# Aces Falling

War Above the Trenches, 1918

Peter Hart

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Extract

# Chapter 1

## Where Are We?

By 1918 the expansion of the Royal Flying Corps (RFC) had mirrored the expansion of its parent organization, the British Expeditionary Force (BEF). Since the outbreak of the Great War in August 1914 the role of the aircraft had developed from virtual fantasy to firm reality driven by the catalytic effect of war. The original simple reconnaissance functions had developed into the systematic photographic mapping of the entire German front line and hinterland. Experiments in observing the fall of artillery shells from the air had blossomed into a complex system of artillery observation that could control the gun batteries of an entire army corps to wreak destruction on sufficiently tempting targets. Early attempts to take any kind of weapon into the sky, starting with the rifle or even the pistol, had culminated in the development of fast, highly manoeuvrable scout fighters armed with twin machine guns. As to aerial bombing, it had advanced from a few determined individuals displaying their murderous intent by randomly lobbing *flechette* darts, hand grenades or adapted artillery shells out of their cockpits. Four years later well-drilled squadrons were dropping aimed bombs capable of inflicting serious damage on targets whether troop concentrations, the infra-structure of communications, munitions factories or just cities full of ordinary people.

After the successful incorporation of aircraft into the all-arms battle in 1915, the demand for the services of the RFC knew no bounds over the next three years. But the RFC was above all the handmaiden of the guns: aerial photographs allowed for the detection of significant targets; its artillery observation flights fine-tuned the accuracy of the guns; it had the power through its contact patrol flights to pierce the communication problems and general smoke of battle to report progress or bring down fire support when required.

It was a self-evident truth that the value of the guns and howitzers

of the Royal Artillery was beyond measure. Indeed the British Army and its commanders had collectively learned a great deal during the traumatic Battle of the Somme in 1916. By the start of 1917 they knew that the preparations for any successful assault *demanded* a tremendous bombardment of artillery to smash the front-line defences and cow the surviving garrison troops. They knew that the German guns *had* to be faced down in a preliminary artillery duel to prevent them creating dreadful havoc once the British troops emerged from their trenches. It was now understood that those German batteries that had not been destroyed *had* to be neutralized, most commonly by the mass use of gas shells to drench the area with incapacitating noxious gases of varying lethality. When the assault went in the guns *had* to provide systematic creeping barrages ploughing forwards across the battlefield to suppress all serious opposition as the infantry struggled across No Man's Land. When a position had been taken a standing barrage of bursting shells *had to* be laid in front to ensure that any German counter-attack would be severely weakened before it got anywhere near the hastily consolidating infantry.

The primacy of the guns meant that the preliminary gunnery duel between the massed batteries of both sides was of crucial importance. As the Germans of necessity paid increasing attention to camouflaging their gun batteries from the RFC 'eyes in the sky', other methods were developed by the British to pinpoint their location. The blaze and noise of a gun's discharge could not be disguised and both flash spotting and sound ranging were routinely used to register the location of the German batteries. Yet these developments supplemented the work of the RFC rather than replaced it.

The Allied offensives of 1917 were designed to capitalize on the perceived damage done to the German Army in the previous year by the twin attritional battles of the Somme and Verdun, battles that had brought a hell on earth to their infantry and gunners. Yet the German Empire was no pushover. It had the resources to withstand an enormous amount of punishment. Its geographical diversity and the cooperation of neutrals enabled it, at least in part, to withstand the unceasing blockade from the Royal Navy that had been confirmed in its hegemony of the seas by the Battle of Jutland on 31 May 1916. The German Army was huge, millions of men marching under the Imperial

colours. Hundreds of thousands had died, but each year another mass of recent schoolboys was ready for the call up to the colours. Many more must die before the Germans were ready to concede defeat.

The British Army had indeed learned a lot on the rolling hills of the Somme. Yet there was still much to learn, a lot of fine-tuning before the all-arms battle could be fully orchestrated. What seems obvious from the perspective of the twenty-first century was not always so crystal-clear in 1917. The British Commander-in-Chief Field Marshal Sir Douglas Haig was still firmly wedded to the idea of breaking through. He recognized the difficulties, but was repeatedly tempted to try to capitalize on the sheer effort and millions of shells needed to break through the German First Line system; he wanted to try to ride that wave of momentum right up to and over the German Second Line system. First at the Battle of Arras, then at Messines and throughout the Third Battle of Ypres he failed to realize that with the weapons systems then at his disposal the best tactical prospects lay in 'bite and hold'. This was the purest form of attrition where any gains in ground came a long way second to the systematic slaughter of German troops. The system recognized that the British field artillery was hamstrung by the limited 6,500-yard maximum range of their 18-pounders and 4½-inch howitzers. This meant that from their gun positions they could only reach about 2,500 yards into German lines and consequently they had to move forward before they could effectively bombard the German Second Line system.

