

I am a son of Dayton, Dayton, Ohio. And no different from any other burg, town or city, we Daytonians have our own local champions, our own demigods of invention and industry that we worship and from whose laurels our pride draws its strength. This evening I have chosen to reintroduce you to two of the Gem City's most celebrated sons, arguably the nation's most memorialized Americans of the twentieth century, Orville and Wilbur Wright. "Reintroduce?" You might ask?

The Wright Brothers; we all know their names, we all know them as the Fathers of Flight, we know of their Dayton roots, we know of the Kitty Hawk connection, we know there is a massive air force base bearing their name. But do we really know them? Do we know who they were as brothers? As individuals? What made them so special? Were they geniuses? Were they lucky? What got them out of bed in the morning?

As inventors, as engineers, and as historical "game changers" their celebrated stature is well deserved. Many consider their achievement - the ability to move through the air a power driven, heavier than air machine, controlled by a pilot - to be one of the most important inventions in the history of science. This places their creation in good company, consider some other notable discoveries :

The wheel in 3500 bc

The compass, probably between the 9th and 11 centuries

Gutenberg's printing press in 1440

The internal combustion engine in the mid to late 1800's

The telephone, patented in 1876 (A.G. Bell)

The light bulb in 1879 (T.A. Edison)

Penicillin in 1928 (Alexander Fleming)

And, most recently, the Internet

This short list is clearly not meant to be exhaustive or exclusive, but these few inventions need little to no explanation as to their impact on civilization. And so it is with the mastery of flight. With that first successful manned flight, the nature of travel, of commerce, of warfare, would be changed forever.

So let us take a closer look at the events and circumstances of Orville and Wilbur's early years, those years which led up to the first manned flight at Kitty Hawk, North Carolina in 1903, and the first functional airplane flight, at Dayton Ohio in 1905.

Orville, born in 1871 and Wilbur, born in 1867, were the sons of the very devout, tenacious, fastidious and litigious Milton Wright. Milton Wright was a minister in the United Brethren Church who eventually rose to the station of Bishop. He was, by all accounts, a very rigid and energetic man, a man of the Bible, a religious conservative, and a person of strict moral principles. Of him and his congregation it might be said "many are cold but few are frozen".

Their mother, Susan Koerner Wright, was a woman of considerable mechanical aptitude. It is said, that she was able to design and construct simple household items. She also developed clever diversions for school age children and several toys. Long after her death, her children remembered their favorite creation of hers was a special sled, used on the gentle hills of southwestern Ohio and eastern Indiana. Clearly, Susan had an ability to visualize, then create utensils or toys that had not, as yet, ever been constructed. And that uncanny ability was passed on to at least two of her offspring.

Milton, on the other hand, was one of those people who couldn't drive a nail straight.

You might say the die was cast or divine providence was at work in the union of the stalwart minister and the tinkering inventor. It would take all the personal resolve and discipline of their father combined with the technological interest of their mother to lead the Wright brothers to their moment of flight.

There were five Wright children, Reuchlin, the oldest, followed by Lorin, then Wilbur, Orville and the youngest, Katharine. In the early years the family was very close, enmeshed by any standard. But after Reuchlin was married he not only left Dayton Ohio, but he essentially left Wright family history as well. He moved to Kansas City to better his financial situation. Time and distance took its toll on his relationship with his remaining family in Dayton. Lorin would become the Wright brothers bookkeeper and business associate. Katharine, of the five, was the only one to receive a college degree, graduating from Oberlin College.

Orville in his later years gave this brief snapshot of life in the Wright household. "We were lucky enough to grow up in an environment where there was always much encouragement to children to pursue intellectual interests; to investigate whatever aroused curiosity. In a different kind of environment, our curiosity might have been nipped long before it could have born fruit."

