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Volume 21 Number 3 *JAAER Spring 2012* Journal of Aviation/Aerospace Education & Research

Article 9

Spring 2012

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Kiernan, K. M. (2012). The Wright Brothers vs. the World: Understanding the Wright Patent Wars. *Journal of Aviation/Aerospace Education & Research, 21*(3). https://doi.org/10.15394/jaaer.2012.1327

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THE WRIGHT BROTHERS VS. THE WORLD: UNDERSTANDING THE WRIGHT PATENT WARS

Kristine M. Kiernan

The Wright brothers' long and expensive legal defense of their patent was understandable, but damaging to both the brothers and the fledgling American aviation industry. Orville and Wilbur Wright believed that, as the inventors of the airplane, they were owed recognition and financial reward. The Wrights' attempts to enforce this through legal means prevented them from making further advances in aeronautics, and frustrated the normal course of invention and improvement promoted by the patent system.

Wright Brothers Background and History

While American aviation and the Wright brothers themselves would have been better off without the legal battles over the Wright's patents, their decision to pursue the lawsuits can be understood by examining the Wrights' background and life history. Orville and Wilbur's father, a bishop in the Church of the United Brethren, was a man of unyielding principle. As a result, Bishop Wright was involved in two bitter and painful power struggles within the church (Crouch, 1989). Certain of his rectitude, Bishop Wright refused to compromise, even when his friends abandoned him. In the end, he prevailed, but it was a pyrrhic victory as he retired from all his duties shortly after winning the battle against his rivals. Orville and Wilbur were careful students of their father's experiences.

When Orville and Wilbur Wright began their research, aeronautics was a small community. Most of the inventors conducting serious research in the field, such as Otto Lilienthal, Octave Chanute, Louis Mouillard, Hiram Maxim, and Samuel Langley, were acquainted with each other. Most had published articles or books detailing their work, or shared their experiences at conferences and meetings (Chanute, 1997). The Wrights diligently studied the work of these men, and were soon making major advances in the science of aeronautics. But the brothers were private and taciturn by nature. While Wilbur did write a few articles and deliver two lectures, most public discussion of their work occurred through Octave Chanute (W. Wright, Wright, Chanute, & McFarland, 2001). Though they had early on expressed willingness to share information freely, the Wrights' personalities did not make them natural communicators.

Guarded About Sharing Information

As the brothers progressed in their research, they became more guarded about sharing information. In response to Chanute's request to write about their experiments in an article in November 1900, Wilbur wrote, "We will gladly give you for your own information anything you wish to know, but for the present would not wish any publication in detail of the methods of operation or construction of the machine" (W. Wright, et al., 2001, p. 45). By the time they had successfully flown their machine, the Wrights' unwillingness to share information had grown. In response to an invitation from Chanute to address the American Association for the Advancement of Science in 1904, Wilbur responded, "(We are) giving no pictures nor

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descriptions of machine or methods at this time" (Crouch, 1989, p. 276).

Part of the reason for this shift in attitude may have been the brothers' relationship with Chanute. While his letters were helpful to the Wrights, Chanute's desire to be associated with the accomplishment of heavier-than-air flight may have made the brothers wary of the motives of outsiders. Once they had learned all they could from their predecessors, the brothers needed no further help. They had both the financial and intellectual resources to address the problems on their own. Chanute, on the other hand, was accustomed to the role of patron and mentor, having served in this capacity for numerous young inventors (Brady, 2000). It is clear from Chanute's correspondence with Louis Mouillard that part of his motivation was to have his name associated with the invention of the airplane (Chanute & Mouillard, 2011). As a result, Chanute sometimes overstated his relationship with the Wrights, and seemed too eager to share in their accomplishments (Crouch, 1989). For their part, the Wrights were determined to preserve their independence. In 1901, Chanute offered to connect the brothers with Andrew Carnegie for the purpose of additional funding, but Wilbur wrote back, "I do not think it would be wise for me to accept help in carrying our present investigations further" (Crouch, 1989, p. 229). In the press release the brothers drafted after their first successful flight, they were at pains to note, "all the experiments have been conducted at our own expense, without assistance from any individual or institution" (O. Wright, 1904, p. 41).

Spurned by the War Department

Once the brothers had achieved their goal, they offered to sell their invention to the US government. But the War Department was still smarting from the money lost on Langley's Aerodrome: investing more money in unproven technology was not politically feasible. Besides, the Department had been deluged with similar unfounded offers. Unless the Wrights could prove what they claimed, the government was not interested. The Wrights, incensed that the Army did not accept their good word and reluctant to reveal their work without the protections of a patent, refused to demonstrate the airplane. Offers from commercial buyers were also refused, unless the buyers agreed to the sale without seeing the aircraft fly, or even seeing pictures of the aircraft (Combs & Caidin, 1979). Understandably, there were few takers.

Lawsuits Instead of Experiments

By 1905, the Wrights had decided that the only way to protect their invention was to hide it away. For the next three years, the brothers did not fly (Combs & Caidin, 1979). Orville and Wilbur Wright were pioneers in aircraft control and propeller design, and they took great joy in tackling difficult engineering problems. "It is much more pleasant to go to Kitty Hawk for experiments than to worry over lawsuits," wrote Wilbur in 1912 (H. A. Johnson, 2001, p. 90). What they might have accomplished if those three years had been spent at Kitty Hawk will never be known. By the time they filed their patent infringement lawsuit against Glenn Curtiss in 1909, the Wrights had already fallen behind (Shulman, 2002). Even though the lawsuits were exhausting and time consuming, keeping the brothers away from the experimentation they loved, the Wrights would not relent. The brothers believed that the airplane, and particularly their system of lateral control, was theirs by right (W. Wright, 1912). Giving in would have been wrong.

Debate continues over whether the Wright's pursuit of patent litigation retarded progress in American aviation in the early 1900's. In the United States, an invention thought to represent an extraordinary leap forward in technology was given broad scope in its patent, and was considered a "pioneering invention" in patent language (Love, 2012). The purpose of such broad patents was to reward the inventor, and to encourage improvements to the initial designs. Normally, the holder of the original patent became the major purchaser of improvement patents (H. Johnson, 2004). However, as the Wrights found no buyers for their aircraft, their ability to enter the market for patent improvements was limited. The lack of demand for such improvements may have slowed the progress of aeronautical invention in the United States (H. Johnson, 2004). In Europe, however, pioneering patents were not given the same broad scope as in the United States. Consequently, the Wright's patents were interpreted more narrowly. Free from much of the costly and time consuming patent litigation that consumed their American rivals, European manufacturers had the resources and freedom to innovate.

Europe Moves Ahead

Europe's progress in aviation was also a product of its military buildup prior to the First World War. Although the United States War Department was relatively slow to realize the potential of the airplane, it was also stymied by a lack of tax revenue. Until income tax was instituted in 1913, the US government could not afford a costly aircraft acquisition program (H. Johnson, 2004). Europe's governments, on the other hand, were eager to purchase aircraft for military purposes. While the Wrights were preoccupied with litigation and the market for aircraft in America was sputtering, European aircraft makers were leaping ahead and selling their products to an eager market.

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Conclusion

In 1910, Wilbur Wright wrote to Octave Chanute, "We honestly think that our work of 1900-1906 has been and will be of value to the world, and that the world owes us something as inventors" (Crouch, 1989, p. 303). Unfortunately, the Wrights' method of calling in the world's debt diminished their capacity to continue innovating, and contributed to the relative lack of progress in American aviation in the 1900s. \rightarrow

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The Wright Brothers vs. the World

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