

The airplane impacted our culture history essay

[Environment](#), [Air](#)



Have you ever wondered what it would be like in a world where airplanes did not exist? What it would be like to travel my means of other transportation, taking nearly five times as long? Those times have changed; thanks to innovators like the Wright Brothers, we have now developed the knowledge and understanding for the ability to make us airborne. We have technologically advanced from simple propeller powered airplanes that could carry 20 passengers to multi-engine jetliners capable of carrying as many as 300 passengers. With these advances in technology and the evolution of the modern airplane, the airline industry has evolved into one of the largest industries in the world; this is my aspiration of becoming an airline pilot. Because of the Wright Brothers' intellect and the knowledge of past innovators, flight was made possible, and the new advances in technology have made flight an efficient, more reliable resource to the public.

The whole idea of flight is a testament to the ingenuity of the human mind. What ever lead us to the idea that we need to be airborne? Why was there are reason to us flying? Well, people wanted to get from point A to point B in a faster, more efficient manner; thus, the idea of the airplane was born. We began by flying balloons and blimps in the late 1800s, and then advanced to engine-propelled aircrafts in the early 1900s. Although there are several past innovators that made generous contributions to the idea of making us airborne, the most well known innovators were the Wright Brothers. They began by building the first airplane that propelled by its own power, carried a man, and landed safely without any destruction. This moment in history was known as the beginning of aviation.

History

“ Flight is possible to man...[and] I feel that it will soon cost me an increased amount of money if not my life” - Wilbur Wright Co-Inventor of the first engine airplane. Before the famous first flight had happened, The Wright Brothers had studied birds in order to gain insight on how flight is conducted. They noticed that as birds fly, the airflow around their wings creates lift, and that by changing the direction of the wings the birds were able to maneuver. With these observations, they were able to alter a portion of the bird wing to create roll, therefore making it possible for a glider to maneuver. Within the next three years, the Wright Brothers went on to accomplish some unthinkable feats, including The first mini-glider piloted flight in 1900 and then a larger replica flight in 1901. Despite their failures on the first two attempted flights, they revisited their calculations and realized that they were not reliable. In 1902 they flew numerous gliders to test their new gained insight in the mechanics needed for proper flight. Then, on December 17, 1903 the first flight in which a machine lifted a man and propelled on its own took place; this was known as the Wright Brothers' first successful experiment in aviation. Orville and Wilbur Wright had successfully conducted their experiment in which a machine carrying a man rose by its own power, flew naturally at a constant speed, and descended without damage. This was a breakthrough in aviation and is considered one of the first innovations of the airplane. Then, in 1909, the worst crash happened as Orville Wright was flying a plane. Orville survived, but his passenger, Signal Corps Lieutenant Thomas Selfridge, did not. Surprisingly, after the incident, the U. S. Government bought its first plane from the Wright Brothers for \$25, 000,

plus an additional \$5, 000 because it surpassed 40mph. From this the U. S. Army had the first armed aircrafts designed for them in which the Wright Brothers taught their pilots on how to operate them. These aircrafts were armed with machine guns. Their invention was followed by several competing designs, however, and Orville was unsuccessful in his attempts to protect the airplane patent. His principle adversary was Glenn Curtiss, who argued that Dr. Langley had invented a practical airplane prior to the Wrights, but had been unable to fly it successfully. Curtiss also built a safer and more technologically advanced airplane and quickly adapted to improved and more modern designs. Unable to compete in the creation of airplanes, the Wright Brothers turned their attention to building better engines, beginning with the Whirlwind, which was introduced roughly in 1925. Ironically, Curtiss and Wright eventually merged and built successful engines and aircrafts throughout World War 2. After the war, the company stopped building airplanes and exclusively built engines. By 1918 the airplane was no longer simply an invention; it now belonged to the world.

The years between The Great War and World War II saw great improvements to the previous versions of the airplane. Airplanes evolved from low-powered biplanes made of wood to sleek, more powerful airplanes crafted from aluminum thanks to the contributions made by Hugo Junkers during the World War I period and its adoption by American designer William Bushnell Stout and Soviet designer Andrei Tupolev. Hugo Junkers was a German engineer who designed the Junkers J 1, the first aircraft to be made entirely of a full-metal skin. William Bushnell Stout was an American engineer who developed the first thick-winged monoplane, which overall improved the

efficiency of aircrafts. Andrei Tupolev was a pioneering Soviet aircraft designer, who designed more than 100 types of aircraft. In the years between the two World Wars, experienced fighter pilots wanted to show off their flying abilities. Many became “ barnstormers,” flying into rural areas to show off their newly acquired skills, even taking paying customers for rides. With all the excitement from airplane enthusiasts, air shows sprang up around the country with events including: air races, acrobatic stunts, and feats of air superiority. The air races drove engine and airframe development; as the winners were getting cash prizes, pilots had the incentive of going faster, which eventually led a series of faster and sleeker monoplane designs. Amelia Earhart was perhaps the most famous of these “ barnstormers,” as well as being the first female pilot to achieve records for crossing the Atlantic and Pacific Oceans.