Over the previous two years General Sir Henry Rawlinson and General Sir Hubert Plummer had hammered out the brutal tactics of 'bite and hold': first deluge the German defences and artillery with shells, advance under the cover of raking creeping barrages to a maximum depth of 2,000 yards, then dig in and slaughter the counter-attacking German troops. When the troops had fully consolidated their gains, then move forward the guns, replenish the ammunition supplies, bring in fresh troops and repeat *ad infinitum*. Berlin was a long way away at a mile a week, but success was defined by the efficiency of such methods in killing Germans at a far faster rate than the British were dying. The trouble was that 'bite and hold' demanded patience of the highest order and almost unlimited resources. Even when Plumer was grinding down the German defences on Gheluvelt Plateau

and Passchendaele Ridge above Ypres, mistakes began to creep into the basic methodology. Short cuts led to inadequate bombardments, which in turn could lead to disasters mirroring the worst debacles of the Somme. And of course the Germans were never passive victims. They changed their defensive tactics to leave the forward zone lightly defended, mainly by machine-gun posts tucked out of harm's way in concrete bunkers or pillboxes; the Second Line system thus became the heart of the defence and the German counter-attack divisions stood ready to strike hard should the British expose themselves beyond the blanket cover of their field artillery.

The stage was now set for the next step in the development of British tactical theory. The 'headline news' was the attempt to exploit the massed use of tanks. First, they offered a certain method of crushing the German barbed wire without the necessity of a prolonged preliminary bombardment. Second, the tanks were useful against German strong-points or machine-gun posts. Third, they were seen as a method of breakthrough, driving on the attack to break through the German trench system. This last was probably not feasible given the low speed, mechanical unreliability and limited range of contemporary tanks.

The tanks may have caught the eye, but the real tactical advance was the seismic change in gunnery techniques achieved by the Royal Artillery. Every year of the war had brought more sophistication into the science of gunnery, but by late 1917 there had been a real step forward. Accuracy was massively improved, not this time by the efforts of the omnipresent RFC observers in the sky, but due to the pinpoint survey of the battlefields so that the maps really did reflect precisely what was there on the ground. Crucially, it was also at last fully grasped that gun barrels varied, not only in relation to each other, but also throughout their limited life span. They therefore needed to be 'calibrated' against a known standard, so that the errors from the norm could be determined and then built into the calculations for each gun. The variable effects of barometric pressure and wind speed on the flight of a shell were also understood and these meteorological observations were then routinely included in the gunners' calculations. This allowed the guns to open up in a barrage shooting 'by the map' with the appropriate corrections without the necessity of previously registering the guns.

All this innovation reintroduced the possibility of tactical surprise, which was brilliantly exploited at the Battle of Cambrai on 20 November 1917. The guns gathered in secret, registering from the map and not by firing the all too noticeable registering rounds that would have indicated their presence to the Germans. The guns opened with a mighty roar, smashing and neutralizing the Germans, the tanks rumbled forward, crushing the barbed wire, the infantry followed and until the lumbering tanks reached the nemesis of concealed German artillery batteries the way seemed open. In truth the British had been a little taken aback by the scale of their success. Their reserves had already been drained at Ypres and they could not capitalize; indeed they were themselves caught by a German counter-attack ten days later which premiered some of the mass bombardment and storm-trooper infiltration tactics that would be at the heart of their offensives in 1918. Both sides were learning how to use the weapons in ever more effective and deadly combinations.

Yet war is not only about attack. Over the winter the whole situation on the Western Front had changed beyond recognition as the collapse of Russia had released Germany from the trauma of fighting on two fronts at once. Most of its forces could now be concentrated on the Western Front for one last attempt to attain victory before the British naval blockade finally drained the German economy dry. By the spring of 1918 the Germans would have over 190 divisions massed on the 468 miles of the Western Front, while the British and French could only muster around 156. The likely outcome of the war had not really changed: the imminent arrival of the United States forces ensured that any advantage the Germans had on the Western Front would be but temporary. Although after eight months of war the Americans had taken up the burden only to the extent of just one division holding 6 miles of the front, there were hundreds of thousands more of them: all *nearly* trained, *nearly* ready for action. Nevertheless it was clear that the Russian collapse coupled with the dreadfully slow and mannered American mobilization gave Germany a brief window of opportunity in the spring and early summer of 1918. After that it would assuredly be too late.

