaster General
General Staff Officers Ia thru Id
Adjutants IIa thru IIc
Ordnance Officer
Interpreter
General Staff Officer of Foot Artillery
General Staff Officer of Engineers and Pioneers
Officer of the Telegraph Section
Headquarters Commandant
Supply Officer
Transportation Officer
Commander of the Headquarters Escort
Veterinarian
Paymaster
Army Commissary
Field Commissary
Army Medical Officer
Superior Counsellor of Military Justice
Field Commissary of Police
Archivist

APPENDIX 3

The following OPORD was issued on 2 September 1914 by von Kluck's First Army. The OPORD was taken from von Kluck's memoirs titled The March on Paris and the Battle of the Marne, 1919. It is provided to illustrate the degree of staff capability available to the German Army and the means of command and control used by the Army and Corps levels.

On the evening of 2d September the situation was appreciated at First Army Headquarters in Compiègne and resulted in the following Operations Order being issued at 9:45 PM:

1. Enemy columns are in retreat from the line Nanteuil-Dammartin as well as towards Meaux. The II Corps, co-operating with Marwitz's Cavalry Corps, has forced the enemy back at Senlis. There is no further information at hand as to the enemy south of the Marne, or on the line Meaux-La Ferte-sous-Jouarre.

2. The Second Army today reached a line south of Soissons-Reims; tomorrow it will advance with its right flank moving from about Soissons toward Château Thierry.

3. The IX Corps will continue its attack against the flank of the enemy retreating in front of the Second Army through Fère-en-Tardenois on Château Thierry. The III Corps will advance south of the IX Corps in the direction of Château Thierry. Cavalry and artillery, machine guns, and infantry on carts will be sent on ahead to attack the enemy when he crosses the Marne.

4. The III and IX Corps will communicate with one another regarding the procedure of this attack. If contact is not obtained with enemy both these corps will at once clear off to the westward off the road of advance of the right flank of the Second Army (VII Corps), from

Soissons-Chateau Thierry and report on the river crossings.

5. The IV Corps will move tomorrow, covering the right flank from Paris-Meaux to the vicinity of Crouy south of the road Betz-Mareuil-Brumetz. Reconnaissance to be made towards Meaux-La Ferte-sous-Jouarre. Corps Headquarters at Crouy.

6. The II Corps will drive the enemy from the wooded country to the south of Senlis and march to about Nanteuil, keeping east of the Crepy-en-Valois-Nanteuil road. Corps headquarters at Nanteuil. Reconnaissance to be made toward Dammartin-Meaux.

7. Cooperating with II Corps, the IV Reserve Corps will assist it to force back the enemy from the woods south of Senlis and will advance to the district east and north-east of Senlis, west of the billets of the Cavalry Corps. It will provide for its own security by a detachment at Creil and by outposts along the southern edge of the woods south of Chantilly and Senlis. Corps Headquarters at Rully. Reconnaissances to be made on the right flank beyond the Oise and towards the north front of Paris

8. Marwitz's Cavalry Corps is in billets west of the Crepy-en-Valois-Nanteuil road and will remain there tomorrow.

9. Air reconnaissance will be made by the III, IV, and II Corps across the Marne in the directions allotted to the corps. The temporary bridges for heavy motor transport at Noyon and Compiègne are ready. The 18th Pioneer Regiment will follow the III Corps.

Army Headquarters will move to La Ferte Milon tomorrow at 10 AM.

Special instructions have been issued regulating the communications behind the front and the movement of Train and supply

columns.

Signed von Kuhl

APPENDIX 4

The following estimate was taken from Hermann von Kuhl's work The Execution and Collapse of the German Offensive in 1918, 1927. This estimate is provided to illustrate the staff thought that was available in the OHL near the close of the war. Much of the recommended actions were in fact adopted in the Michael and St Georg attacks.

The Offensive Against the British

General

The offensive against the British is based upon their want of strategic flexibility and on our ability to regroup our forces rapidly by means of rail transportation

The entire offensive operation should not consist merely of one single major attack at one part of the front. Past experiences have proved time and again that on the western front such offensives because of enemy counter-measures will sooner or later stall, in spite of the most favorable initial successes.

