Zeppelin's Airship
and public enthusiasm for flight

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The breakfast table. Echterdingen, Germany, August 1908

As if at play, you forced the way,  
progress itself should progress!  
A way whose ultimate goal, today  
we can't even venture to guess.  
How to achieve the highest perfection,  
that is what you've taught us.  
Heavenward into the ether  
your ship has proudly brought us  
and upwards to the stars  
and upwards to the stars.  

For Zeppelin, Max Reger

It sounded like thunder from afar. It came closer, one could tell, for the sound grew steadily louder. It was not thunder, though, for it did not pause, but continued in a steady, deep, low rumble. “Was ist das, Papa?” a child asked from across the table. “Schauen wir mal,” came the reply. As father and child stepped out of the cottage home at the edge of the town of Echterdingen, Germany, they saw what might be a giant bird creeping closer in the distant sky. Or perhaps it was a balloon as seen at carnivals and that were all the craze in France. The owners of those giant round bags of air often allowed passengers aboard, for a price, offering breathtaking views of the surrounding area. As the object drew closer the father and child recognized it as a balloon, but this balloon was different. It was elongated and floating horizontally, the rounded cone of a nose guiding the sleek, tubular body behind it. As the enormous shape enveloped the sky, and as the thunderous sound drowned out the noise of normal farm life, the father finally answered the young child's question with two simple words.

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2 “What is that, Papa?”
3 “Let's go see.”
echoed throughout the land, “Zeppelin kommt!”4

The monstrous shape soon floating above them was the fourth creation of Count Ferdinand Adolf August Heinrich von Zeppelin. The previous three airships had gone virtually unnoticed by the small town of Echterdingen. But this was a historic flight. In an effort to sell his idea to the German army, Graf von Zeppelin5 was taking this fourth airship, the LZ4 (Luftschiffe Zeppelin IV), on a record-breaking flight around southern Germany. A trip spanning over 700 kilometers and projected to take 24 hours, this expedition would be the qualifying test to prove to the German army that the Zeppelin airship was a viable form of steerable, sustained human flight, and ready for the Imperial army.6

**History of aviation from the beginning**

Proving to be more than just a fulfillment of an army qualification, the journey of the LZ4 embraced the hearts and minds of the German people. From Kaiser Wilhelm II to the residents of the small town of Echterdingen, the Zeppelin airship became a uniting symbol, an icon that embodied German patriotism, and helped imbue the German people with a fascination with

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5 Graf is the German equivalent of the social class 'count.' The term 'Graf von Zeppelin' should not be confused with the term 'Graf Zeppelin,' the former being the person, and the later being two zeppelin airships named after the man, the LZ127 (1928) and LZ130 (1938). This paper will most usually be referring to the person when using 'Graf Zeppelin,' since the time frame of the paper is limited to before 1914.

6 Duggan, 31.
flight. What was it about this singular occurrence that changed the perspective of the German populace? While relating the events of the Luftschiffe Zeppelin IV at Echterdingen, Germany, it will be shown how Count Zeppelin and his airship were unable to receive public and government approval before this event, and how the event reversed the government and public rejection, ultimately leading to Zeppelin and his dirigible becoming a national icon. In addition, this essay will show how German patriotism played a role in bringing the “Zeppelin craze” to life, and in return increased that patriotism.

France, Germany and England were the principal European participants in the evolution of human flight. Each contributed to man's search for human flight, and in so doing elevated the patriotism of the citizens of their country. As Peter Fritzsche has stated, “far from diluting nationalist passions, once thought to be ancient and mean, industrial prosperity and rational purpose gave them shape and sturdiness. Aviation, perhaps better than any other field of technology, clarifies the links between national dreams and modernist visions.”

For the Germans, Count Zeppelin and his airships became a figure of statehood, an example to emulate, and a symbol of the caliber of German technology. Zeppelin was so great, thought the German people, that not only could he defy the laws of gravity with his airship, he even forced “progress” to progress.

The history of aviation extends beyond the written records available to scholars. Yet, a brief overview of some of aviation's recorded history points to perhaps why Count Zeppelin chose a form of dirigible, a lighter-than-air craft, as the creative output for his passion for flight. There have always been dreamers who envision humans flying, and the dream was not limited to

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the Western world. Many cultures, in some way, have expressed the desire for human flight. This desire is seen by their worshiping gods with power over the wind and sky, as did the ancient Egyptians; by believing in angels with wings, as does much of the Christian world; or by drawings and stories of humans in flight. Chinese folklore tells of the emperor Shun who, around 2230 B.C., escaped from atop a burning granary tower using two wide reed hats as parachutes. The story of Daedalus and Icarus tell of a father and son escaping from Crete using a pair of waxen wings. Leonardo da Vinci produced many detailed sketches of flying apparatuses in the 15th Century. Although nothing practical for manned flight came from this period, much about aerodynamics and the air was learned, and “by the Middle Ages, humanity already had a significant grasp on working the air via sails, kites, windmills, helicopter toys, flue turbines in kitchens, and rockets.” Each of these advancements improved the collective knowledge about physical bodies in the air, leading human kind slowly to flight.

