

## David McCullough on the Wright Brothers

The Pulitzer Prize winner tells the human story behind the invention of the airplane.

*Air & Space Magazine*

*Diane Tedeschi*



**The author (in his office) has written several books on American history, including *1776* and *The Great Bridge*. (William B. McCullough)**

*Author and PBS fixture David McCullough has received many honors, including the Presidential Medal of Freedom, for his books on American history. He spoke to Associate Editor Diane Tedeschi in March about his latest biography, *The Wright Brothers*.*

**Air & Space:** Do you think the Wrights could have accomplished what they did in another country? Or do you think there's something about this country that fosters visionary thinkers such as the Wrights?

**McCullough:** Well, they might have done something in France, but I doubt it. I think it was the atmosphere-and much of the book is about this-the atmosphere of America at that time. In a town like Dayton, which was really in the manufacturing surge-not just big things like railroad cars and cash registers-but everything. Every imaginable thing. It was a day when almost everything was made in America, and said so, and proudly so. And so they were just

part of a whole-I don't want to say culture, that sounds too fancy. They were part of an era when people were making things and new inventions were coming on the market all the time. It was also-it's that period between the turn of the century and World War I. A really protean time in America, and I think it's the time when we take over and succeed in building the Panama Canal where the French had failed. When there wasn't a national debt, there was a national surplus. And Theodore Roosevelt was president-there was a vitality and an energy. The sense that progress wasn't a fiction, it was reality. And the typewriter and the lightbulb and the telephone. All these things coming along one right after another. So it was an exciting period, and the Wrights were right in the thick of it.

**In reading through the brothers' correspondence and diaries, what do you make of their writing style? And what does their way of communicating with each other tell you about them?**

Well, you've asked a very, very pertinent question. Bishop Wright, their father, who was an itinerant minister, and was away much of the time, insisted that his children learn to use the English language properly and effectively as he had to do for his sermons and his essays. He kept a diary and he wanted to encourage them to keep diaries. He also encouraged them to speak the language effectively, as he did brilliantly. So when they were in the swim, as it were, they were always capable of writing superb letters, not only to each other-with an extensive vocabulary and an extensive sense of what makes English really work-but [also] in their business proposals, their explanations of what they had accomplished, the speeches that Wilbur gave in front of engineering groups and scholars and the rest. You read them today, and it's humbling. And again, they never went to college. They never even finished high school.

**What role did their sister Katharine play in their success?**

Their mother had died in 1889. It was the worst blow in the history of the family, and she died of tuberculosis. After that, Katharine became the woman of the house. She was the more sociable of the children. And she kept them in line, and if they didn't want to do something, and she felt they ought to do it, she said, "You got to do that." She was always there to be a help when needed. The most dramatic example was when Orville was putting on a demonstration over at Fort Myers across the river from Washington with a young Army lieutenant [Thomas Selfridge] flying with him [as a passenger]. He crashed, and the young man was killed-he was the first fatality from an airplane. Orville was very nearly killed, and he was terribly injured. And she got word back in Dayton-she was a high school teacher. She taught Greek and Latin. She's the only one in the family who ever went to college; she went to Oberlin. And she loved college-she was superb at it. She was bright as could be-they all were. Extremely bright. Wilbur in my view was a genius. Literally a genius. But the minute Katharine got the word that Orville had had this terrible crash, she called the principal and said, "I'm taking an indefinite leave of absence." And she was on the train that night from Dayton to Washington. She got to Washington, and she went over to the Fort Myers hospital and was

with him for the next five weeks or more-tending to his every need. In some ways she saved his life, but certainly saved his spirit. He was very hampered by pain from that accident for the rest of his life. And she stuck with him.

**In your view, did the brothers have any notable flaws or weaknesses?**

I would like to say yes, because that would make them seem more human I suppose, but, no, they didn't. You might argue that they denied themselves too many of the pleasures of life. They never married. They never had children. They had set themselves on a mission. So they were really so focused on that. But, no, I don't think so. I think in other ways, their conduct was exemplary. They never criticized or talked in a derogatory way about any of their rivals behind their backs. They were always polite-they were perfect gentlemen. They were brave in the extreme, and I think that's a point that cannot be overstressed. It wasn't just that they figured out how to fly and flew. Everytime they went up, and they went up 50 to 100 times in a year, they were risking their lives. They could be killed. And they would never fly together for that reason. Because if one of them got killed, the other was still alive to carry on with the mission.

