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## **THE MILITARY HISTORY OF THE FIRST WORLD WAR: AN OVERVIEW AND ANALYSIS**

PROFESSOR DAVID STEVENSON

This is a vast and sombre topic. To provide a summary in fifty minutes is like viewing it from Mars, and it is only through focus on the detail that the reality of the military experience can best be communicated. In Carl von Clausewitz's definition, war 'is an act of force to compel our enemy to do our will': its essence is the destruction of property and the killing, maiming and capture of human beings. Between 1914 and 1918 these things happened on an unprecedented scale, and an exceptionally eloquent body of art and literature remains as testimony to the consequences. But what I can attempt to do this evening is to survey the broader trends and underlying developments, in order to provide a framework for considering why the fighting took the forms it did, in the light of the intensive new research conducted in the last three decades. I will talk primarily with reference to the Western Front, but deal more briefly with the other theatres and the war at sea. And I will divide the lecture into three parts: the bankrupting of the initial strategic plans in the relatively mobile campaigning of 1914; the much longer and apparently more static middle period between 1915 and 1917; and the return to more fluid, semi-mobile, warfare in 1918, which was also the year of Allied victory. Why the Allies eventually won, and how the pattern of warfare evolved from mobile to static and back to mobile again are the two big questions I will grapple with.

### *- I - The Opening Phase*

Older members of the audience will recall A. J. P. Taylor's insistence on the inflexibility of railway timetables. Peacetime strategic planning was relatively new in Europe (in the Crimean War the British and French had first declared war and then decided how to fight it). It had started in Prussia, and after Bismarck's victories in 1866 and 1870 it was copied elsewhere. Recent research has shown the war plans were more adaptable than Taylor suggested and were subject to regular revision: the French in 1914 implemented their Plan XVII and the Russians Plan XIX Altered, while the German plan was a rolling document amended every year. We now also know that many military chiefs envisaged a conflict that so far from being over by Christmas would last at least eighteen months. Even so, in the summer and autumn of 1914 the belligerents' war plans almost uniformly failed.

The German plan (best referred to as the Schlieffen-Moltke Plan) entailed moving the bulk of the field army westwards to defeat France quickly by wheeling through Belgium and outflanking the modern fortresses the French had built along the Franco-German border. The more archaic Belgian fortresses round Liège and Namur could be overcome quickly by mobile heavy artillery, and the French had left their northern frontier largely unfortified. During August the French advanced into Alsace, Lorraine and the Ardennes, but were driven back with enormous losses. Both they and the small British Expeditionary Force (BEF) were forced to retreat. The French commander, Joseph Joffre, however, used the interval to transfer forces from the east to the centre of his line, and in September counter-attacked at the First Battle of the Marne. The Germans in turn now withdrew, and across Northern France and Belgium over the next two months the Western Front took on the characteristics that have since remained notorious.

The German plan miscarried in part through mistakes at the top. The German commander, Helmuth von Moltke the Younger, unnecessarily diverted two corps from his right flank to fight against the Russians. He delegated the decision to retreat from the Marne to a staff officer, Colonel Richard Hentsch, who authorized it prematurely. Yet even if the Germans did not need to pull back, they were on the verge neither of capturing Paris nor of forcing France to surrender. In contrast to 1870, the French army had been mobilized swiftly, and was almost as big as the German one. In contrast to Moltke, Joffre kept his nerve and successfully implemented a fall-back plan after the repulse of his opening attacks. The French had invested heavily in their railways, and whereas Joffre employed them for his lateral manoeuvres the leading German armies by September were up to a hundred miles beyond their railheads. They had only 4,000 lorries, most of which broke down, and could neither feed nor provide veterinary care for their horses. Hence they faced a supply and also a communications crisis, as unlike the French they lacked access to a telegraph network, and such wireless messages as they sent were liable to interception. More fundamentally, both sides when defending profited from the nineteenth-century revolution in firepower. This meant magazine rifles using smokeless powder, which concealed infantry could fire fifteen times a minute from up to half a mile; machine guns that could play across an ellipse 2,500 yards long and 500 wide; and above all quick-firing field guns, the French 75mm delivering, with a practised crew, up to twenty rounds a minute. Whereas German light field howitzers did terrible damage to the French in the Ardennes, 75 mms firing almost all their reserves of ammunition were critical to French success on the Marne.

