

What role did aviation play during the Great War?

Questions/Key Points	Notes
<p>How supportive were civilians of the War at first? Later?</p>	<ul style="list-style-type: none"> ● Background <ul style="list-style-type: none"> ○ https://www.britannica.com/event/World-War-I ○ How the war starts <ul style="list-style-type: none"> ■ Archduke Franz Ferdinand is assassinated on June 28 1914 ■ Causes a cascade of events; Austria-Hungary declares war on Serbia on July 28 ■ Germany wants war to stay in the Balkans; tells Russia to stop mobilizing and France to remain neutral. They don't ■ Aug 1, Germany declares war on Russia and on Aug 3 declares war on France ■ Germans invade Belgium and Britain gets involved to defend Belgium ■ Central powers vs. Allied Powers ■ Central powers are Austria-Hungary, Germany, Turkey, Bulgaria ■ Allied powers are Russia, France, Romania, Serbia, Italy, Britain, Belgium and US (joins later in 1917) ● Overall view of aviation during WWI <ul style="list-style-type: none"> ○ Perhaps a misconception that aviation didn't play a major role in WWI? <ul style="list-style-type: none"> ■ Possible that aviation was overshadowed given extensive ground combat ○ Many aircraft were shot down ○ "This is the essence of the puzzle over airpower in World War I: vast resources were invested in it and, at the end of the war, the Allies tried to destroy German airpower permanently. Yet many modern historians contend that airpower in World War I was unimportant" (44524708) ○ Was air power used as an offensive or defensive tool? ○ At the beginning of the war: Britain had 48 airplanes, French 136 and Belgians 24, Germans 180 ○ In 1915, Congress approves \$300,000 to be used towards aviation ○ Many American aircraft companies received orders for aircraft (American neutrality?) ○ At the time, airplanes and pilots were integrated into armies as a whole, but after WWI there was a push to create separate air forces ○ When one country came up with a new technology, everyone else scrambles to try and do it too ○
<p>The main role of aviation during the Great War was reconnaissance.</p>	<ul style="list-style-type: none"> ● Reconnaissance <ul style="list-style-type: none"> ○ Had balloons (last section) ○ Initially, engines weren't strong enough to carry more than one person so heavier-than-air aircraft were also used for reconnaissance (battle of the Marne) ○ Reconnaissance aircraft created a lack of surprise and contributed to stalemate <ul style="list-style-type: none"> ■ Most offensive movements that were seen by reconnaissance aircraft failed ○ "At first the air weapon continued to function at low efficiency during the

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The first uses of strategic bombing were used during the Great War.

Fighters were developed by attaching machine guns to aircraft. Some technological difficulties arose with shooting guns through propellers, but the issue was solved by the Germans with interrupters.

Machine guns were also used to gun down

swing of the German armies because airmen, as well as commanders and their staffs were inexperienced, but aerial reconnaissance soon became decisive" (4452...)

- 1913, 14 - Wrights continued to build pusher planes (props in back) but Burgess and Curtiss companies made tractor-style aircraft (engine in front). Reduced visibility esp since they were mainly used for reconnaissance, but became the preferred design; greater stability and performance
- Radios were used for communication
- Bombing
 - German Zeppelins (last section)
 - Were not very successful because they were easy to shoot down
 - First bombings from aircraft in August 1914; dropped bombs and grenades manually from aircraft
 - In 1917, Germans had twin and 4 engine aircraft that could be used as bombers but they didn't have many.
 - Esp. towards beginning of the war, airframe and powerplant technology wasn't advanced enough to support bombing
 - British made a bomber to be used in Berlin but the war ended before it could be used
 - Bombers were inaccurate because they lacked good aiming technology
 - Good thing about early bombers was that they could get to their targets in time without having to face too many air defenses
 - Lieutenant Colonel Edgar S. Gorrell in 1917, came up with a "strategic bombing" plan but it wasn't implemented
 - Bombings on Britain didn't make civilians want peace but instead made them want to retaliate. Was not effective at reducing morale or harming the war economy
 - As aircraft and engines improved, they were able to carry heavier loads which led to fixed-wing bomber aircraft
- Fighters
 - <http://www.jstor.com/stable/resrep11760.16>
 - Giulio Douhet; theory of "Command of the Air"
 - If one side could completely control airspace, they could do whatever they wanted with it.
 - First principle of fighter aircraft
 - https://web.archive.org/web/20160603222631/http://www.worldwar1.com/relevance/Relevance_Summer09.pdf
 - In 1914, started with pilots shooting handheld guns at other pilots they came across, was not very effective
 - Thought of putting machine guns on aircraft
 - Vickers F.B.5 Gunbus - First production aircraft equipped with a machine gun; pusher-style airplane because of propellor issue
 - Germans created Fokker Eindecker E.I, E.II, and E.III fighters equipped with machine gun interrupters in tractor configuration
 - Also came up with the idea of formation flying in fighters; pilots would have other aircraft to their sides and behind them to guard them
- Close Air Support, Ground Attack
 - Sopwith Salamander, Halberstadt CL.II, Junkers J-1