The highest rung of the German High Command consisted of two men who many considered had risen to the level of *de facto* rulers

of Germany. Field Marshal Paul von Hindenburg and General Erich Ludendorff had established their reputation with the crushing defeat of the Russians at the Battle of Tannenburg in August 1914. As a team they had replaced General Erich von Falkenhayn during August 1916, but their authority had grown to encompass much of civilian Germany. Neither was quite what they seemed: Hindenburg, a solid embodiment of the state made flesh, was brighter than he looked; while Ludendorff, the ice-cold brain, was prone to some degree of mental instability under stress.

The Germans were planning for breakthrough, for annihilation and for victory on the Western Front. They were not short of proposed plans. The first was for a massive assault in the Somme area to throw the British back and then, after leaving a protective flank guard against possible French intervention, to attack north, thereby 'rolling up' the British line. This option became known as Operation Michael. A second scheme, Operation George, envisioned a bold thrust to cut through the British lines in the river Lys sector near Armentières and then a race to the sea to cut the BEF from the succour of the Channel ports of Dunkirk and Calais. A third proposed taking on the French with twin attacks on either side of the Verdun salient to be known as Operations Castor and Pollux. Once Verdun had been 'pinched out' they presumed the French would be a spent force and the British could be targeted without fear of interruption. Other offensive plans included an envisioned attack in the Arras area – Operation Mars. After much discussion it was decided to target the British Army so Verdun was perforce ruled out. The question then was where to attack the British. After considerable vacillation the final choice was for Operation Michael. The strongly held Arras ridges were not a palatable option for a 'must-win' offensive and although planning continued it was relegated to a support role. The deciding factor was time: every month counted and it was apparent from the flooded terrain of the Lys valley that an attack could not be made before April, while the attack in the Somme area could be launched in March 1918. In Ludendorff's opinion the most important necessity was to achieve a breakthrough. Once they were through the British lines then the strategic objectives could be set according to the developing situation. His explanation exudes a certain smugness.

> I was influenced by the time factor and by tactical considerations, first among them being the weakness of the enemy. Whether this weakness would continue I could not know. Tactics had to be considered before purely strategical objects, which it is futile to pursue unless tactical success is possible. A strategical plan which ignores the tactical factor is foredoomed to failure. Of this the Entente's attacks during the first three years of the war afford numerous examples.[1] *General Erich Ludendorff, General Headquarters*

As the Germans plotted victory on the Western Front, back in Britain a group of politicians, led by the Prime Minister David Lloyd George, finally made their move to control Haig who in their view was wasting thousand upon thousands of British lives in futile assaults on the Western Front. It was Lloyd George's contention, backed by other 'Easterners', that the Allies should be concentrating their efforts on knocking Austria, Turkey or Bulgaria out of the war and thereby exposing the German 'underbelly'. To the 'Westerners' led by Haig and the Chief of Imperial General Staff Sir William Robertson such plans would mean throwing lives away in pointless side shows which, even if successful, would contribute nothing to the real deciding battle of the war on the Western Front. Yet Lloyd George and his cohorts remained unconvinced. After the relative failures of the BEF on the Western Front in 1917 they moved to retain in Britain a substantial proportion of the reinforcements that should have been restocking the depleted ranks of Haig's legions. To add further injury they ordered the despatch of more British divisions to bolster the Italian front.

As a result of this near suicidal policy, on the very eve of the German onslaught the British were forced to reshuffle and totally reorganize their chronically under-manned divisions, reducing the number of battalions in the constituent infantry brigades from four to three, and hence the number of battalions in a division to nine, which therefore matched the system employed in the French and German armies. This was not necessarily bad practice, but the timing for such a major reshuffle was dubious in the extreme. In this dramatic cull some 141 battalions disappeared. The remaining battalions would be brought up to full strength from the disbanded units.

The British and French commanders knew that the Germans would

attack: the question was when and where. As Haig wisely commented later in the war, to the bemusement of the intellectually challenged ever since: 'How much easier it is to attack, than to stand and await an enemy's attack!'[2] The attacking general has the initiative, the enemy must respond to his moves; in defence you must guess how, where and when the blow will fall – no easy task and with awful consequences for failure. The British knew they must for once defend and of necessity they looked to the pragmatic system of defence in depth that the Germans had practised with considerable success during the Third Battle of Ypres in 1917. As a result, in December 1917 the General Headquarters of the BEF produced their *Memorandum on Defensive Measures*. In essence the bulk of the troops were held back, well away from the massed field artillery of the opposing force. The Forward Zone, based on the existing front line system, was intended merely to slow down the attacking troops, with a new emphasis on fortified strongpoints connected by fields of interconnecting machine-gun fire rather than linear trench systems. Pre-planned defensive barrages would crash down on any threatening incursion. Set back about 1 or 2 miles behind the Forward Zone was a more conventionally defended linear series of defences – the Battle Zone – that were out of range of the initial mass barrages from all but the very heaviest guns and howitzers. Behind this was the Rear Zone that was to be constructed about 4 to 8 miles further back.