If we turn to the other belligerents we see similar patterns. In the east the Russians faced a much smaller Austro-Hungarian force and about a tenth of the German field army. They diluted their numerical advantage by attacking both. They further diluted it by subdividing the forces invading East Prussia; with the result that the defending German VIII Army could defeat them sequentially at the Battles of Tannenberg and the Masurian Lakes. Here it was the Germans who exploited interior rail links and intact telegraph networks, whereas the invading Russians blundered forward along forest tracks and broadcast unencrypted radio messages. Against Austria-Hungary, in contrast, the Russians not only defeated an Austrian incursion into Russian territory but also overran much of Austrian Galicia, partly because the Austrians divided their efforts between the Russian front and a spectacularly unsuccessful incursion into Serbia. In Galicia the Russians demonstrated that territory could still be conquered, but a far greater numerical advantage than previously was needed, and even then, once the Germans came to Austria-Hungary's aid, the Russian advance was halted.

When the fighting fronts stabilized, none the less, the Germans held most of Belgium and 4.5% of metropolitan France, including key industrial areas in Lorraine and French Flanders. To end the war on favourable terms the Allies must expel the Germans from these territories, which proved forbiddingly difficult. But outside Europe, by 1915 the Allies had destroyed most of the German warships operating outside the North Sea, severed the Central Powers' overseas trade links, and could bring in reserves from all over the globe. Troops from India held one third of the British Western Front sector in the winter of 1914-15. If the Allies could mobilize their resources, they held a longer-term advantage; but whether this would suffice against the Germans' stronger territorial position and greater operational effectiveness remained unresolved.

## - II - *Stalemate, 1915-1917*

By the end of 1914 both sides had already suffered hundreds of thousand of casualties. It was during the initial phase of open warfare that daily losses were greatest, the French army suffering 27,000 fatalities on 23 August alone - more even than the British dead on the first day of the Battle of the Somme. It was unsurprising that troops exposed to shrapnel bursts responded by digging, and trenches, whatever their evil subsequent reputation, saved lives. Men felt safer in them. The outstanding new feature of the war in 1915 was the 475 miles of opposing trench systems extending from the North Sea to Switzerland. The earthworks before Sebastopol in 1855, Richmond in 1864-65, Plevna in 1877, and Port Arthur in 1904-05 to some extent foreshadowed them, but nothing remotely matched their scale. The Germans dug in first, to tighten their grip on their gains and to release troops for a drive into Russia. Their engineers selected crests of ridges that afforded good artillery observation, so that repeatedly the Allies would be attacking uphill. It was no accident that the trench lines extended between two great railway systems, the German one stretching from the coast via Lille towards the Ardennes and their fortress complex at Metz; the Allied from the Channel ports via Amiens towards Paris and then east to Nancy and Lorraine. Hence both sides could shuttle reinforcements to points of danger, and faster than attackers could pick their way forward. By 1916, as defences grew more elaborate, they typically comprised three lines, each consisting of a forward, a main, and a support trench, with interconnecting communication trenches, and field gun batteries in the rear as well as machine guns and barbed wire further forward. In chalk areas like the Somme, the defenders could shelter in dugouts thirty feet deep; in areas with a high water table such as Flanders they built hundreds of concrete pillboxes. Taken together, as was shown repeatedly, the attacking infantry found these obstacles too strong.

A precondition for trench warfare was enormous numbers of men: typically 5,000 combatants per mile of front. But the French, German, and (by 1916) British armies were many times bigger than in previous wars, and their losses from disease far fewer, while advances in medicine meant most of the wounded would eventually return to duty. The French and British brought in labourers from all over the world to build railways and move munitions and stores; the Germans used

prisoners; and both sides imposed unremitting labour duties on the soldiers themselves. Every army ran into shell shortages, mostly in the winter of 1914-15, but all (including Russia) accomplished production miracles that satisfied their armies' voracious demands; and did so all the year round, as unlike in earlier conflicts the trench garrisons continued in post without withdrawing to winter barracks or bivouacs.