Not until the mid 18th century, did the dream of human flight become a reality. While not quite the dream of flying with wings like a bird, human flight was finally obtained by use of a hot-air balloon. As the result of a failed business attempt, Joseph Montgolfier, sat in front of a fire at the University of Avignon, in November of 1782. Watching the ashes fly up the flue, carried by the hot air from the fire, Joseph pondered if the same principle could be applied to the scene of the futile siege by Spanish forces against British Gibraltar that hung as a painting on the wall. Could a vessel be made to harness the rising power of heated air to carry soldiers over the fortress walls? Joseph quickly tested his idea with a small cube-like balloon made from paper

8 Richard Hallion, Taking flight: inventing the aerial age from antiquity through the First World War (New York: Oxford University Press, 2003), xvi, 3-6. Hallion provides over 40 pages devoted to the early history of human flight. Many examples are given of cultures who had notable figures involved with the idea of flying. Also included within these pages are a few paragraphs that look at why Hallion believes Europe was the place where human flight most likely would develop.
stretched over a light, wooden frame. After a successful test flight, Joseph involved his brother, Etienne, in his idea to create the first known vessel to carry humans into the air. Two months after the Montgolfier brothers tested a 35 foot diameter rounded balloon, the most popular public scientist at the time, J. A. C. Charles let fly his own lighter-than-air craft, this one filled with the recently discovered hydrogen.\(^9\)

In the ensuing contest to create the first balloon to carry a human being beyond the bounds of earth and gravity, Charles and the Montgolfier brothers tested their experiments in and around Paris to the delight of the local citizenry and for the speculation of many notable figures.

In attendance of many of the Montgolfier and Charles flights were diplomats such as Benjamin Franklin\(^10\) and John Quincy Adams from America, William Pitt and William Wilberforce from England, and King Louis XVI and Queen Marie Antoinette of France. On November 21, 1783, a year and seventeen days following Joseph Montgolfier's initial cube-balloon test, Jean François Pilatre de Rozier, a popular physics and chemistry lecturer, and François Laurent, Marquis d'Arlandes, became the first humans to fly completely untethered from the earth in a Montgolfier balloon. The next month, eleven days later, J. A. C. Charles followed as copilot of his own balloon. The next month, eleven days later, J. A. C. Charles followed as copilot of his own

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\(^9\) Hallion, 50-52. Humorously, this first balloon, the Globe, after bursting due to the expanding gas at high altitudes, landed outside Ecouen, near Gonesse. The novelty of something falling from the sky was so great, that the local villagers thought the balloon to be an “ungodly work,” and lost no time in attacking it with anything available. “The Mercure de France, [a Parisian newspaper], sarcastically described the struggle with the hissing deflating balloon: 'The creature, shaking and bounding, dodged the first blows. Finally, however, it received a mortal wound, and collapsed with a long sigh. Then a shout of victory arose, and a new valor reanimated the victors. The bravest, like another Don Quixote, approached the dying beast, and with trembling hand plunged his knife into its breast” 51.

\(^10\) At the flight of one of Charles' test balloons, the Globe, an observer pessimistically asked of a nearby Benjamin Franklin, “Of what possible use is it?” To which Franklin frankly replied “What is the use of a newborn babe?” Hallion, 51.
hydrogen filled balloon.¹¹

Throughout the 19th Century, ballooning moved from novelty to science, but simply rising above the earth was not enough for many seekers of flight, for once in the air, man was still subject to the winds and had no control of his destination. The balloonist had power over vertical motion, he could choose where to go up from, but he could not choose where to go once airborne. The quest for sustainable, steerable flight was still at large, and two branches of flight experimentation seemed most promising at the turn of the 20th Century: find a way to propel and steer a balloon, or mimic the ability of birds to glide on a pair of wings with the ability to steer the craft in any direction.

Of the differences between the two types of air craft that would evolve from man's search for flight, P. B. Lichtfield, president of Goodyear tire and rubber, and creator of the famous Goodyear blimp, explained

that the *airplane* remains aloft through the aero-dynamic forces created by the forward motion created by its motors, plus the lifting effect given by its tilting wings. Being heavier than air the airplane must remain at high speeds and at once descends if its motors stop.

The *airship* is actually lighter than the air in which it floats, its motors being used chiefly to carry it forward, and its rudders and control surfaces primarily to give it direction and stability. If its motors fail, the lighter-than-air craft still remains in the air, and will be brought down only by the gradual release of the lifting gas which it contains.¹²

At the time Zeppelin set about to create his great airships in the mid 1890's, the *airplane* was still an unattainable quest. The *airship*, infinitely less technical and simpler to implement, certainly

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¹¹ Hallion, 47-57.
had a factor to play in which branch of aviation vehicle Zeppelin chose to build. The only problem now was to build one that worked.

In a field of cabbage. Echterdingen, Germany, August 1908

Whenever the airship flew over a village, or whenever she flew over a lonely field on which some peasants were working, a tremendous shout of joy rose up on the air towards Count Zeppelin's miracle ship which, in the imagination of all those who saw her, suggested some supernatural creature.

- Thüringer Zeitung

As father and child followed under the shadow of the floating giant, a multitude of people joined them. It seemed everyone from the town had come out to see the Zeppelin. Not just the town of Echterdingen, but people from all over Germany where there to see the airship. Spectators gazed in astonishment while animals yelped in terror and confusion, as the immense hovering mass of fabric and metal began to descend. Engine problems that plagued the airship since the beginning of its journey the day before, brought the monstrous, airborne behemoth towards the earth. As the airship touched down, the first time for this machine to touch dry earth, the crowd swelled to well over a thousand souls wishing to catch a glimpse, and perhaps a touch, of the largest human creation to fly in the air. At 45 ft in diameter and nearly 450 feet long, this craft was clearly something not to be missed.