World War II saw a dramatic increase in the pace of aircraft development and production. Countries saw how efficient the airplane was when it was first introduced to warfare in World War I, and wanted to replicate the usage in the Second World War. All countries involved in the war stepped up development and production of aircraft and flight based weapon delivery systems, such as the first long range bomber. In addition, air combat tactics and doctrines changed; large scale strategic bombing campaigns were launched, fighter escorts introduced and the more flexible aircraft and weapons allowed precise attacks on small targets with dive bombers, fighter-bombers, and ground-attack aircraft. New technologies like radar also allowed more coordinated and controlled deployment of air defense.

The period after World War II saw a dramatic increase in commercial aviation, partly due to innovations we were able to achieve from ex-military aircraft and transform them into commercial jetliners. This pathway to commercial aviation was accelerated by the heavy and super-heavy airframes of World War II bombers (the B-29 and Lancaster) that were transformed into aircrafts capable of carrying people and cargo. The Jet Age, as it was known, was a period in the 1950s which brought out the first commercial airliners powered by turbine engines. It was the age where airliners developed faster, more efficient airplanes that could travel a much farther distance. The first commercial jet to fly was the British D. H Comet. As the 1950s came into play, the British Airline BOAC introduced the first Comet into commercial flight, but was very unsuccessful in many of its first flights. The shape of the windows led to cracks due to metal fatigue, and this metal fatigue led to catastrophic problems to the fuselage. As repairs were done to the airplane, other competitors sprang up and designed their own commercial jetliners; the Boeing 707 introduced new levels of comfort, safety and passenger expectations, and became the first successful airliner in service. Another breakthrough began with Chuck Yeager in 1947, when his rocket-powered Bell-11 broke the sound barrier. For years to come, this was the record many pilots wanted to exceed, and many did as the years progressed.

During the Cold War, the development of the atomic bomb greatly increased the necessity of military bombers to carry out the bombing missions. At first, supersonic interceptor aircraft were created as countermeasures for the bombers, and would soon cease development due to the shift to guided

surface-to-air missiles. The introduction of the intercontinental ballistic missiles was made possible by the launch of Sputnik 1 by the Soviet Union, which drastically started the Space Race between the United States and the Soviet Union. The Space Race between the two nations focused on attaining firsts in space exploration, which were seen as a necessity for “ national security and symbolic of technological and ideological superiority.”

The Space Race was the conflict between the United States and the Soviet Union in a period known as the Cold War. Both nations wanted to achieve technological and orbital superiority while taking over outer space. The introduction of jet planes and new technology that made the “ Jet Age” possible contributed to the Soviet launch of Sputnik 1. An artificial satellite launched in 1957. As this was happening, John F. Kennedy proposed that the United States would beat the Soviet Union in having the first man on the moon. In his famous “ we choose the Moon” speech, he concluded with “ I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the Earth.” His justification for the Moon Race was both that it was vital to national security and that it would focus the nation’s energies in other scientific and social fields. 1 With that said, the Space race had begun. The launch of Sputnik 1 also convinced the United States that Soviet Russia had the capability and the technology of launching an intercontinental missile. All of this was made possible because the Soviet Union and the US captured German advanced German rocket technology and personnel. You might be asking, how has the airplane contributed to the technology that took us to the moon? Many innovations that contributed to the first modern jet planes

assisted us in the development of stronger engines that eventually led us to the moon. On the other hand, these modern jets also contributed to the creation of nuclear weapons and intercontinental missiles. In turn, modern jets were created to intercept these missiles from reaching their target, and these jets were developed so that they can easily out-maneuver the missiles and destroy them.

Cultural Perspective

The airplane had meaning for everyone—from popular enthusiasm for the pilots and their aerial exhibitions, to the commercial and military potential of aviation, to the broad cultural implications of flight, to the artistic expression it inspired. The Wright Brothers not only solved a long-studied technical problem, but also helped create an entirely new world. Speculation on what that world would be like began with our first tentative leaps into the air. As the first airplane became public and as the world embraced aviation, it did not take long for aviation to coincide with popular culture. The invention of the airplane blended with several of the 20th century artistic and intellectual movements. Flight was perhaps the decisive signal that a new, modern age has begun. Before The Great War, both film and aviation were still in their infancy, but already it was apparent that each had powerful potential to influence the world. The film industry displayed various perspectives of the new innovation: some had intentions of promoting the new technology, others used the airplane as a setting to carry their story in a more exciting manner, while others exposed the flaws and the possible destruction and as a “terrifying instrument of war.” Nevertheless, the airplane was a successful innovation that influenced culture for many years to come.