New technologies did not, at least at first, offer a way out. The Germans introduced poison gas at the Second Battle of Ypres in April 1915, and the British at the Battle of Loos in September. Initially it was released from canisters and needed a favourable wind. By 1916 chlorine had given way to phosgene, which was six times more lethal and delivered in artillery shells, but in the meantime both sides had developed reasonably effective gas masks. Gas warfare added further horror to the fighting and slowed it down still more, but gave the attacker no outstanding advantage. Tanks too, although explicitly designed to help the infantry traverse trench barriers, remained a nascent technology. They were used by the British on the Somme in September 1916 and by the French on the Chemin des Dames in April 1917, but still in very small numbers, and the early models, crawling forward at barely walking pace, were all too vulnerable to shellfire and to mechanical breakdown. Much better prospects for overcoming the defences lay with enhancing the performance of artillery, and especially heavy artillery (six-inch calibres or more) directed by aerial reconnaissance and photography. This improvement was slow, and required the manufacture of thousands of heavy guns and millions of shells and the training of hundreds of crews, although by 1917 the French, Germans, and British all possessed many more guns and were more proficient at using them. They could also lay down a 'creeping barrage', a curtain of field-gun and machine-gun fire that in principle moved just ahead of the advancing infantry until they stormed their target. But if the attackers' armies were moving up what some historians have dubbed a 'learning curve', so too were the defenders. From 1916 the Germans typically kept only small numbers in the forward line, where they were most vulnerable to bombardment, and concentrated units in the rear, positioned to counter-attack once the attack had lost momentum. For most of 1917 such tactics had considerable success. It is therefore untrue that the middle period of war witnessed simply the interminable repetition of an unvarying script, and despite the Western Front's static appearance military technology and tactics were evolving rapidly, although a fundamental equilibrium persisted. The German army throughout this period deployed up to a third of its strength in the east, so lacking numerical superiority in the west, but the Allied armies' greater numbers were still too few for the conquered territories to be liberated.

The Western Front must be situated in a broader context. From spring 1915 the Allies attempted to impose a total blockade on the Central Powers but this was slow to bite, partly because Germany continued importing from its neutral neighbours. Conversely, the German High Seas Fleet avoided an engagement with the larger British Grand Fleet, not least because the German Government wanted to preserve its navy as a means of pressure on the British in the peace negotiations. The May 1916 Battle of Jutland, in which the Germans inflicted twice as much damage as they incurred, was interpreted by the High Seas Fleet command as a narrow escape, and convinced them not to run such risks again. Germany's U-Boats were too few to inflict serious losses on Allied shipping until 1916, and they were hobbled by American objections to 'unrestricted' submarine warfare (i.e. torpedoing anything afloat and without warning). Only in February 1917 did the Germans judge they had sufficient submarines and were pessimistic enough about the war on land to defy Washington by launching a no-holds-barred campaign.

Trenches were characteristic not just of France and Flanders but also of almost every other campaigning theatre. They formed in the Gallipoli peninsula, where after Turkey entered the war Allied forces tried unavailingly during 1915 to break through to Constantinople; in the Trentino and on the Isonzo, where Italian forces were on the offensive against Austria-Hungary after Italy joined the Allies in May 1915; in Macedonia, after Allied forces advanced inland from Salonika in the autumn; and in Poland (although the Eastern Front had half the density of manpower and was less rigid than its Western counterpart). In these theatres force-to-space ratios and quantities of heavy weaponry were generally lower than in the west, but here too the firepower revolution gave the defender the tactical edge. Fully to understand the 1915-17 pattern of fighting, however, it is necessary to step up from tactics to strategy.

For most of 1915 the big strategic story unfolded in the east, where the Germans reinforced the beleaguered Austrians and drove Russia out of Poland, before joining with Bulgaria in over-running Serbia and Montenegro. They hoped, though failed, to drive Russia into a separate peace. Allied strategy, in contrast, lacked co-ordination, the British concentrating their efforts on Gallipoli while the French delivered a succession of fruitless Western Front attacks. At the Chantilly Conference in December, the Allies agreed to stage synchronized offensives in summer 1916, only to be pre-empted in February when Moltke's successor as German commander, Erich von Falkenhayn, attacked at Verdun. If the big innovation of 1915 was trench warfare, that of 1916 was months-long battles of attrition, and Verdun was the prototype. Falkenhayn hoped to lure the French into such costly counter-attacks against the German artillery that he would break Paris's will to carry on, but Verdun became almost as damaging for Germany as for France, and had failed in its objectives even before the Allies regained the initiative.

