

Why the French Army Was So Vulnerable During World War II?

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Abstract: France, who bravely fought against Germany in World War I, only resisted for 42 days in World War II. It is a huge gap that is unimaginable. The paper aims to analyze why this happens. The gap is mainly reflected in the differences in military theories and the use of tanks during the war. After summarizing the experience of World War I, France believed that solid fortifications would bring victory. So they built the Maginot Line to defend German's attack. In contrast, Germany believed developing tank forces that could attack quickly would be more advantageous. So they developed Blitzkrieg, a kind of tactic that utilize the defense, firepower, and mobility of armored forces for large-scale deep penetration. Therefore, the German army had the chance to quickly bypass the Maginot Line, cross the Aden Mountains, and penetrate the enemy's rear, forcing the British French coalition to retreat from Dunkirk and then surrounded Paris.

Keywords: World War I, World War II, France, Schlieffen plan, Blitzkrieg

1. Introduction

On June 22, 1940, the first German tank passed the Arc de Triomphe in Paris, France, only 42 days after the German army started the invasion against France. German tanks drove from the Ardennes mountains, drifted the British and French forces to Dunkirk, and crushed all the French troops in front of them in a short moment. However, in World War I, the French army fought bloody battles, losing only 7% of its territory at a cost of more than 1.5 million casualties, and defeated waves of German attacks. However, now, the large French army was overwhelmed by the Germans easily. The reasons for this outcome can be summarized mainly in differences in military theories.

2. Schlieffen Plan in World War I

First, to analyze the reason of the differences in Military theory, the famous Schlieffen Plan before World War I should be mentioned. Alfred von Schlieffen, who became the Chief of Staff of Germany in 1891, formulated this plan. Although he did not personally participate in the war, his plan changed the situation of World War I. In 1870, the Franco-Prussian War broke out. In that war, the Germans defeated the French army and quickly occupied Paris. Afterward, the French ceded the border towns of Alsace and Lorraine as compensation. But after that, France established strong defensive fortifications against Germany, which made it impossible for the German army to defeat France as

quickly as before. In this situation, once the war broke out, Germany would be caught in a double-sided attack by Tsarist Russia and France [1].

Therefore, after taking office, Schlieffen began to study solutions. He found that it was impossible to defeat Czar Russia quickly. Russia's excessive strategic depth gave them too much room for maneuver. The backward transportation system would slow down the German army. The isolated German army, like the French army in Napoleon's period, would be defeated miserably because of the long front, cold winter, and lack of supplies. However, due to the inefficient war mobilization system and transportation system of Czar Russia, once the war starts, the Russian army will take 6 to 8 weeks to complete the military assembly of the German army [2].

Schlieffen boldly believed that the German army should use the 6 to 8 weeks to quickly capture France and return to deal with Russia. In his plan, he divided the 89 German divisions into two parts. In the position facing France on the west line, 79 divisions are arranged to attack France, while in the position facing Russia on the east line, 10 divisions and some local troops are arranged to defend Russia. The western line is divided into left and right wings. There are 68 divisions in the right-wing force and 11 divisions in the left-wing force. Left-wing forces are deployed along the French-German border to face French defense systems directly while the right wing in the western front is the main force in Germany and the key to Germany's victory in the war. They will rotate southwest with the Verdun area as the axis, pass through Belgium, enter France from the border between Belgium and France, cross the Belgian plain and sweep the French coast, surround Paris from north, West, and south, and then go east, Encircle its main force from behind the French army. The task of the left wing on the western front is to lure the enemy and resist the attack of the main force of the French army [2].

In 1891, Schlieffen put forward Memorandum No. 1. In this memorandum, Schlieffen adopted the way of plot rehearsal, deduced the basic process of the future European war, and put forward the general deployment of Schlieffen plan. Later, in 1892 and 1894, Schlieffen put forward the second and third memoranda, which are the prototype of Schlieffen plan. Since then, during his term of office, Schlieffen has conducted numerous exercises, sand table deduction and discussion, and repeatedly revised the memorandum [2]. In December 1905, Schlieffen completed the last memorandum and handed it over to his successor, Moltke junior, in 1906. So far, the complete Schlieffen plan took shape.