Yet the British had little experience of defence; the last full-scale German offensive had been back at Ypres in April 1915, many lifetimes ago. There were several intractable problems that they were required to overcome before they could properly introduce a flexible system of defence. The first and most obvious was that their Forward Zone positions had been dictated by tactical considerations in the final throes of the last attack. They were often badly sited in valleys, overlooked by the Germans and with dreadful communications across the battlefield wastelands immediately behind them. There were salients that were simply indefensible. A series of tactical withdrawals might have seemed the answer, but for reasons of morale were almost inconceivable. The vulnerable bulges in the line left after the Third Battle of Ypres, and at Flesquières following the Battle of Cambrai, would have to be defended because how could they abandon the sacrificial ground that so many

had died to capture just short months before? There were also the knock-on effects of the severe manpower shortage: exactly who would dig the new lines, construct the concrete pillboxes and lay the barbed wire? Did they actually have the time to get the new defences finished before the Germans attacked? Theoretically there was also a question as to whether the generals responsible had fully taken on board the concept of defence in depth. In many cases the idea of an elastic Forward Zone funnelling attacking troops between defended localities into machine-gun and artillery 'traps' seems to have been fatally compromised. Generals found it impossible to 'give up ground' and consequently placed up to a third of available troops in the Forward Zone, tethered well within the range of the German field artillery and vulnerable to being overrun.

The situation was complicated by the manifold alterations in the High Command at Home. David Lloyd George was an accomplished politician. Haig was as yet beyond his reach but CIGS General Sir William Robertson was a more feasible target. Lloyd George embroiled him in a dispute over his powers in relation to the Supreme War Council, casting his silken lines around the thrashing Robertson until he was forced into a corner and duly replaced by General Sir Henry Wilson. This could have been a serious blow to Haig as Wilson was not one of his foremost admirers and had a well-earned reputation for duplicity. Yet he was no incompetent and the press of events over the next few months meant that their relationship, while never warm, was functional. In a similar fashion the appointment of a new Minister of War, as Lord Milner replaced Lord Derby, did not really alter the overall situation. Lloyd George had intended this as the first steps in a root and branch renewal of command with the ultimate aim the toppling of Haig. In this he failed.

In the air war the situation had been transformed out of all recognition. The entire *raison d'être* of the Royal Flying Corps had been to facilitate the British offensives launched in 1915, 1916 and 1917. Its whole method as developed by the Commander of the RFC on the Western Front, Major General Hugh Trenchard, had been based on pushing the scouts deep behind the German lines and thereby allowing his reconnaissance and artillery observation aircraft free play over the German lines where their work truly counted. In

a sense the Germans had acquiesced in this by adopting a defensive aerial strategy based on preserving their strength and generally harassing the superior numbers of RFC aircraft as best they could. Now in 1918 the Germans *had* to get their reconnaissance aircraft deep behind the British lines on a far more regular basis than had previously been their practice. Their scouts *had* to stop the RFC reconnaissance aircraft from crossing the lines to uncover the secrets of the German plans. Once the offensive began the German aircraft would be needed more than ever for artillery observation duties, infantry contact patrols and low-flying ground-strafing attacks on British infantry and artillery positions. The German Air Service could no longer remain on the aerial defensive; like the RFC during 'Bloody April' of 1917 they too were at the beck and call of the ground forces.

There was another serious problem facing the German Air Service. The tiny United States Army Air Corps may have seemed all but an irrelevance in the days following their declaration of war on Germany in April 1917, but it was soon apparent that its influence could be crucial if the war extended deep into 1918.