And education, both formal and informal was indeed encouraged. Although the early years of his ministry found Milton Wright shepherding flocks as far away as Cedar Rapids, Iowa, the Wright children did not seem to be bothered by the multiple school changes in their early years. Attitudes towards formal education and the pursuit of degrees was very different on the cusp of the twentieth century as compared to one hundred years later. For many, an eighth grade education was nearly an advanced degree. Orville Wright never received a high school diploma, he left high school after his junior year. Wilbur, received enough credits to graduate from Richmond High School in

Richmond Indiana but the family had moved back to Dayton just prior to his graduation ceremonies, so he never received his high school diploma – until it was presented posthumously to his niece, Ivonette Miller, in a memorial ceremony in 1994 !

In 1885, Wilbur was to be on his way to Yale. He had enrolled in some advanced classes at Central High School in Dayton Ohio in order to better prepare himself for the rigors of a college curriculum. In the winter of that extra year of study, Wilbur was in an accident while playing a pickup hockey game with classmates and friends. The details are somewhat blurred but it seems he was batted in the head during the pickup game. The injury seemed minor to his parents but shortly after this he began to have heart palpitations and later began to withdraw from most social activities. I site this seemingly minor injury because it serves as the catalyst for the greatest change in Wilbur's early years. He suddenly transformed from one of the finer athletes of his grade and one of the most socially active members of his school to become nearly reclusive. All thoughts of Yale were dashed. He settled into caring for his declining mother who had contracted tuberculosis seven years earlier. As his older brother Lorin later noted Wilbur became the "cook and chambermaid" of the household.

And this young man develops the airplane?

The "upside" of Wilbur's self imposed "grounding" was a vast amount of time on his hands when not attending to his mother. As a leading minister and Bishop, Milton Wright had a sizeable personal library which was at all times available to Wilbur. Wilbur was known for his keen memory and he made great use of it delving into tomes such as Gibbon's "Rise and Fall of the Roman Empire", Plutarch's "Lives", the Encyclopedia Britannica, the histories of France and England, Hawthorne, Sir Walter Scott - these were all devoured by Wilbur in the safety and peace of his father's library. By 1888, three years after the peculiar accident, Wilbur was as well read as

any college graduate and, moreover, knew this about himself. His self awareness of and his confidence in his intellectual abilities appear to stem from this period of quiet transformation. What was Orville up to at this time ? Orville was four years younger than Wilbur and while Wilbur was reading the classics, Orville was entrenched in the Central High School curriculum in Dayton; at least for awhile.

Orville was a good student but restless in the restrictive atmosphere of a defined curriculum. He was a tinkerer at heart like his mother, a tinkerer with lots of energy and with his father's work ethic. During high school summers, Orville apprenticed himself in a local printing business having decided that he wanted to be a professional printer.

The death of their mother, Susan in 1889 was a great sadness for all of the Milton Wright family. However, it set up the circumstances for Orville and Wilbur's first collaborative effort, the printing business. At the time of their mother's death in 1889, Orville was eighteen years old and Wilbur was twenty-two. Orville was intent on getting a printing business started but knew he would need some help. Wilbur was now free from his nursing duties and at last emerging from what can only be considered a three year smoldering depression. The specifics of their initial conversation, wherein Orville likely induced Wilbur to join his printing efforts, are not known, but sometime in late 1889 the brothers began working together, designing and building their first professional printing press. Whereas most people new to the printing business require capital up front for the purchase of their presses, the Wright Brothers simply created them from materials excavated from junk piles at essentially no cost to themselves. Their first logo or imprint was titled

“WRIGHT BROS.; JOB PRINTERS”

It was the first time the phrase “Wright Bros” appeared in print. Their printing endeavors included:

The West Side News, their first business collaboration

The Evening Item

The Dayton Tattler, which was edited by Paul Lawrence Dunbar, a classmate of Orville's at Central High School in Dayton .

And a weekly publication called "Snapshots"

The printing business was barely a break-even operation for the brothers, but it did provide them ample opportunity to work together every day in an environment which was frequently stressful. They found, ultimately, that they could tolerate each other, they could and would work through whatever issues and disagreements arose. Wilbur is quoted as having said of his brother Orville :

"I love to scrap with Orv, Orv is such a good scrapper!"