The Chantilly offensives started with the Russian 'Brusilov offensive' in June, brought forward to help the Italians withstand an Austrian advance in the Trentino. General Alexei Brusilov used innovative tactics, and surprised his enemies,

about half the Austro-Hungarian army in Poland becoming casualties or prisoners. The Germans were obliged to call off operations at Verdun in order, once again, to assist their ally. But further blows followed rapidly: the beginning on 1 July of the Anglo-French offensive on the Somme; Romania's war entry in August; and Italy's capture of the town of Gorizia. Summer 1916 was the tensest moment for the Central Powers since the Battle of the Marne, and in the face of it the Army High Command (*Oberste Heeresleitung*, or OHL) changed hands again, Falkenhayn being replaced by Paul von Hindenburg and Erich Ludendorff. The new team managed to stabilize the situation by over-running Romania and halting the Russians, while holding the Allied advance on the Somme to six miles. The OHL feared, none the less, that in spring 1917 the Allies would renew their synchronized offensives, and it urged a crash acceleration of arms production as well as backing the navy's demand for an unrestricted submarine campaign that it was hoped would starve out Britain within five months, thus making it irrelevant if the US entered the war.

In fact the Allies at another Chantilly conference in November 1916 had indeed decided to renew their synchronized offensives, but the February Revolution in Russia, which overthrew Tsar Nicholas II and shattered army discipline, derailed the combined strategy. When the French attacked regardless on the Chemin des Dames in April, their assault was halted in its tracks, triggering mutinies that for several months rendered their army incapable of major offensives. Although at the insistence of the BEF commander, Sir Douglas Haig, the British went ahead with the Third Battle of Ypres in July-November, this failed to reach its targets of the German trunk lateral railway and the U-Boat bases on the Flanders coast, and arguably damaged the British army more than it did the German one. While Third Ypres proceeded, German forces drove back the Russians in the Baltic and helped the Austrians to pierce the Italian defences at Caporetto and advance a hundred miles. In the Middle East, in contrast, the Turkish army had been weakened by campaigns against the Russians in the Caucasus. British offensives in 1917 secured Baghdad and Jerusalem, though did little for the broader Allied war effort. Despite America's entry into the war in April (which brought indispensable financial, economic, and naval assistance), the Allies' strategic co-ordination had again broken down, and they seemed no nearer to resolving the fundamental problem of how to expel the Germans from France and Belgium without a completely ruinous cost.

### - III - 1918 and the Return to a War of Movement

The 1918 Western Front map looks very different from that of 1915-17. Between March and July the German launched five great ('Ludendorff') offensives, twice advancing almost fifty miles and threatening the key British railway junctions at Amiens and Hazebrouck before advancing almost half way to Paris. Between July and November, in contrast, the Allies first reconquered the captured territories and then liberated French soil almost completely, as well as much of Belgium. Both sides had learned how to break through trenches (and photographs of the 1918 fighting often show soldiers in foxholes or in open fields, as in 1914 or during the Second World War), but the Allied advance, if slower, was more sustained and went further.

The Russian October Revolution, followed by a ceasefire in December 1917 enabled the Germans to move some half a million men from east to west (although hundreds of thousands remained behind). This gave them a numerical majority on the Western Front where they had an incentive to use it before American troops arrived in strength, the latter's numbers in France as of March 1918 still totalling only 284,000. Ludendorff and Hindenburg knew the operation was a gamble, but they believed it worth trying in part because of new artillery and infantry tactics. The artillery revolution is associated with the names of Colonel Georg Bruchmüller and Captain Erich Pulkowski. Through painstaking trials with each gun, the Germans had learned to dispense with ranging shots, and could deliver without warning an intense and accurate bombardment, lasting hours rather than days and designed not to destroy their enemies' positions but to silence their batteries (drenching them with poison gas shells), paralyse their command centres, and suppress front-line resistance. The accompanying 'Stormtroop' or 'infiltration' infantry tactics entailed assaults by specialist squads equipped with portable machine guns, grenades, and flamethrowers, which would bypass the opposing strong points and drive on as far and fast as possible. Aircraft would direct the artillery and carry out ground strafing, but the Germans had virtually no tanks and their lorries (only a tenth of the numbers the Allies possessed) suffered from petrol and rubber shortages and were fitted only with steel tyres. As the Germans were also desperately short of horses, they could break the Allied lines but lacked the logistical capability to support their advances, which supply shortages repeatedly halted. By the summer their troops were weary and demoralized, and took less care to conceal their preparations, with the result that the final two offensives forfeited surprise and the French could prepare counterstrokes.