Graf von Zeppelin's previous ships had sparked only minor curiosity from the local and

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13 Hedin, 1.
14 Boston Globe “Tragic End for Monarch of Air”, 1. Zeppelin usually launched and landed his airships from his work shed which was a structure floating on Lake Constance. Picture from the period show earlier ships hovering close over dry ground, but this was perhaps the first time the ship actually touched the earth.
15 Duggan, 31.
national public. As this fourth airship made its way across southern Germany in early August 1908, a national fervor began to build, centered on the stoic hero of the Franco-Prussian war and his crazy, gravity defying leviathan. Major newspapers from both sides of the Atlantic covered the progress of Zeppelin's airship as it traveled from Friedrichshafen, to Mainz, to Oppenheim, and finally as it passed over Echterdingen.

The sight of the Zeppelin received the same reaction from the citizens of each town over which it flew. “The Streets were filled up, people clambered onto rooftops,” wrote the *Scwäbisher Merkur*, Stuttgart's largest newspaper. “Above the hilltops, just to the right of the Bismark Tower, a silver, glimmering, wondrous entity appear[ed]. At first it seem[ed] to stand still, but then pushe[d] itself slowly but steadily against the fresh morning breeze,” continued the paper. The excitement and awe inspired by the giant dirigible was something that they never would forget. “One [felt] its power;” exclaimed the article, “we [were] overcome by a nervous trembling as we follow[ed] the flight of the ship in the air. As only with the greatest artistic experiences, we [felt] ourselves uplifted. Some people rejoice[d], others [wept].” In other cities, reports patriotically proclaimed that crowds spontaneously broke out in singing of the national anthem, “*Deutschland, Deutschland über alles.*”16 Such was the fervor surrounding the landing at Echterdingen, that as the father and child reached the cabbage field where the airship had landed, an estimated forty thousand people

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had gathered to catch a glimpse of the monstrous balloon.\textsuperscript{17}

**Zeppelin's path to aviation**

It is ironic that Zeppelin even set out to create a massive, rigid airship. Before Zeppelin began his quest to build a flying leviathan, his main desire was to be a high-ranking, military official. Zeppelin had followed the path of many German aristocrats and served in his home kingdom's army. For hundreds of years Germany consisted of separate principalities and kingdoms. When Prussia began to unite these separate kingdoms during the mid 1800's, there was obviously some resentment felt at the individuality and power that was lost. Zeppelin was quite patriotic about a unified Germany, but, like many from his southern kingdom of Württemberg, was dissatisfied with the overbearing Prussian influence. The Count sought a career with the Württemberg military, and after unification in 1871, moved upward and into the ranks of the Imperial army. While serving as Württemberg's ambassador to Berlin, Zeppelin estranged several Prussian staff members, and participated in a secret petition to the German emperor which called for a parallel military cabinet equal to that of Prussia, and thereby “inhibit any further undesirable Prussification of the valued Swabian army.”\textsuperscript{18} When the participants of the petition were exposed, the demise of Zeppelin's career was imminent.

At the annual autumn military maneuvers, traditional war games practiced by the military that had the unfortunate side purpose of weeding out incompetent or unwanted officers, the Count's previous actions came back to haunt him. He received a bad review for his command of a cavalry division and as a result, was forced into early retirement at the age of fifty-two. With

\textsuperscript{17} *New York Times*, “ Explosion Destroys Zeppelin's Airship,” August 6, 1908, 1.
his military career no longer a reality, Zeppelin needed something to fill the void. More importantly for Zeppelin's ego, as Henry Cord Meyer points out, “unless he found some alternative and effective way of self-expression, he was doomed to enforced retirement and social-psychological deterioration on his Swabian estate—with occasional sops of provincial preferment.”

Completely uncharacteristic for Zeppelin to give up and retire, he focused his efforts on something that had occupied his thoughts since his early military career: human flight.

Zeppelin had been an avid supporter of aircraft for military purposes since his early military days. His first experience with lighter-than-air craft probably came as a young army officer from the German state of Württemberg. On a trip to the United States as a neutral observer to the Civil War, Zeppelin received permission from President Abraham Lincoln to participate with Union troops in launching a tethered hot-air observation balloon. Zeppelin's earliest recorded thoughts on lighter-than-air craft come in 1874, in response to an address given by the German postmaster general on the need for the mail system to “take advantage of new technologies to benefit humanity.”

The postmaster's address cited examples from the Franco-Prussian war, in which the citizens of Paris, while under siege in 1870, carried out over sixty balloon maneuvers carrying passengers and mail to safety. Concerned by the progress the French were making with lighter-than-air craft, Zeppelin wrote in 1887 to the king of Württemberg, promoting the value of a machine that could “give Germany the advantage of flying militarily and commercially.”

In 1890, no longer able to push for a military craft from within the army, Zeppelin decided to produce an airborne weapon with his own finances. He also sought the financial

19 Meyer, 30.
21 de Syon, 16.
support of the German government and a technical stamp of approval from the leading engineering group in Germany, the Association of German Engineers (Verein der Deutschen Ingenieur, VDI). Unfortunately, the count received lukewarm support from the engineering society and nothing from the government. Eager to begin construction and unable to find support from the German government or military, Zeppelin overcame this first obstacle by relying on small grants from the king of Württemberg and moneys obtained by mortgaging his wife's estate. Another issue was where to build such a large vessel. In order to avoid excessive building fees, and to ensure a place with little obstruction during ascents and descents of the fragile behemoth, the king of Württemberg allowed Zeppelin to build a large, floating shed on Lake Constance near Friedrichshafen. Zeppelin did receive necessary and major support, though, from industrialist and aluminum production manufacturer Carl Berg. Working together with Berg, Zeppelin established a company to support the building of his first airship, the Company for the Promotion of Airship Flight, in Stuttgart in 1898.22

