Essential Question: 17 November 2020

What role did lighter-than-air aircraft play in military aviation?

## Questions/Key Points

The telegraph wasn't invented at this point, so how was the balloon useful if they couldn't communicate with people on the ground?

How much of an advantage did balloons give to the Union army? How different would the outcome have been if they didn't have the technology available to them?

How did people's perceptions of war change now that civilians could be attacked directly?

## Notes

- Battle of Fleurus, 1794
  - o Background
    - https://www.britannica.com/event/Battle-of-Fleurus
    - Part of the French revolution
    - French fighting against Austrians and Dutch
  - https://www.istor.org/stable/43165728, pg 3
  - o <a href="https://www.jstor.org/stable/26202034">https://www.jstor.org/stable/26202034</a>, also for American Civil War
  - o https://www.jstor.org/stable/2600571, pg 10
  - o https://www.jstor.org/stable/44220180 but was it 1793 or 1794?
  - First usage of balloons for reconnaissance in war
  - o Part of Compagnie des Aerostiers from 1.2
  - Flew high enough to see the entire Austrian Army
- American Civil War
  - See above, 26202034
  - https://www.jstor.org/stable/1839448
  - Union army was able to use telegraph and balloons to communicate with ground in real time
  - o Initial usage of flying in military was solely for reconnaissance
  - August 1861, T. S. C Lowe was asked to build a balloon for the war department. Ended up making 4 more balloons and started an "Aeronautic Corps" in 1862 which turned into the "Aeronautic Department" the following year
  - o Built hydrogen balloons; could fly up to 1,000 ft
  - Confederates also built a balloon after seeing the ones the North had, but it was "captured" and they gave up on further aeronautical efforts
- WWI Zeppelins and Observation Balloons
  - https://www.britannica.com/technology/zeppelin
  - o https://www.bbc.com/news/uk-england-27517166
    - Germans had Zeppelins during WWI and used them to bomb the British
      - Created terror and fear for civilians
    - British fought against the Zeppelins with exploding bullets which could light the hydrogen inside them
    - Had to give Zeppelins to Allies afterwards for reparations
  - <a href="https://www.nationalarchives.gov.uk/education/resources/zeppelin-raids/">https://www.nationalarchives.gov.uk/education/resources/zeppelin-raids/</a> (contains some primary sources)
    - "At 11:47 p.m. Hedon, six miles from Hull, reported Zeppelin coming to Hull, and almost immediately the engines were heard in my telephone office. My Staff Officer went outside the Hotel and saw a Zeppelin over head, very distinct against a clear sky, at a height estimated by him as 3,000 feet. He saw three bombs dropped. As each one left the Zeppelin the airship was clearly lit up. He then reported to me, and I heard five explosions, and I saw from my window that two fires had started" Major General Ferrier, Commander of the Humber Defences (Britain)
  - Observation balloons

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- https://airandspace.si.edu/multimedia-gallery/wwi-german-observation-ball oonq54447jpg
- o <a href="https://www.istor.org/stable/3087941">https://www.istor.org/stable/3087941</a>, pg 13
- All major countries had balloons for reconnaissance; had telegraphs and phone wires for communications

## Summary

The use of aviation in military applications began with lighter-than-air aircraft, mainly balloons and later Zeppelins during the Great War. As the technology was still underdeveloped, it was mainly used for reconnaissance and communication, as opposed to fighting itself. One notable exception was the German use of Zeppelins to drop bombs over England. As heavier-than-air aircraft developed further, the use of balloons was mostly discontinued.