**Is it true that Orville never spoke to Katharine after she got married?**

That's exactly right. He refused to go to the wedding, refused to have anything to do with her. He had what in the family were called "his peculiar spells": He would get sullen and wouldn't speak much to people and feel that he wasn't being treated fairly and so forth. Well, [not attending Katharine's wedding] came much later in his life. But it was also very unkind to her. But he felt that she had betrayed him, and that they were to be together for life. And they were partners, and they had been. They were very close in age. The difference between Wilbur and Orville in age was four years. So Katharine and Orville were very close—always had been. But when he heard that she was dying—she married a man who was the editor of the Kansas City Star-she was dying in Kansas City, he went down to see her in the last days of her life.

**What do you make of the Wrights protracted legal battles, particularly with Glenn Curtiss, over the patenting of their invention?**

Well, I feel badly for them. I feel sorry because they hated that kind of thing. But they were determined to stick up for the fact that they had been the inventors-that they had first developed the particular aspects of their flying machine as they called it. And they won every case that came up. Now there was a school that felt-and some still do-they would have advanced the development of aviation had they let everybody use whatever they had invented. But as was said at the time, there was much support for their point of view editorially and otherwise. The fact that [Thomas] Edison had patents didn't stall the spread of electric light any more than the fact that [Alexander Graham] Bell had all kinds of patents on his telephone stalled or stymied the use of the telephone. What's so ironic is that many of the people who would write about how this was the wrong thing to have done also had copyrights on the books they wrote.

**Do you think fame was a burden for the Wright brothers in the way that it was for Charles Lindbergh?**

Yes. They didn't like the limelight. They tried to avoid it whenever possible. However, when their hometown wanted to put on a huge celebration, a homecoming, closing the town down to celebrate for two whole days, their feeling was if our town wants to do this, the leaders of the town believe this is called for, who are we to say no? So they went along-perfectly willingly.

Later on, Orville, who was the shyest of all, would make many public appearances out of respect for Wilbur. Wilbur was the big brother-he was the leader, and as I said, Wilbur was a genius. Orville had more of an entrepreneurial instinct and desire than Wilbur ever had. Neither of them were interested in what they were doing because it was going to make a lot of money. There's no question about that. They weren't doing it for the money.

**What do you think people who are trying to solve some of today's most pressing technological issues could learn from the Wright brothers?**

One is to know what you're doing and pursue a background reading that isn't limited in focus. Pay great attention to details. Don't give up. Learn from your mistakes. Learn from your failures. And remember that insoluble problems have proven again and again to be soluble. I think we can all learn from them. I think they're a great lesson in how to approach life. They had a joyous time, and their love of architecture, their love of art, their love of music, their love of literature-these are fully educated people. They are home-schooled as it were, but their home-schooling was right up to and almost equal to any great liberal arts training in any great university.

**You mentioned that money was certainly not the motivation for the Wright brothers, and you spoke of the joy with which they worked. Do you think that joy was most intensely experienced when they were doing the flight testing on the dunes at Kitty Hawk?**

I don't think they were ever happier in their lives than they were living in the extreme hardships of Kitty Hawk. The attacks of mosquitos, the winds, the struggle they had against the elements. But they loved it. One other point that I think is extremely important is the letter that Wilbur wrote to the Smithsonian Institution on May 30, 1899. He wrote a letter saying he was very interested in aviation; he was gliding. And he had some ideas about how he could proceed and to please send him everything they knew on the subject. It was written at Katharine's little plant-topped desk in the parlor [at the family home in Dayton, Ohio] and it's a superb letter [it's reproduced in the book]. The letter was answered by Assistant Secretary of the Smithsonian Richard Rathbun. They sent him everything they had, and recommended the books he should read. So the Smithsonian was his first mentor, and he never forgot that, and felt deep gratitude to the Smithsonian. Now, they had their struggles and differences after Wilbur's death. That's another story, and that, too, is in the book.

**Anything you'd like to add?**

This is a profoundly American story from which we can all learn a great deal. About life and attitude. And the possibilities and the pleasures that come through work.