The first three airships were built and tested, with varying results. The test flight for the first airship was more problematic than hoped for, and laid out the basic issues that Zeppelin would need to overcome before his vehicles would be of worth to the German government. Described in the Scientific News and Notes section of the American Science journal of 1900, the first airship flight was fraught with broken machinery and leaky envelopes. “Experts who either shared in or watched the recent experiment,” wrote the journal, “declared that improvements in the steering apparatus were necessary.” The article listed among other problems that "the screw blades [or propellers] did not respond properly, ... the air pressure motors failed, ... the steering rods ... became bent, ... the method of transmitting power to the screws will need great

22 Duggan, 24.
improvement to enable the airship to contend against even a light wind.” Perhaps the greatest
defect to overcome, the article stated, “was the continual escape of gas, necessitating constant
filling of the receptacle up to the moment of starting.” Succeeding ships with continually
improved construction led to more successful test flights.

Count Zeppelin’s patriotism for Germany throughout this learning period was evident.
He hoped that the airship would prove valuable to the German army, and that his success would
restore the honor lost with the termination of his military career. During experimentation of the
first three ships, Zeppelin was not interested in public opinion. A comment to a news reporter
seeking a story from the “aerial dreamer down at the lake” showed both his unconcern for public
approval and his patriotic intentions. When asked for information, Zeppelin brusquely replied, “I
am not a circus rider performing for the public; I am completing a serious task in service of the
Vaterland.” As his airships began to perform more successfully, Zeppelin received positive
reviews from the press and began renewed contact with official circles. Continually appearing in
his memorandums to officials was his warning that “failure to heed his appeals [to build an aerial
military force] presaged a disaster for the Vaterland; [and that] the empire must press ahead to
acquire the best possible airship advantage over France.” In hopeful prophetic prose, Zeppelin
stated,

in days to come my airships are destined to erase the advantages or
disadvantages of the geographical location of nations. For
Germany, as the power most capable of supplying proficient crews,
they will assure her world military domination, as indeed they will
cause a complete revolution in commerce and transportation.

24 Meyer, 33.
25 Ibid., 34.
26 Ibid.
Zeppelin's prophesy would prove to be more appropriate to the United States use of airplanes in World War II, rather than his own airships, but nevertheless showed his devotion to the German nation. Reflecting on Zeppelin's traumatic military experience and his later experiments with airships, Henry Cord Meyer explained Zeppelin's profound devotion to finding a solution to the problem of flight.

Only such a profound shock could produce the kind of motivation for action that would move him to risk his personal reputation and family fortune in what was so easily perceived as a ridiculous enterprise, especially for a German officer! This was not the situation of a retired gentleman turning contentedly to tinkering and inventing as a hitherto sometime hobby. Quite the contrary! Here was a man driven by a profound psychological need to compensate for great and unjust dishonor to his person and family name. Only such motivation explains that deep-seated urge and single-minded devotion to an enterprise to satisfy honor and rehabilitate his career by circumventing his enemies and detractors in devising a new and spectacular weapon of war for his Vaterland.27

The Storm. Echterdingen, Germany, August 1908

What started as a record-setting journey, though, would soon turn catastrophic, the result of which would catapult the Zeppelin airship and its creator into the realm of folk hero and national icon. What began as a small town gathering grew to a crowd of truly overwhelming size. To accommodate the growing crowds flowing into Echterdingen, the local railways ran special railway cars. To better keep order among the swelling crowd, a large group of military from the surrounding cities patrolled the field. Count Zeppelin, soon after the ship landed, left for a nearby inn to rest from the stressful, overnight journey he had just completed, while

27 Meyer, 48.
engineers went about the task of seeking repairs for the damaged engines. At approximately 2:30 in the afternoon, after a rise in the wind, some of the crowd, expecting a storm, advised the military to anchor the ship more securely, but the advice went unheeded. Thirty minutes later, the ship was completely destroyed.

As storm winds increased, the ship rose up into the air with men frantically clinging to the ropes, only to let go at the last possible moment. With several crew still aboard, the airship crashed into a nearby grove of trees and violently smashed to the earth. Jolted by the quick decent and sudden stop, the engines exploded causing the whole ship's fabric to catch fire and disintegrate in flames.\(^\text{28}\) One of the crew, presumably Karl Schwarz, described the event as though he were thrust into the fiery gates of Hell.

Fifteen thousand cubic meters of hydrogen gas were burning, and the ballonettes were bursting with our reports. The rigs, supports and struts of the metal frame were glowing, bending and breaking; the envelope was being torn apart in blazing shreds; and soon flames were eating through to the gasoline tanks. The heat was becoming unbearable; it was Hell itself in which I was burning alive.\(^\text{29}\)

As the crew desperately tried to release the hydrogen, a great explosion rocked the ship and sent Schwarz and the remaining crew flying to the ground. Schwarz, along with the other crewmembers, managed to extricate themselves from the wreckage and stumble to safety.\(^\text{30}\)

\(^{29}\) Hedin, 44.
\(^{30}\) Hedin, 44.
Only a burning jumble of cloth and twisted metal remained of the once majestic airship.

**Why was Zeppelin unsuccessful before Echterdingen?**

Public approval for Zeppelin's airship was certainly on the rise as his LZ4 flew across southern Germany towards the fateful landing at Echterdingen. However, such support did not exist for the Count during the previous decade of experimentation. Why was the Count so unsuccessful at garnering public interest and government funds in the early stages of his ship building? Guillaume de Syon proposes four reasons why Zeppelin received little public and government support.