The Ludendorff offensives cost the German field army more than a million casualties, and it dwindled from 5.1 million to 4.2 million men. Though the French and British armies, now on the defensive, also suffered hundreds of thousands of losses, the Americans accelerated their troop shipments. During the summer over 250,000 American personnel reached France each month, and by November they numbered nearly two million. From July the Allies and Americans again outnumbered their enemies, and they used similar artillery tactics to the Germans, with the addition that they had many more heavy guns and could now launch major attacks in rapid succession or even simultaneously. They were assisted by superior logistics, as although the French railways (like the German ones) were suffering from years of neglect, they were

kept functioning by injections of British and American rolling stock and personnel, and supplemented by tens of thousands of lorries, largely fuelled by American petrol. The Allies also had tanks, which they could now deploy in hundreds rather than dozens, although the massed assaults staged at the Second Battle of the Marne on 18 July and at the Battle of Amiens on 8 August were exceptional. Generally tanks were used in smaller batches, as infantry support weapons rather than an independent arm, but they saved lives and made it easier to attain surprise. Finally, and again in response to the spring emergency, the Allied and American governments had appointed Ferdinand Foch as General-in-Chief of their Western Front armies and he devised and implemented a co-ordinated strategy. During July and August the Allies cleared their lateral railways and coalfields, before in late September unleashing four major attacks from Flanders to the Argonne that targeted the German trunk line. In the face of this multiple challenge the Germans could not transport their reserves quickly enough, and on 28 September Ludendorff suffered a nervous breakdown. He agreed with Hindenburg that they must seek an immediate ceasefire.

Ludendorff also broke down because of news from the Balkans, where the Allies attacked in mid-September and forced Bulgaria to sue for a ceasefire. This crisis arose in parallel with that in the west. It threatened to split the Central Powers in two, and to cut off their principal source of oil, in occupied Romania. In late September also, British Empire forces (using tactics similar to those on the Western Front) destroyed the Turkish armies in Northern Palestine and drove north into Syria, as well as advancing on Mosul. Finally, the Italians, who with British and French assistance had repelled a final Austro-Hungarian offensive in the June 1918 Battle of the Piave, went on to the attack in October at the Battle of Vittorio Veneto, in the midst of which Austria-Hungary disintegrated as a political entity and hundreds of thousands of its troops surrendered.

The Allied victories rested on adequate manpower (although the British and French armies were both experiencing serious shortages), and troop morale, which the German onslaught and the Americans' arrival buttressed. It also demanded abundant weapons and munitions, manufactured primarily in Britain and France, although American war loans and raw materials (particularly oil and steel) were indispensable to the production effort. A further precondition was command of the seas, the U-Boat menace being at its deadliest in April 1917 but thereafter subsiding. The convoy system (introduced from summer 1917) was the most important single factor in defeating the submarines, but the Allies also used the surviving ships more efficiently, reducing turnaround times and concentrating them on the North Atlantic. In many ways theirs was a triumph for superior organization, but also for the political leadership of Woodrow Wilson, David Lloyd George, Georges Clemenceau, and Vittorio Orlando, in what had become a contest between autocracies and democracies. Historical commentary on the 1918 campaigning has become markedly patriotic, with different writers highlighting the British, American, and Canadian roles. Actually the British Empire, France, and the United States all made vital contributions to the outcome, albeit in different ways, and it would be wrong to single out any one factor as decisive for Germany's defeat. None the less, by 1918 the character of warfare had been transformed, and particularly the all-arms aspect of Allied operations, combining armour, artillery, airpower, and infantry, is recognizable to servicemen in today's armed forces to whom the military world of 1914 seems remote. The question remains of whether (as Haig argued in his final despatch) victory emanated logically from the prior attrition process, or whether the Allies won at the time and in the manner that they did only through their opponents' errors. And although by 1918 the Allies and Americans were fighting a more mobile, less costly, style of campaign, and in 1919 their advantages would most likely have become overwhelming, at the time the armistice was signed their leaders were very conscious of how close-fought the struggle had been and how unexpected their salvation. This encouraged them to halt the fighting before they ventured onto German territory, and helps explain their hesitation in the hour of triumph.

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