> **The United States had fifty-five airplanes at the time they declared war, and their aircraft industry was insignificant. Therefore, we did not have to reckon with the early appearance of American air units. It was likewise to be expected that the individual peculiarity of the Americans and their sources available for assistance did not promise that countless air units would be created to reinforce the France-British front, but rather that they would give the Entente their aid in furnishing material for building up their air resources. The number and type of American engineers, specialists and workmen was so significant that their influx in the aircraft operations in England and France must lead inevitably to a great increase in their production. It must also be expected that American factories, operating under the direction of British and French engineers, would be converted to the production of planes and motors. French and English flying schools were thoroughly able to train the large numbers of pupils that came pouring over from America and prepare them for work at the front.**[3] ***General Ernest Wilhelm von Hoeppner, German Air Service***

It was the responsibility of von Hoeppner to make sure that the German Air Service was fully equipped to meet this new challenge. After making his case and securing the essential support from Ludendorff and Hindenburg the 'American Programme' was drawn up. It was decided that they needed to have an extra forty Jagdstaffeln scout units and seventeen Flieger Abteilungen (A), the army cooperation units, which in turn would require more flying training and combat training schools. After four years of war this was not an easy matter and took immense effort and patient negotiations. They needed to double aircraft production to around 2,000 a week in a country where all the necessary raw materials, resources, machine tools and skilled workmen were in extremely short supply with numerous competing demands. The aviation industry desperately needed iron, steel, copper, nickel, zinc and aluminium but it faced legitimate competition from all sides of the war economy. At this late stage in the war Germany was in desperate need not just of aircraft but of submarines, warships of all kinds, artillery, mortars, machine guns, motor-transport, perhaps even the new tanks. Once manufactured, all this machinery of war needed fuel and oil if it was not to grind to an impotent halt. The German economy had been severely weakened by the pernicious long-term effects of the immovable Royal Navy blockade – the noose that slowly tightened around Germany's neck with every day that passed. Ironically the actual men needed to act as pilots, observers and ground crew for the expanded air force were not such a problem. Among the millions of mobilized men the 24,000 men required were a drop in the ocean.

Trenchard was well aware of both the increasing strength of the German Air Service and of the radical reversal in German and British priorities in the air war and as early as December 1917 he had prepared a pamphlet, *The Employment of the Royal Flying Corps in Defence.*

> **The first and most important of the duties of the RFC in connection with defence is to watch for symptoms of attack and to use the utmost endeavours to obtain and transmit at once all information which may assist responsible Commanders to determine beforehand when and where an attack is coming and by what force. It is the duty of the Intelligence**

> Branch of the General Staff to keep the RFC constantly instructed as to the information which is required, and of the suspected areas of hostile concentration. Every detail observed should be reported. Points of apparent unimportance to an observer are often of great value in elucidating reports from other sources.[4] *Major General Hugh Trenchard, Headquarters, RFC*

The RFC was to look in particular for signs of construction of the communications and logistical infrastructure without which a major offensive was impossible: the railways and sidings, improvements to roads, the massive munitions dumps. Then there were the signs of German forces massing, the new aerodromes, the camps and the gun battery positions. Once an offensive was clearly imminent then the duty of the RFC was clear.

> As soon as it has been established that preparations for an attack are in progress behind the enemy's line, the next duty of the RFC is to interfere with them. The means available are:
> a) Cooperation with our artillery, the activity of which will probably be increased at this stage.
> b) Extensive bombing attacks, to hinder the enemy's preparations, inflict casualties upon his troops and disturb their rest.[5] *Major General Hugh Trenchard, Headquarters, RFC*

The primacy of its role in ensuring that the fire of the Royal Artillery was effective would naturally continue once the German infantry came over the top. But the RFC would also be required to take its place alongside the infantry in the front line.

> The means to be employed stated in their relative order of importance are:
> a) Attacking the enemy's reinforcements a mile or two behind the assaulting line with low-flying aeroplanes.
> b) Attacking the enemy's detraining and debussing points, transport on roads, artillery positions and reserves.
> c) Sending low-flying machines, on account of their moral effect, to cooperate with the infantry in attacking the enemy's most advanced troops.[6] *Major General Hugh Trenchard, Headquarters, RFC*

For Trenchard, whatever the overall situation, there was one underlying principle that always endured: to carry out successfully their intended aims and objectives it was necessary for the RFC to maintain a never-ending offensive against all forms of German aviation.

> **This can only be done by attacking and defeating the enemy's air forces. The action of the RFC must, therefore, always remain essentially offensive, even when the Army, during a period of preparation for offensive operations, is standing temporarily on the defensive.**[7] ***Major General Hugh Trenchard, Headquarters, RFC***

The pamphlet was issued on 16 January 1918, by which time Trenchard had left to take up the position of Chief of the Air Staff back in London. His replacement was Major General John Salmond. In practical terms the changeover had no impact on the RFC as Salmond was very much a 'Trenchard man' and had no intention of changing the priorities of the RFC. Whatever the German Air Service did, the RFC would attack, and keep on attacking. When push came to shove, ultimately even the greatest of the scout aces of both sides would find that they were expendable in the cause of their country.