The first barrier for Zeppelin was that he was his reputation as a military career officer, and not for any sort of technical or aviation background. He was, in effect, out of his league to be experimenting with aeronautics. In an attempt to bolster his credibility, Zeppelin sought the approval and support of his airship plans from the Association of German Engineers (VDI). While they respected him for his military background, the VDI gave the Count's airship idea only cautious support, rather than the enthusiastic endorsement that his idea would really fly. The report recommending Zeppelin's ideas focused mainly on the merits of his proposal, and “steered away from any criticism of his technical qualifications.” In a definite patriotic tone, the report concluded that support of such ideas was necessary so that Germany might not fall behind in the race to conquer the air. “France, North America, and England have overtaken us with considerable resources,” lamented the report. “Should not German technology participate too in the solution to this problem?”

A second issue inhibiting Zeppelin's earlier success was the many other aviators

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31 de Syon, 18-19.
petitioning the government with incomplete and experimental aircraft. To the public, he was just another crackpot aviator. Two other contenders in Germany provided the most competition for Zeppelin's bid for government support. Experimenting with non-rigid balloons, Dr. August von Parseval created the cheapest avenue for dirigible construction, but his creations were limited in carrying capacity due to the envelope buckling in the middle if insufficient air pressure were present. A second rival came from fellow military man, Major Hans Gross, who sought to produce a semi-rigid airship that would allow for a larger carrying capacity, yet could still be deflated and carried by troops in the field.32 A 1906 caricature satirizes the state of German unity and aeronautic ability by showing the three contending airship builders astride their respective airships, spears and sword in hand. Each inventor sits ready to face off for an in-air battle observed by the British “John Bull” below and by General von Einem above riding the Prussian eagle. The British character exclaims, “I'm very satisfied with Germany's current airship situation!” Zeppelin, Parseval, and Gross were all contending for a market that did not exist outside the army.33

A third inhibitor, according to Guillaume de Syon, was the conservative view of technology that many had at the turn of the century. In his book War in the Air, British writer H. G. Wells wrote a prophetic portrayal of the future of air warfare that clearly shows the consternation he felt about humanity's evolution to flight. Although seen as science fantasy at the time, Wells' descriptions came eerily close to future reality. “There is no place where a woman and her daughter can hide and be at peace,” wrote Wells. “The war comes through the air, bombs drop in the night. Quiet people go out in the morning and see airfleets passing

32 de Syon, 29.
33 Ibid., 27-29.
overhead – dripping death – dripping death.”34 Further showing public mistrust of technology, de Syon sights the growing “Escapist” movement among the European countries. “The romantic prejudice against the machine defined it as hostile and depersonalizing to the world of feeling,” writes de Syon. Ironically, many who sought to escape to the countryside used products of industrialization, like the train and automobile, to get there.35

Finally, de Syon points to the lack of public enthusiasm for flight at the turn of the century as having a negative impact on Count Zeppelins chances for public support in the early stages of his ship building. Not until after the first successful airplane flight accomplished by the Wright brothers in the United States in 1903, did public enthusiasm begin to rise. Before then it seemed the extent of the achievements with balloons had been reached, and that there was no practical use for them or the heavier-than-air craft which were still in the experimental and development stages. Balloons and airplanes were a novelty item, far too unpractical for the general public.36 An article from the Viennese newspaper, Die Reichswehr on 18 May, 1903, describes a race taken place between a motorcycle and a balloon. The atmosphere was that of a carnival, a real machine pitted in a race against a novelty. Even though the balloon won, it was still uncertain how it would provide practical performance possibilities for the prevalent population.37 While some balloons used were for entertainment purposes, much of the professional attention given to ballooning was of a scientific nature, mainly dealing with meteorological research.38

Even Zeppelin's early public relations efforts did little to garner public interest and

35 de Syon, 24.
36 Ibid., 25.
support. Five years prior to the tragedy at Echterdingen, in a purposeful attempt to raise money for the building of his second air machine, the Count sought help from the Scherl publishing company. In an effort to spread the word and gather funds, mailing lists were drawn up and articles were prepared to solicit the help from Germany's aristocracy. The recipients of the subsequent mass mailing were treated to “confusing technical descriptions” in a “dull and defeatist” tone, despite Scherl's attempt to give them a cheery outlook. The readers were subsequently left to “gather the impression that they were being asked to help an old man who was feeling sorry for himself, not a brilliant inventor who was sacrificing everything for the good of Germany.”

Hope rises from the ashes. Echterdingen and Friedrichshafen, Germany, August 1908

O Zeppelin, O Zeppelin,
Du hast ein kluges Koeppelin,
Du denkt: “Was man in Frankreich sah
Mit der Patrie – dees kenn' mir aa!”
Gottlieb

With his magnificent airship now a pile of burned material and twisted metal, crewmembers sent immediately for the Count. As he gazed upon the sorry scene, he lost all composure, “tears stream[ed] from his eyes as he stood in an attitude of despair before the

39 de Syon, 26.
40 Newspaper clipping, Archive at National Air and Space Museum. Digital scan of original in possession of the author. “O Zeppelin, O Zeppelin, | Smart you've always been, | 'What was seen in France,' though you, | 'with La Patrie – I can do that, too!’” The Patrie was a French airship which flew from Paris to Verdun on November 30, 1907. The ship was forced to make an emergency landing at Souhesmes, due to then mechanic's clothing catching in the engine's gearing and causing it to become disabled. Shortly thereafter a storm arose and ripped the airship from the grasp of 180 men who were attempting to hold it fast as repairs were made. The ship sailed solitary toward the north and was reported seen crossing the English Channel, South Wales, Lloyd's Signal Station at Torr Head, and Ballysallough, County Down, Ireland, after which it continued to sail northwards over the North Atlantic, never to be seen again. See also New York Times, No Title, 6 August 1908, 5.
shattered balloon.”\textsuperscript{41} Nothing was left for the Count to do, but return to the town of Friedrichshafen, the origin of the ill-fated expedition, and give up his airship enterprise or start the long, arduous task to begin anew.