The whole operation should rather include a combination several offensives, closely interrelated as to their ultimate effects, to be launched from various points of the front, with the object of shattering the entire British line.

In order to prove that this principle is sound, I need only point to the British initial success at Cambrai. Into what a precarious position we would have gotten, if such an attack had been launched simultaneously with the major attacks in Flanders! The attack was successful, because only one division was in reserve within the zone of the Sixth Army, and all other reserves were located in Flanders. No

doubt, the British Cambrai attack might have put us into a very awkward position, had a stronger force been employed in its execution - especially for the purpose of exploitation.

To place the British into such a predicament should be the governing idea for our attacks throughout.

Forces

At the end of February and during the first part of March, we shall probably have approximately 70 divisions in reserve in rear of the western front.

It will be necessary for us to leave on the front of Albrecht's Group of Armies - in addition to the dismounted cavalry divisions - 6 divisions, and on the front of the Crown Prince's Group of Armies 14 divisions only, in order to enable us to attack the British in the zone of Rupprecht's Group of Armies with some chances of success.

This arrangement will give us for the Front of Rupprecht's Group of Armies 50 divisions in reserve. Of these, 10 divisions will have to remain in the rear of the Flanders front to provide protection against a British attack which is apt to be launched simultaneously with ours.

Consequently, 40 divisions in round numbers will be available for the attack - in addition to the divisions now holding various sectors along the proposed line of departure.

Plan of Attack

The entire operation is divided into two phases.

The first phase includes an attack on a wide front within the zones of the Second and Eighteenth Armies (referred to hereafter as the Cambrai-St. Quentin offensive).

The second phase, which is to begin two weeks later, constitutes a breakthrough within the zones of the Fourth and Sixth Armies in the general direction of Hazebreuck (referred to hereafter as the Hazebreuck offensive).

First Phase

Object of the Cambrai-St Quentin Offensive: To isolate and destroy the British forces holding the Cambrai Salient; to make a wide breach in the British front for the purpose of compelling the Briton thereby to draw his reserves away from Flanders front and to commit them to action here for the establishment of a new front; to reach the line Bapaume-Combles-Peronne-Ham-La Fere.

Second Phase

Object of the Hazebreuck Offensive: To pierce the British front in Flanders-now deprived of its reserves-by means of an attack in the direction of Hazebreuck (St Georg Offensive proposed by Rupprecht's Group of Armies), to strike it in the flank and rear with the object of shattering the entire British line, and thereafter to roll in up from the north.

First Phase.

Execution of the Cambrai-St Quentin Offensive. At first a simultaneous double attack will be executed:

(a) with 12 divisions from a line of departure on both sides of Bullecourt in the direction of Bapaume for the purpose of reaching the Bapaume-Cambrai Railroad, the principal supply line of the British Cambrai front;

(b) with 10 divisions between Somme and Oise, as well as from the direction of La Fere, in order to gain possession of the Crozat

Canal. This double attack will be followed two days later by--

(c) the main offensive with 20 divisions from St Quentin and the region north of it in the direction of Peronne, with a view to closing the gap existing between the attacks mentioned under (a) and (b), and reducing the Cambrai Salient.

Reasons for this Combination of Offensives and its Purpose. The two attacks on the wings (a) and (b) are to contain the British and French local reserves located in front for a speedy and far-reaching progress of main attack which is to start later from St Quentin and the region to the north of it.

Second Phase.

Preparations. Within the zone of the Fourth Army, preparations are to be effected in such a manner that, at the beginning of the Cambrai-St Quentin offensive, all infantry and artillery troops that can be made available for the purpose (15 divisions), are placed in readiness for the attack on the left wing along a the line Hollebeke-Armentieres.

The Lille Detachment will revert to the control of the Fourth Army for this purpose.

Similar instructions apply to the Sixth Army which will have to make the necessary preparations to the northwest of La Bassee for the attack on Hazebreuck.

Bringing up the Forces. If the Cambrai-St Quentin offensive develops favorably, it will be possible to release considerable troops in the zone of the Second Army along the Cambrai Salient. I am counting on a force of from 8 to 10 divisions.