Indeed, this ability of these two young men to constructively scrap, to argue their way to solutions, was paving the way to future success.

By 1892, it was clear to both brothers that printing was never going to be any meaningful source of income. Their presses were the technical envy of the city but the Wright Brothers were no match for the fierce competition for stories and subscribers. What little success they enjoyed was largely due to their technical ingenuity. These technical skills led to their second collaborative enterprise, the cycling business.

In 1890 it was estimated that forty thousand bicycles were built. By 1895, estimates were at 1.2 million ! The bicycle craze was in full rage at the end of the nineteenth century. Even before the brothers were formally interested in the cyclery business they had already begun repairing cycles for neighbors and for friends.

They launched full bore into the cycling business in 1892. Wilbur is generally credited for the idea of the repair and sales shop. There exists correspondence to suggest he was the impetus

behind it. In any case, their joint business endeavor was, initially, a great success. But for the cyclery business the falls and winters were long and slow, to the point that by late 1894 Wilbur penned this thought to his father :

“ I do not think I am specially suited for success in any commercial pursuit even if I had the personal and business references to assist me ... I have always thought I would like to be a teacher the pay is sufficient to live comfortably and happily... and I think with proper training I could be reasonably successful.”

I ask for a second time - this young man develops the airplane? !

The teaching career never materialized. In spite of the slow down, Orville and Wilbur seemed even more determined to make a success of their bicycle enterprise. Over the next few years they not only devised an electrical welding tool and created their own wheel-hub and coaster brake, but also began building bikes of their own creation. The Van Cleve was their top of the line bicycle, selling for sixty-five dollars, quite “pricey” for the Late 1800s. The simpler St. Clair and the Wright Special were more modestly priced. The bicycle repair and sales shop was now providing real income.

In 1896, Wilbur was twenty nine years old and Orville was twenty five. Any interest in marriage for these eligible bachelors? Apparently not. Orville, in various descriptions and accounts, is said to be pathologically shy. The few female contacts he is known to have had “went nowhere,” at least with regard to marriage as an end point.

Wilbur was no better with women. Charles Taylor, a hired mechanic at the bicycle shop, recounts that Wilbur could talk to older women as if he had known them for years, but when it came to young women, he would become nervous and begin to fidget.

With respect to shyness and nervousness as impediments to marriage, I seriously doubt that

Orville and Wilbur were the only two males of the late nineteenth century to be afflicted with such impediments. Nonetheless, I do suspect that their personal ambitions, combined with their father's ministerial views of sex, the era's prevailing Victorian attitudes and the brothers indefatigable work ethic left little to no time for matters of the heart.

And as for close friends, the brothers certainly had the companionship of similarly aged friends and neighbors through their grade school and high school years but beyond the time period of youth their closest friends were each other. Orville and Wilbur worked together, lived together, planned, studied and drafted together. They were very self contained and what few significant wanderings from their own company occurred were with their sister Katharine, their father Milton and their brother Lorin and Lorin's children.

Printers, bicycle makers, mechanics, and minor inventors, when did these two brothers turn their attention to the air and flight? Certainly the year 1896 saw newsworthy events involving attempts to fly. As printers, the brothers would not only have heard of these events but placed the accounts into their own publications. Although the printing business was now a minor part of their work efforts, they still published "Snapshot," the targeted readers being the cyclery crowd. The first of these newsworthy flight related events was the death of Otto Lilienthal.

Who was Otto Lilienthal?

Lilienthal was a self taught German aeronautics enthusiast who began his research of manned gliders in 1879. By 1896 he had completed at least two thousand glides in sixteen various glider types. Unlike most of the early experimenters in flight, Lilienthal believed that if man were to ever master air travel it would come as the product of manned experimentation in trials, not models. Few, if any of the early designers and experimenters did much more than attempt to fly simple models. Lilienthal not only put himself in great danger but meticulously recorded the accounts of

his glides. His accounts and attempts to quantify the parameters necessary for flight (lift as measured in pounds, air pressure, lifting surface, velocity) became the basis for the next generation of fliers and gliders to follow him. In the summer of 1896 Otto Lilienthal fell to his death when his glider stalled in mid air and he crashed to the earth from a height of fifty feet.