In Friedrichshafen, festivities and celebrations had been planned. The town was gaily decorated with flags and a party atmosphere. Since early in the morning automobiles arrived from every direction, trains brought tens of thousands of people from neighboring cities and towns, and local peasants arrived on foot, all intent on welcoming home the victorious Count and his marvelous airship. “In front of the principal hotel the military band was just on the point of beginning its concert when at 4 o'clock a man rushed excitedly from the office of a local newspaper and affixed a telegram on the blackboard at the entrance to the building.” Crowds of people rushed to read the latest news, expecting to find that the ship had left Echterdingen and would shortly arrive.\textsuperscript{42}

To the dismay of some, and the disbelief of others, they learned that the great leviathan had been caught in a storm and destroyed. Consternation was immediately felt for the Count when it was reported simply that four men had been seriously injured. News quickly spread throughout the crowd and turned the atmosphere, previously so intent on enjoying the “forthcoming jollification,” into one of deep despair and uncertainty. As the crowds began to return home, all thoughts of celebration now dashed, a carriage arrived carrying the Count's daughter. After she entered her father's office and was told of the terrible disaster, the crowds lingering outside the building heard her cry, “That will kill him,” followed by the bitterest of sobbing. Shortly after a second telegram arrived explaining the tragedy in more detail, the

\textsuperscript{41} \textit{Boston Globe}, “Tragic End for Monarch of Air”, 6 August 1908, 2, 
\textsuperscript{42} \textit{L.A. Times}, “Shattered Hopes: Zeppelin's Airship Wrecked In Storm”, 6 August 1908, 4.
crowds of people dispersed for home. \(^{43}\)

With his creation consumed by flames, Count Zeppelin could have chosen to give up his search for mastery of air, and the fever surrounding the Zeppelin craze could have easily died with the ship, yet such was not the case. Like a martyr to a suppressed cause, the destruction of the LZ4 became a rallying point for the Count and the German people. In a show of deep appreciation and encouragement, large amounts of funds were raised to help Zeppelin build another airship. Already by the next day, 375,000 Marks had been raised by various voluntary means. Donations poured in by the thousands from all classes of Germany society. Attributing to the funds were the likes of the Berlin aristocracy, Senator Pooseld of Luebeck, the Eesen Mine Company, the citizens and city council of Cologne, numerous anonymous citizens, and even the Emperor William. \(^{44}\)

So great was the amount of money received from the German people, that Count Zeppelin founded an “institute for the investigation of the problems of air navigation in the interest of German industry, defense and science” to appropriately account for the generously donated funds. The Bank of Stuttgart held the donations, and by September 4, had already credited 500,00 Marks to the Counts name, with another 250,000 Marks subscribed, but not yet paid. \(^{45}\)

The crash at Echterdingen had the distinct affect of unifying Germany at a time when Germany was still struggling with the creation of their nascent nation. “With its impression of success instantly transformed into catastrophe, and its awareness of the Count's lonely work of nearly two decades turned to ashes, the German public released an avalanche of public

\(^{44}\) Chicago Daily, “$500.00 is Given Count Zeppelin: German People Promptly Open Subscription Lists for Construction of New Airship”, 7 August 1908, 6.
compassion and financial consolidation.”

In response to Zeppelin's tragic loss, the Emperor sent a letter of condolence and encouragement. The amount of patriotism displayed by Kaiser William and the Count is striking in their correspondence. “I have heard with the deepest regret,” wrote the Kaiser in a telegraph, “of the destruction of your balloon by a storm, and I wish you to know of my cordial sympathy in your misfortune. All the more since I and all Germany thought we had every reason to believe we could congratulate you on the glorious realization of your splendid epoch making achievement. Nevertheless, what you have accomplished must be recognized as of the highest order, and this must be a comfort to you in this catastrophe.” In a later reply, Count Zeppelin acknowledged the Emperor's well wishes and patriotically proclaimed his intention of continuing the work of building airships. “Your majesty's telegram has turned my grief to joy,” wrote the Count, and “I will gladly devote myself to your wishes and those of the German people and continue the construction of airships.”

Why was Zeppelin successful after Echterdingen?

Zeppelin's success as an airship builder, though still at times beset by financial hardship, was thoroughly established after the event at Echterdingen and the subsequent spontaneous collection of donated funds. Throughout the rest of the Count's life, and well into the 1930's, the Zeppelin airship, and Count Zeppelin himself, achieved national iconic and hero status. What had changed since his first attempts to gather support for the building of his first airship? What conditions had changed in the eight years since the flight of the LZ1 on July 2, 1900, to allow

46 Meyer, 32.
47 Chicago Daily, 7 August 1908, 6.
such incredible public approval and support? Taking the four points discussed earlier for Zeppelin's lack of support, it can be seen that now the conditions were ripe for these factors to be reversed.