Besides one will by that time be able to determine whether any

division may be withdrawn from the Cambrai-St Quentin Offensive, whether the front of the Sixth Army may be thinned out, and whether divisions (4 to 6) may also be transferred from the German Crown Prince's Group of Armies.

At any rate, it will be necessary to release for this offensive about 30 divisions; if the forces cannot be gotten together in any other way the Hunding operation will have to be executed.

A large part of the artillery and trench mortars used during the first phase may be employed at all events during the second phase, inasmuch as there is no longer any demand for the forces employed in the artillery preparation, and since it will be quite impracticable to move them forward.

The railroad will play a decisive role when it is a question of putting the forces in readiness for the second phase.

Execution of the Offensive. It, too, will consist of a double attack-

(a) of the Fourth Army to the north of Armentieres in the direction of Mount Kemmel-Bailleul;

(b) of the Sixth Army to the south of Armentieres in the direction of Estaires. Principal direction for both attacks: Hazebreuck.

Signed: Wetzell

APPENDIX 5

The following is from von Hutier's OPORD which was issued in two parts as a warning order on 14 March 1918, followed by more detailed order on 15 March.

14 March 1918

The Army will attack on both sides of St Quentin in order to throw back the enemy over the Somme and Crozat canal. The attack is to be carried out continuously without halt. There will be no daily objectives.

15 March 1918

1. If the enemy is driven back over the Somme and the Crozat canal, he will in any case try to hold on to this line, if only to safeguard the bringing reinforcements against the Second and Seventeenth Armies via Roye and Amiens. It is therefore necessary to force the line quickly. Loss of time on our part will permit the enemy to strengthen his defenses.

2. As soon as the Somme and the Crozat canal have been crossed, the task of the Eighteenth Army will be to attract to itself the French reserves earmarked for the support of the British and defeat them, and sever the connection between the French and British. It may be assumed that the French will bring up strong reserves by the railways Roye-Chaulnes and Montdidier-Amiens in order to launch them below Peronne against the flank of the Second Army and the front of the Eighteenth.

Even in the event of a great offensive against their own front they will not desist from giving local support to the British. In addition, other forces will probably be sent via Chauny-Noyon, and pushed forward to the Crozat canal and the Somme, for the protection of

their flank. This movement will begin as soon as our activities on the fronts not to be attacked are recognized as feints. This, at latest, should be on the second day of the attack.

The task of the Eighteenth Army therefore demands resolute, rapid action, both in forcing the line of the Somme and the Crozat canal, and the further advance. The sooner the Army reaches the line Chaulnes-Roye, the more chance is there of its encountering the French whilst they are still undeployed and more favorable will the prospects of open warfare become.

BIBLIOGRAPHY

PRIMARY SOURCES

Balck, Wilhelm. Development of Tactics in the World War. Fort Leavenworth: The General Service Schools Press, 1922.

von Bergmann, Walter A. and Hermann von Kuhl. Movements and Supply of the German First Army During August and September 1914. Fort Leavenworth, Kansas: The Command and General Staff School Press, 1929

von Bernhardt, Friedrich. Cavalry in Future Wars. Translated from German. London: Edward Arnold, 1909.

.Germany and the Next War. Translated from German. London: Edward Arnold, 1913.

Bevan, Edwyn. German War Aims. New York: Harper & Brothers, 1918.

von Bruckmueller, Georg. Die Deutsch Artillerie in der Durchbruch Schlachten des Weltkreiges. Berlin: E. S. Mittler & Sohn, 1922.

Buat, Edmond A. Hindenburg and Ludendorff as Strategists. Fort Leavenworth: Translation, 1924.

.The German Army During the War of 1914-1918. Translation from French. Paris: Chapelot, 1920.

.Ludendorff. Translation from French. Fort Leavenworth, Kansas. Command and General Staff School Press, 1932.

von Bulow, Otto. My Report on the Marne Battle. Translation from German, Major P. B. Hann, 1934.

von Cockschenhausen, Freidrich E. E. The Education of Troop Officers in the Military Profession. Translation from German. Berlin: E. S. Mittler & Sohn, 1926.

Edmonds, Sir James E. Military Operations: France and Belgium, 1914. London, Macmillian and Company, 1933.