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trenches on the ground from the air.

Giulio Douhet, Trenchard and Mitchell were convinced that airpower would play a crucial role in future conflicts, leading to large investments in aviation and air forces.

- Metal armored aircraft equipped with machine guns which could be used to gun down people in trenches
- Battle of Verdun
 - Germans tried to trick French airmen in preparation
 - Tried to block French aircraft from the air as well
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- Battle of the Somme
 - Fought in the trenches
 - Large casualties and stalemate
 - German air reconnaissance allowed them advanced knowledge of what was going to happen
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- Post WWI & Interwar Period
 - Treaty of Versailles - Germany wasn't allowed to have any military aviation at all
 - Giulio Douhet
 - Expected that strategic bombing in future wars would be enough in itself to make the enemy want to surrender immediately
 - Hugh Trenchard and Billy Mitchell shared similar views
 - Douhet's ideology turned out to be problematic and he overestimated airpower and its abilities. Civilian morale was stronger than he thought and bombers were more complex aircraft than he expected.
 - Air Forces
 - <https://web.archive.org/web/20120812113116/http://www.raf.mod.uk/history/raftimeline19181929.cfm>
 - British RAF was established on April 1st, 1918 towards the end of the war
 - Hugh Trenchard is the chief of Air Staff
- Famous aviators/aircraft
 - Red Baron
 - <https://www.kumc.edu/wwi/biography/red-baron.html>
 - Manfred Albrecht Freiherr von Richthofen
 - German fighter pilot, flew a Fokker Dr.I Triplane
 - Shot down 80 aircraft
 - Died in battle in 1918
 - Billy Bishop, Canadian, shot down 72 aircraft, now has an airport in Toronto named after him
 - Rene Fonck, France, 75 aircraft
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- New Technologies
 - Interrupters on fighter aircraft enabled machine guns to be used on aircraft with tractor configurations since bullets could be fired through the prop without hitting the blades. Tractor aircraft were better suited for performance.
 - 12-cylinder liberty engine - US manufactured engine that allowed for better performance

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<https://www.jstor.org/stable/44524708> (image on pdf pg 5)
<https://www.jstor.org/stable/26276450>
<https://www.jstor.org/stable/26300686>
<https://www.jstor.org/stable/resrep12116.23>
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<https://link.gale.com/apps/doc/A19618801/UHIC?u=monm93287&sid=UHIC&xid=35a3feab>.
 "Guilio Douhet." In *International Military and Defense Encyclopedia*, edited by Trevor N. Dupuy. Detroit, MI: Macmillan Reference USA, 1993.
<https://link.gale.com/apps/doc/BT2342100216/UHIC?u=monm93287&sid=UHIC&xid=faf0f22b>.
 (Encyclopedia pg 232)

Summary

At the start of the Great War, aviation was still in its infancy. Aircraft were not strong enough or well equipped to do much more than aerial reconnaissance, which was the main purpose of aviation during the Great War. However, the war served as an impetus for countries to develop their technologies rather quickly, which led to the creation of bomber aircraft and fighters. As airpower quickly increased in quality through and after the war, many became convinced that aviation would become a decisive factor in future conflicts.