The second major event of 1896 was the success of an unmanned, engine powered flight machine. This flight was the work of Samuel P. Langley. Langley, then Secretary of the Smithsonian Institute, and hailed as one of the chief scientists in the United States, and his staff successfully designed and flew a steam driven “aerodrome” over the Potomac River. This flight was the rage of the scientific news in 1896. One must remember that the flight was unmanned and uncontrolled but it did go up in the air!

On the heels of that amazing aerodrome flight, the third major event of 1896 took place. It was in that year that Octave Chanute, the French born but US educated engineer performed a series of successful glides in the Indiana dune country. It was at the end of that summer session of trials that the bi-plane configuration prevailed as the most promising. That biplane configuration is very similar to what the Wright brothers would eventually construct in just a few years.

A few words about Octave Chanute: he was a pioneer in the aeronautical field having written “Progress in Flying Machines”, which in 1894, served as the bible of aeronautical studies. In the late 1800’s, Chanute’s reputation as one of the leading engineers in the country led to his presidencies of both the American Society of Civil Engineers and the engineering section of the American Association for the Advancement of Science. In 1896, Chanute was already sixty four years old. In Indiana, his activities were supervisory, he himself did no gliding. Nonetheless he was, worldwide, one of the most visible and respected advocates for flight, even before the events at Kitty Hawk. To the extent that the Wright brothers befriended potential competitors, Octave

Chanute could be considered one of their few friends.

The death of Lilienthal, and the works of Langley and Chanute piqued Wilbur Wright's growing interest in a new challenge. This created the perfect atmosphere for a major shift in the future focus of the Wright brothers. Not only was Wilbur tiring of the bicycle business but now, in his early thirties, in the years just before 1900, he was eager to make his mark in some new aspect of engineering. The problem of flight became that aspect in which Wilbur Wright chose to make this mark.

Was it Wilbur who actually led Orville into this aeronautical pursuit? It was Wilbur who penned one of the most important letters ever sent to the Smithsonian Institute. In that letter he requested any information the Institute could make available on the subject of flight. The letter was written in the first person singular. In all their later endeavors the brothers were scrupulous in adhering to the team concept, the two writing, inventing and planning as one. Had Orville truly been involved in those seminal moments that letter to the Smithsonian would likely have been written in the first person plural or, at the least, mentioned Orville's shared interest.

In later correspondence to his father, the bishop, Wilbur wrote of his intention to fly a glider. In that letter there was no mention that Orville would or would not assist in that effort. And in some of the bishop's later writings, it can be gleaned that not only had Wilbur likely pulled Orville into the pursuit of flight, but also was regarded, at least by the bishop, as the senior partner of the duo and perhaps the more talented. He wrote to Wilbur (in 1909) :

“ You owe it to the world that you should avoid all unnecessary personal risks. Your death, or even becoming an invalid would seriously affect the progress of aeronautical scienceyou have much that no one else can do so well. And, alone, Orville would be crippled and burdened.”

Wilbur may have been the catalyst, but after 1900 the public face of the Wright brothers,

their endeavors in business, and very importantly, their multiple patent battles, revealed no trace of Wilbur's leadership. Official correspondence, no matter which one originated it, was always written in the first person plural. All monies were held in a joint account and the checks were signed "The Wright Brothers", with an OW or WW next to it indicating who had written the check.

This solidarity of the brothers behavior very likely stems from the solidarity of the Wright family itself. Orville and Wilbur became mutually supportive to each other, with an unspoken, unwritten commitment to each other and to the cause. This never formalized but very real pact of equality between Orville and Wilbur ultimately led to the sands of Kitty Hawk and beyond.