. Military Operations: France and Belgium, 1918. London: Macmillian and Company, 1935.

von Falkenhayn, Erich G. The German General Staff and its Decisions 1914-1918. New York: Dodd, 1920.

von Francois, Hermann. The Battle of the Marne and Tannenberg. Translation from German. Berlin: August Schert, 1920.

von Freytag-Loringhoven, Baron. Deductions from the World War. Translation from German. London: Constable & Co. LTD., 1918.

Gough, Sir Hubert. The Fifth Army. London: Hodder and Stoughton, 1931.

Groener, Wilhelm. The Testament of Count Schlieffen. Translation from German. Fort Leavenworth, Kansas: Command and General Staff School Press, 1936.

von Hausen, Baron. Memoirs of the Marne Campaign. Translation from German. Fort Leavenworth, Kansas: Command and General Staff School Press, 1920.

von Hierl, Constantin. Strategic and Tactical Problems for the Study of the Marne Campaign - 1914. Translation from German. Berlin: E. S. Mittler & Sohn, 1927

von Hindenburg, Otto. Out of My Life. London: Cassell and Company, 1920.

von Hoffmann, Max. The War of Lost Opportunities. London: Kegan Paul, Trench, Trubner & Company., LTD, 1924.

The Infantry Journal. Infantry in Battle. Washington D. C.: The Infantry Journal Inc., 1939.

Jockim, Theodor. Operations and Rearward Lines of Communication of the German First Army During the Battle of the Marne, 1914. Translation from German. Fort Leavenworth, Kansas: Command and General Staff School Press, 1936.

Joffre, Joseph, Erich Ludendorff, Ferdinand Foch, and Crown Prince William. The Two Battles of the Marne. New York: Cosmopolitan Book Corp., 1927.

von Kluck, Alexander. The March on Paris and the Battle of the Marne 1914. New York: Longmans, Green and Co., 1920.

von Kuhl, Hermann. Execution and Collapse of the German Offensive in 1918. Part I and II. Translation, The Army War College, 1934.

The German General Staff in the Preparation and Conduct of the World War. Translation from German. Army War College, 1927.

The Marne Campaign. Translation from German. Fort Leavenworth, Kansas: Command and General Staff School Press, 1920.

Lucas, Pascal M. The Evolution of Tactical Ideas in France and Germany During the War of 1914-1918. Translation from French. Paris: Berger Leorault, 1933.

Ludendorff, Erich. Ludendorff's Own Story, Vol I & II. New York: Harper & Brothers Publishers, 1919.

The Problems with the German General Staff, Vols I & II. New York: Harper & Brothers, 1919.

The Nation at War. London: Hutchinson & Company, 1936.

- Lutz, Ralph H. The Causes of the German Collapse in 1918. Stanford University, California: Standford University Press, 1934.
- Mueller-Loebnitz, Wilhelm. The Mission of LTC Hentsch on September 8-10, 1914. Translation from German. 1921.
- Neame, Philip. German Strategy in the Great War. London: Edward Arnold & Company, 1923.
- Nicolai, W. The German Secret Service. Translation from German. London: Stanley Paul & Co. LTD., 1924.
- Petain, Phillippe. Report of Marshal Commander in Chief of French Armies: Defensive Campaign March 21-April 9 1918, Vols I & II. Translation, 1931.
- von Poseck, Max. The German Cavalry in Belgium and France 1914. Berlin: E. S. Mittler & Sohn, 1923.
- Schwarte, Max. The Great War, 1914-1918, Vol III. Translation Army War College, 1933.
- von Seeckt, Hans. Thoughts of a Soldier. Translation from German. London: Benn, 1930
- von Stein, Herman C. A War Minister and His Work. London: Skeffington, 1920.
- von Tappen, General. Up to the Marne. Berlin: Gerhard Stalling, 1920.
- von Tirpitz, Admiral. My Memoirs. New York: Dodd Mead & Co., 1923.
- U. S. Army. German Offensive of July 15, 1918. Fort Leavenworth, Kansas: The General Service Schools, 1923.
- Wilkenson, Spenser. The Brain of the German Army. New York: Macmillian, 1890.
- William, Crown Prince, My War Experiences. New York: Robert M. McBride & Company, 1923.