Volumes could be written about the various ways the airplane has impacted our culture and ways of life, our society and economy, and most of it for the better. Many of the products and services we take for granted in our daily lives would be impossible to transport without the use of airplanes. Sending a Christmas present around the world and expecting it to arrive on Christmas Eve would take forever without the use of airplanes. They provide us with the comfort and security of traveling at high speeds from one country to another. " People are now introduced to new cultures; they can travel a lot further and a lot faster. You can go and have breakfast in California and supper in Paris, and you get introduced to new type of cultures and new types of art, and it really changes our perspective on the way the world works." (Interview with Mr. Brian Hatchet, Executive Director Montgomery County Historical Society Old Courthouse Museum.) With the use of airplanes, travel has been renovated into a more efficient way to get from place to place. As mentioned in the quote, we can now travel from country to country much faster than ever before and are able to learn new cultures through our travels. The airplane has brought us closer together to people, friends, and family far away. It has also changed what we see as boundaries in the sense that we can travel to far away places in a short time.

On the contrary, because many of us are now able to travel to places we have never been to before, we are beginning to invade the privacy of other nations. We invade quaint little places and spoil their natural beauty by having new hotels built, restaurants and nightclubs opening, by imposing our morals and dress sense (or lack of it) upon the locals. With the consequences we face from traveling to other countries, we tend to engulf ourselves in that

conflict, which, in turn, causes a global conflict between the two nations. The airplane, in effect, has made the world a more standardized and uniform place because many people are traveling to other countries, inflicting them with our personal values and beliefs at a much faster rate than it would have been made possible by boat. In the old days, air travel was a luxury and the locals saw those first passengers as curiosities; nowadays, the invading hordes have changed the social landscape forever.

The invention of the airplane has opened our minds and increased our understanding of the world. We have the ability to learn other cultures and relate to those people of that culture in a more meaningful way. We are able to learn other languages that give the learner the ability to step inside the mind and context of that other culture. Without the ability to communicate and understand a culture on its own terms, true access to that culture is barred. Why is this important? In a world where nations and people are ever more dependent upon on another to supply goods and services, solve political disputes, and ensure international security, understanding other cultures is dominant. As globalization and mobility and communications are bringing the world ever closer together, ever more urgent is the need for global citizens to be proficient in other languages.

Changes in Warfare

There is a dark side to the invention of the airplane: warfare. It is how the airplane influenced warfare and how it has changed the way we fight our battles. At first, the airplane was merely used for re-con purposes, and, as the aircraft evolved, so did the military strategies used. Airplanes were now

designed for air-to-air combat as nations were becoming more technologically advanced. With this, the airplane had made its first appearance in war, when the British first introduced “ Furious.” They had the capability to safely bomb targets from the sky and offer intelligence to the ground forces of their upcoming targets. The airplane allows us to “ hit-and-run” without harming any of our allies or troops. In this process, an aircraft bombs the target and simply flies away without putting our own troops in danger. Today, airplanes have become an integral part of warfare. It led to the creation of “ dogfights,” which is just an aeronautical term for air-to-air combat. One of the most influential warplanes was the bomber, the Enola Gay. The Enola Gay dropped the bomb, which devastated the Japanese forces during World War II, and led to a quick ending to the war in the East. A nation without an air force simply cannot win a battle with just ground units and anti-air cannons. Planes are fast enough now that anti-air cannons cannot shoot them down anymore. And radar? Radar simply detects that air forces are approaching; it will not do you any good if you cannot react fast enough with your own nations’ air force (if you have one that is). The airplane has revolutionized the way warfare is fought.

Globalization

The Merriam-Webster Dictionary defines globalization as “...the development of an increasingly integrated global economy marked especially by free trade, free flow of capital, and the tapping of cheaper foreign labor markets.” The most obvious way of affecting globalization is the emission of environmentally unfriendly gases, including CO₂ (carbon dioxide) and NO_x (nitrogen oxide). Despite emission reducing technology and more fuel-

efficient and less polluting turbofan engines, the rapid growth of air travel has increased the amount of greenhouse gases emitted into the atmosphere. 350 million pounds of toxic gases were emitted into the atmosphere in 1993 by airplanes alone. If that much was emitted in 1993, what is being done to the environment in the modern era? As countries develop, deforestation is becoming more common to build more nuclear plants and clear land for future airports. In 2009 there was a 73% decline in the amount of forests. Toxic waste will be stored in landfills, and eventually seep into the ground. This can lead to acid rain, which further pollutes the marine and forest ecosystems.