Initially, Zeppelin was not recognized as an aviator, his background being in the military, with no technical training to rely upon. Since his first semi-successful flight in 1900, Zeppelin succeeded in flying numerous other craft with varying amounts of success. In late September 1907, the precursor to the famous “Echterdinger Ship”, the LZ3, successfully flew four test flights, logging over eight hours with each flight and reaching up to 200 kilometers in distance. By 1908, Zeppelin was seen as a successful airship builder, and no longer a crazy dreamer down by the lake. In later years, some polls showed that Zeppelin rivaled Bismark and Emperor William II for popularity and admiration.48

After establishing some credentials with his successful flights, Zeppelin was taken more seriously by the government. In 1906 the Kaiser, in an effort to provide support for progress in German aircraft that would compare to their French rivals, created a research, support and publicity agency, the Motor Airship Study Society, which was supported by a number of German businesses. From this society, Zeppelin soon received a 100,000 Mark loan, interest free, for the further study and refinement of his rigid airship.49 Subsequently, Zeppelin's airship began to take on a unique public image that stuck out from the competitors. Fully twice as large as the competing non-rigid airship in development by Parseval, or the semi-rigid designed by Major Gross, or the various types of airship in development by the French or Great Britain, the Zeppelin airship was truly gigantic, and often conjured up a Jules Verne-type realistic fantasy for

48 Meyer, 230; Fritzsche, 17.
49 Duggan, 27.
those who saw it.\textsuperscript{50}

Secondly, by 1908, technology had become more commonplace. As people saw the immense benefits that technology, such as the automobile and train, provided, they grew less resistant to any disruptions they may have caused. Balloons and dirigibles had become quite common, and increasingly used in innovative and interesting ways. In London, the same year that Zeppelin's LZ4 crashed at Echterdingen, Muriel Matters, a suffragette and ballooning enthusiast “flew over the Houses of Parliament dropping hundreds of 'Votes for Women' leaflets.”\textsuperscript{51}

Zeppelin's public standing also improved and many local and national newspapers were reporting on any news or updates regarding his airships. He established a “favourable public image: the genial, stalwart, dignified loner still enduring after 15 years of unrequited endeavor.”\textsuperscript{52} The \textit{Allgemeine Sport-Zeitung} proudly claimed the only weekly newspaper in the German language that carried a standing column dedicated to airship travel and regularly ran pages on the newest happenings in balloon and flying technology.\textsuperscript{53}

In other countries, aviators were accomplishing new feats that caught the public attention. Most notable was the Wright brothers’ flight from Kitty Hawk in 1903. Alberto Santos-Dumont, in 1901, had built numerous airships, and in this year successfully flew a course that led him around the Eiffel Tower in pursuit of the Deutsch prize.\textsuperscript{54} Santos-Dumont was the creator of over 14 ships, his actions doing “much to arouse interest in flying.”\textsuperscript{55}

\textsuperscript{50} de Syon, 27;
\textsuperscript{51} Chemel, 62.
\textsuperscript{52} Duggan, 28-29.
\textsuperscript{53} Image from the back cover of a booklet, NASM.
\textsuperscript{54} Hedin, 7-11.
A year after the LZ4’s crash at Echterdingen, a flight of monstrous proportions took place that both greatly stimulated public interest in flying machines, and caused government concern. Lord Northcliffe of Great Britain, in the fall of 1909, offered £1,000 to the first successful flight across the English Channel. A balloon had made the trip in 1785, but took 3 hours at a height of 6600 ft. By July 1909, three contenders were ready to fly the channel and win the prize. Owing more to his cunning crew and friends than the speed of his monoplane, Louis Blériot, a French aviator and inventor, claimed the prize by waking at 2:30 in the morning to take advantage of the dying winds at that early hour. While his competitors slept on, Blériot had his plane made ready and was prepared to make the historical flight by 4 am.

Pictures of the event moments before take off shows a clearly nervous Blériot, painfully aware of the danger involved in the still budding technology of aviation. At 4:41 am, Blériot’s little single winged airplane lifted off from French soil and crossed the English Channel quicker than his wife and crew who followed in the destroyer Escopette. After 37 minutes at a height of about 250 feet and a speed of about 40 miles per hour, Blériot’s plane, the XI, landed on English soil at 5:18. France and flight enthusiasts the world over were ecstatic. Others, fearing the new age seemingly thrust upon them overnight, lamented the disturbed isolation Britain had once enjoyed. Regardless of previous feelings about the affect of airplanes and airships on civilization, the reality was the world had suddenly changed. The editor of Flight claimed that with this single act, “the whole civilized world was made aware of the fact that the age of aerial
locomotion by mechanical means is no longer of the distant future but is in very deed of this year in which we are living.\textsuperscript{56}

After the turn of the century, popular culture embraced the thought of human flight with enthusiasm. Almost overnight, after the events at Echterdingen, a plethora of Zeppelin memorabilia sprang up. One could buy Zeppelin shaped objects and toys, and products seemingly endorsed by Graf Zeppelin, from cookies and perfume, to beer, spoons, suspenders, cheeses, cleaning agents, postcards, and boot polish, each bearing Zeppelins name or face. Many musicals and popular songs were created that embodied the romantic aspect of flying in air, particularly in airships. “Come take a trip in my airship,” invited one popular American song by Ren Shields and George Evans, “come, take a sail 'mong the stars, ... have a spin around Mars.” In complete fantasy, these songs and musicals portrayed the belief that the whole solar system was now open to everyone.\textsuperscript{57} With such thoughts available to the consumer public, it is no wonder that the German people enthusiastically

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\item \textsuperscript{56} Hallion, 250-257.
\item \textsuperscript{57} Hedin, 16-19, 32-38. For a recording of “Come Take A Trip In My Air-ship” go to http://cylinders.library.ucsb.edu/search.php?queryType=@attr%201=1016&query=billy%20murray&num=1&start=43&sortBy=&sortOrder=ia
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supported the reality of an airship built in their own country. Zeppelins and airships had become commonplace and well liked. Indeed, wrote H. W. S. in *The Burlington Magazine for Connoisseurs* in 1909, “there is scarcely anything more discussed than dirigibles and flying machines. ... everything that pertains to the subject seems interesting.”