SECONDARY SOURCES

- Addington, Larry H. The Blitzkrieg Era and the German General Staff, 1865-1941. New Brunswick, New Jersey: Rutgers University Press, 1971.
- Barnett, Correlli, The Swordbearers. Bloomington: Indiana University Press, 1975.
- Banks, Arthur. A Military Atlas of the First World War. New York: Talinger Publish Co., 1975.

- Craig, Gordon A. The Politics of the Prussian Army 1640-1945. London: Oxford University Press, 1955.
- Demeter, Karl. The German Officer Corps in Society and State, 1650-1945. Translation from German. New York: Preager, 1965.
- DeWeerd, Harvey A. The Great Soldiers of the Two World Wars. New York: W. W. Norton & Co., 1941.
- Dupuy, Trevor N. A Genius For War: The German Army and General Staff, 1807-1945. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1977.
- Earle, Edward M ed. Makers of Modern Strategy: Military Thought from Machiavelli to Hitler. Princeton: Princeton University Press, 1941.
- Essame, H. The Battle for Europe. New York: Charles Scribners & Son, 1972
- Farrer, L. L. The Short War Illusion. Santa Barbara: ABC-CLIO, 1973.
- Gatzke, Hans W. Germany Moves West. Baltimore: John Hopkins Press, 1950.
- Goerlitz, Walter. History of the German General Staff, 1637-1945. Translation from German. New York: Preager, 1953.
- Gies, Joseph. Crisis 1918. New York: W. W. Norton & Co., 1974.
- Goldsmith, Margaret. Hindenburg the Man and the Legend. New York: Morroe, 1930.
- Goodspeed, Donald J. The German Wars, 1914-1945. Boston: Houghton Mifflin Co., 1977
- Haeussler, Helmut. General William Groener and the Imperial German Army. Madison, Wisconsin: University of Wisconsin Press, 1962
- Hart, Liddell. Strategy. New York: Preager, 1967.
- Hillgruber, Andreas. Germany and the Two World Wars. Cambridge: Harvard University Press, 1981.
- Horne, Alistair. The Price of Glory. London: Macmillan, 1962.
- Howland, Charles. A Military History of the World War. New York: Doubleday Inc., 1933.
- Isslein, Henri. The Battle of the Marne. Translation from French. Garden City, New York: Doubleday, 1966.
- Kitchen, Martin. A Military History of Germany from the Eighteenth Century to Present Day. Bloomington: Indiana University Press, 1975.
- _____. The Silent Dictatorship. New York: Holmes & Meier Publishers, 1976.

Lupfer, Timothy T. The Dynamics of Doctrine: The Changes in German Tactical Doctrine During the First World War. Fort Leavenworth, Kansas: Command and General Staff College, 1981.

Macksey, Kenneth. Tank Warfare. New York: Stein and Day, 1972.

McPherson, William L. The Strategy of the Great War. New York: G. P. Putnam's Sons, 1919.

Marshall, Samuel L. A. World War I. New York: American Heritage Press, 1971.

Ritter, Gerhard. The Schlieffen Plan. Translation from German. New York: Praeger, 1958.

_____. The Sword and the Scepter: The Problems of Militarism in Germany, Vols I-IV. Translated from German. Coral Gables, Florida: University of Miami Press, 1970

Rosinski, Herbert. The Germany Army. London: The Hogarth Press, 1940.

Simkins, Peter. Air Fighting 1914-1918. London: Imperial War Museum, 1978.

Simonds, Frank H. History of the World War: The Victory of Armistice. New York: Doubleday, Page & Co., 1920.

_____. They Won the War. New York: Harper & Brothers, 1931.

Smyth, Sir John. Leadership in Battle. New York: Hippocrene Books Inc., 1975.

Salzbach, Herbert. With German Guns. Hamden, Connecticut: Archon Books, 1981.

Terraine, John. To Win a War. New York: Doubleday & Co., 1981.

Tschuppik, Karl. Ludendorff: Tragedy of a Military Mind. Translation from German. New York: Houghton Mifflin Co., 1932.

Viereck, George S. As They Saw Us. Garden City, New York: Doubleday Doren & Co., 1929.

Weigley, Russell F. History of the United States Army. New York: Macmillan, 1967.