However, after Moltke junior had studied Schlieffen plan, he believed that the left-wing forces deployed in front of the French army in this plan are too weak. If France launches a direct attack on Lorraine from this area, it will threaten the connection between the right-wing main force and the rear, which will be fatal. So he modified the Schlieffen plan and added eight divisions to the left wing to enhance its strength [3]. He was preparing to launch two group armies to cover the left wing. If the movement of the right-wing can be made further north, passing through the southeast of Paris, to encircle the enemy from both wings, then a breakthrough can be implemented in the French fortress area in Lorraine. Alternatively, depending on the development of the situation, the left-wing forces can be transferred to the right in a timely manner [3]. But this change laid the groundwork for Germany's failure in World War I.

The right-wing, which was originally the main assault force, was weakened, and the large-scale use of trenches and machine guns during World War I made it difficult for German infantry in the war. Schlieffen planned to quickly invade France from the right and then quickly turn to encircle Paris from a large angle. However, in World War I, the right-wing army was blocked by the Marne River. Therefore, the German army's plan to defeat France quickly completely failed. After that, the German army had to fight with Russia and the British and French coalition forces on both sides, and the two sides had a confrontation, which was the reason why the German army failed in World War I. [1]

3. Maginot Defense Line, Tanks and the Theory of Blitzkrieg in World War II

The French army fought bravely in World War I, but also suffered heavy casualties, which laid a strong foundation for the victory of World War I [4]. However, the performance of France in World War II is very incomprehensible. How could a victorious country in World War I be defeated so quickly by a defeated country in 42 days? In the war between Germany and France during World War II, the military strength of both sides was between 3.3 million and 3.7 million. In the comparison of the number of heavy weapons such as tanks, planes, and artillery, both sides are basically equal [5], which is enough to prove that the reason for France's failure is not due to insufficient military strength but some other reasons.

Both France and Germany had summed up their experience after the war. France won World War I by the defense. Therefore, France believes that defense is supreme in war. As long as the defense is strengthened, it can consume the effective strength of the enemy and win the war. Therefore, France further strengthened the defense line of the German-French border and built a strong and well-designed Maginot defense line. This defense line is the largest and most expensive defense system in history, including a series of defense measures such as machine gun and artillery fortifications, landmine fields, anti-tank systems, underground passages, transportation trains, and underground command systems. It is almost impossible for the German army to break through the Maginot Line from the front.

After summing up the experience and lessons of failure, Germany found that their problem was that they could not quickly break through the enemy's defense line [5]. They urgently needed an army with high mobility, high protection, and strong firepower to attack and intersperse quickly. Therefore, the German army focused on the emerging new weapon—the tank.

The tank was invented by the British and first appeared in the battle of Somme river. The tractor equipped with steel plates, machine guns and cannons frightened the German army when it first appeared. But the early tanks were slow, weak armor and poor performance. So, dramatically, the French improved the tank and developed the highly representative Renault FT-17 tank in the history of tank development, which is the world's first tank with 360 degree rotating turret [6]. However, due to France's emphasis on defense, these excellent tanks can only be used to provide cover for infantry in defensive warfare, and mobility can not be used at all. Therefore, almost all the tanks produced by the French only pay attention to defense and firepower.

In fact, France had also attempted to develop tank forces. They developed the best tank at the time - the Soma S35. However, due to military defense theory, these tanks were not properly utilized [7]. The famous French general Charles de Gaulle once proposed the theory of mechanized warfare that focuses on the use of tanks. He believed that only by establishing a three-dimensional mobile warfare system composed of armored vehicles and aircraft, with attack as the core and high mobility to respond to potential conflicts and defend national security [8]. However, at that time, the French military's top management focused on the Maginot Line and trench fortifications, believing that sturdy bunkers were the best means of defending the country. As a result, Charles de Gaulle's theory was excluded from the French army, and his military work on tanks, Mechanized War, were worthless in France, selling only a few francs.