**Zeppelin's affect on flight**

> “The rigid airship was the most dramatic technical failure of the first half of the twentieth century.”

Eric Schatzberg

What led Schatzberg, a critical reviewer of Meyer's *Airshipmen, Businessmen, and Politics, 1890-1940*, to make such a derogatory comment about the Zeppelin airship? Was it not a successful unifying tool for the German people? Did it not spread terror to the French and English during WWI? Did it not provide a fairly safe and elegant form of travel to hundreds of passengers? Was it not a viable form of commercial transportation? “Rigid airships attracted support,” contended Schatzberg, “because they could fly transoceanic distances carrying significant payloads years before airplanes became capable of such flights.” The government heavily supported them, he continued, and once the support ceased the rigid airship ceased to be built. Yet the airships greatly affected the course aviation would play in the world at the time, with remnants of those decisions trickling down into our day.

At a time when human flight was seen as futuristic and surreal, Zeppelin's airships provided a practical and realistic application for flight that appealed to the general public. In

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60 Schatzberg, 185.
certain ways the Zeppelin airships gave the Germans something stable and unifying during the tumult and uncertainty of the Weimar period. Because of the public attention and approval of the Zeppelin airships, much of the research and development, prior to the rise of the Nazi party, was devoted to lighter-than-air craft, rather than the development of the airplane, as was seen in other competing nations. Much research has been done on the German's “Sonderweg” of history, and it seems that Germany's history of aviation followed it's own “Sonderweg.”

Hugo Eckener took command of the commercial company started by Zeppelin after the latter's death in 1917. Under his direction, the Zeppelin airship rose in popularity in Germany and throughout the world. The first commercial airline was established by the Zeppelin company, and many laws and international rules were established as a result of the reality of flight that the Zeppelins provided.

Many aviators and lawmakers contemplated the legal ramifications of travel and warfare by air. A 1910 article from American Journal for International Law, recognized the need for laws specific to the emerging commercial opportunities of the airship. “The air-ship has at last been brought to a state of efficiency” wrote the author, “which, while far short of perfection, takes it out of the field of mere experiment and seems to assure its speedy employment in the transportation for hire of passengers and goods. Other uses of less worth to the community or of absolute detriment are equally certain.”61 Similarly, a 1915 article by C. M. Picciotto in the Journal of the Society of Comparative Legislation, examined contemporary events that had transpired since the beginning of World War I, just the previous year, and how, if at all, they might be applied to current rules of International Law. Building on the conventions declared at the Hangue Convention in 1907, Picciotto concluded that all terms should be applicable to

aircraft as they would be to naval craft, including retaining “shipwrecked crew” by neutral countries.

In 1937, the latest of the Zeppelin airships, the Hindenburg, suffered a terrible explosion that killed 37 passengers and crew, effectively putting an end to the era of Zeppelin's airships. What caused this accident to terminate the Zeppelin airship's four decades of triumph? Why did it not produce another phoenix-like rebirth for the Zeppelin company? Three main reasons kept the Zeppelin airships from rising once again from the ashes. First was the considerable cost taken to build the ships. During the 1930's, the Nazi powers slowly faded out the usage of airships in favor of the quicker and cheaper airplane. 62 Airplanes were considerably cheaper and quicker to build, and did not require heavy subsidies from the government, leading the British Aeroplane to exclaim, “Airships breed like elephants and airplanes like rabbits.” 63 Second, the airship was quickly being replaced in all abilities by the much cheaper airplane. Soon the only record held by Zeppelin airships was the ability to remain in the air for days. The airship basically became impracticable. A final reason for the absolute death of the Zeppelin ships was the lack of helium available to Germany. The U.S. had the only natural resource for helium production, and due to laws passed by Congress in 1927, helium was not an international commodity. Owners of the Zeppelin company, and those who approved the governmental subsidies, decided building the giant ships filled with unstable hydrogen to be too risky for further use.

So, what effect did the event at Echterdingen have on public approval and support of the Zeppelin? Clearly, the most pronounced effect of the Echterdingen crash was the spontaneous

62 de Syon, 172-186. The reasons stated are very, very generalized. This topic could obviously create another 30 page essay.
63 Rosendahl, 320.
and overwhelming compassion felt by all of the German people towards the Count. The instant drama created by the sudden destruction caused a feeling of individual involvement to blossom within the German people. They saw the ship as their ship and the destruction as their destruction. It was therefore only natural for them to want to help rebuild what, for them, was something that was theirs. Particularly important to this result of the Echterdingen crash was how the following Zeppelin craze included all classes and political groups. “Many Social Democrats found the new airship an acceptable expression of all-German working-class accomplishment. Other Germans could cheer the industrial workers' contribution to the greater technological glory of the Vaterland.”\textsuperscript{64} Every political, social, and economic group was able to lay claim to the Zeppelin. Just as people throughout time have “assimilated certain human constructions, from train stations to bridges, as symbols of their communities,” in like manner the great Zeppelin airships brought the German people together and with it, created a national identity and symbol.\textsuperscript{65}

\textsuperscript{64} Duggan, 33.
\textsuperscript{65} de Syon, 4.
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**Images**
All images, except the Montgolfier balloon, were found at the Library of Congress's Prints and Photograph Online Catalog through the keyword search 'zeppelin' <http://lcweb2.loc.gov/pp/pphome.html>, 1 May, 2006.


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