But the Germans do not think so, they believe that tanks can become an excellent weapon for attack. If tanks are used in a centralized manner, leveraging their advantages in protection, firepower, and mobility to maneuver through and surround, a new tactic, known as Blitzkrieg, will be formed. According to the Blitzkrieg by Henry f. Reilly, "Blitzkrieg or lightning war is not a German term for just any kind of quickly waged and violent war. It is a name for a special kind of quickly waged and violent war which has a technique of its own" [9]. So this theory was very novel at the time.

The theory of Blitzkrieg was proposed by the famous German general Heinz Wilhelm Guderian [10]. He believes that if the two weapons of fighter planes and tanks are fully utilized, it will be of great help to the attack. At the beginning of a battle, bombers can be used to destroy enemy airports and important military facilities in advance to seize air control. As enemy fighter planes in the air can pose a fatal threat to tanks on land, seizing air control is very important. After seizing control of the air, a force composed of tanks and armored vehicles will quickly launch attacks on the enemy, opening gaps in the weak areas of the enemy's defense line at the fastest speed and using high maneuverability to penetrate and surround the rear. When conditions permit, paratroopers can also carry out airborne operations to cooperate with the rapid assault of tank clusters. The main characteristic of this tactic is its sharpness, speed, and deadly strike, which will cause unprecedented impact on the enemy's defense line. According to the theory of war mechanics, the combat effectiveness of an army depends on its strength, maneuverability, and impact, both of which are related to speed. The faster the speed, the greater the impact. The German Blitzkrieg relied on speed for large-scale and deep raids [9].

By comparing the tanks equipped by France and Germany during the same period, one can see the differences in military theory between them. Except for the Soma S35 tank, which had excellent performance but used inefficient single turrets, the remaining main tank in France was the Char B1 heavy tank. This type of tank has strong firepower and good protection, but its maneuverability is extremely poor, which is very in line with the concept of French tanks as mobile artillery for defense. The main tanks of the German army were the Panzer II and Panzer III tanks, which, although not as protective and firepower as the Char B1, were far more maneuverable [6]. If only the performance and quantity of tanks were compared, Germany would not have a significant advantage, as France was also equipped with many light tanks with good maneuverability. But if we observe the specific methods of using tanks in both countries, it is not difficult to understand. The French army used tanks as defensive weapons, while the German army concentrated tanks as offensive weapons. There is a huge difference between the two uses. So the German army can make great use of the theory of Blitzkrieg.

Due to the emergence of Blitzkrieg, the methods used by the German army in attacking France completely exceeded France's expectations. In fact, Hitler's original plan was not the ultimate way to achieve success in Blitzkrieg, but a German officer's plane made a forced landing in Belgium before the war due to losing its course, posing a risk of leakage in the German attack plan [5]. So Hitler urgently changed his attack plan and adopted Blitzkrieg as the main attack method. A group of tanks led by General Guderian personally bypassed the front line of the Maginot Line and broke into French territory from the Ardennes Mountains, which the French believed were difficult for vehicles to pass through. Next, this unit utilized the high mobility and impact of armored vehicles to attack and quickly penetrate the direction of the English Channel [5]. It took 10 days to reach its destination, cutting off the retreat of the Anglo-French coalition and forcing them to withdraw from Dunkirk to Britain. Afterward, in cooperation with the main force of the front, the German army completed the encirclement of the French army in the Paris area, so France declared its surrender only 42 days after the campaign began [10].

4. Conclusion

In conclusion, the main reason for France's rapid failure in World War II was the gap in military theory. In World War I, France achieved victory through tenacious defense, while Germany failed due to its inability to break through France's defenses. After summarizing the experience of World War I, the two reached completely different conclusions. France believed that defense was the best way to defend the country, so it established the unbreakable Maginot Line. Germany realized the lack of offensive impact and used tanks to propose the theory of lightning warfare, which was

characterized by rapid attack and strong impact. When the two sides engaged in battle, although the French defensive fortifications were sturdy, they lacked any maneuverability, so the German armored forces were able to find weak points in the French defense line and boldly penetrate and quickly achieve strategic goals. After the French army broke through the Magino Line, it lost its significance, so failure was inevitable.

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