To better understand the years leading up to Kitty Hawk, it is important to further characterize the Wright brothers as professionals. To this point they have ultimately proven themselves to be innovative and accomplished mechanics. But in the years of 1899 to 1903 they became full fledged engineers. And not your typical "bridge builder" engineer. They become "experimental engineers".

Engineers, mind you, they are not scientists. Science is interested in the principles at work governing the universe and all within it. The Wright Brothers discovered how to fly, not what principles made flight possible. The truth is, airplanes would be flying for twenty-five years before physicists and mathematicians could adequately, "scientifically," explain the phenomenon of flight. In our present era we find that most technologies spring from basic scientific research; in 1900 the reverse was more likely - the technology or invention would trigger the eventual scientific understanding.

Thank God for our tireless, focused, disciplined, Dayton engineers. By devouring the available literature on flight, particularly those materials and references provided by the Smithsonian, by their meticulous and time consuming research with the wind tunnel, by the

development of the very clever wing-warping technique, by their daring abandonment of certain long accepted assumptions concerning the principles of lift and by the mechanical genius of developing the first aircraft engine which generated a sustained twelve horsepower, the Wright brothers were on the cusp of their famous December 17th 1903 flight at Kitty Hawk, North Carolina.

Why Kitty Hawk? Could the Wright Brothers have possibly foreseen that their choice of Kitty Hawk would spawn the “license plate” war of one hundred years later between Ohio and North Carolina; Birthplace of Aviation vs. First in Flight ?

The Wright Brothers knew that in order to fly their creation they would require three conditions to be met, those being, sustained winds, a soft place to land, and isolation of location – the test flights were to be private, away from any publicity or public scrutiny. Ever the pragmatists, the brothers resorted to the Monthly Weather Review, a publication of the United States Weather Bureau, which chronicled the average hourly wind velocities recorded at 120 weather bureau stations around the country. The first listing to meet all three of the criteria (sixth on the list) was Kitty Hawk, North Carolina. The brothers, like most people at the turn of the century, had never heard of the place; which clearly appealed to them. So Kitty Hawk it was to be.

The three years of research and trials from 1900 to 1903 were peppered with lively correspondence between the Wrights and their friend, Octave Chanute. By this time, Chanute was nearing seventy years old and was extremely well connected to the social, the scientific and engineering communities worldwide. He was, however, at the end of the creative and inventive phase of his own career. It is during this period that he nearly badgered the Wright Brothers to disclose the product of their research. They would have no part of it. Chanute had gone so far as to propose an introduction to Andrew Carnegie and suggested that he could be the Wright Brothers financial patron. Again, the brothers would have no part of it. The brothers had maintained their

total independence - and frank isolation - in the pursuit of flight on the basis of the continued financial success of their cyclery business, their own personal thrift, simplicity of lifestyle, and an unflagging desire and growing confidence that they were going to be the first to fly. They had no interest in “sharing” ideas, “giving away the store” and they, unlike many, neither needed nor wanted a patron.

At seventy, Octave Chanute could afford to be generous with the discoveries and ideas of others. After all, he wasn't “in the hunt” any longer. And the brothers had long surpassed Chanute in the area of aeronautical principles. With such badgering, why did the Wrights continue to correspond with Chanute? What could he now offer to them? The Wrights were pragmatists, Octave Chanute provided them with the necessary connections, both national and international, before and after the Kitty Hawk event.

One might ask: “Would not flight have been achievable earlier if the brothers had been more collaborative?” It is my firm belief that the mechanisms of research, replete with the motivators of compassion and duty, somehow place it – mistakenly - in an elevated state above most other human endeavors. Research is little different than most human activities. There is a competition and there is a prize. In a sport, the game may take minutes, in research the measurement can be years; in a sport the victor carries a trophy, in research the victor carries the potential of eternal adulation. Plain and simple, people are competitive no matter what the field of play. Orville and Wilbur were no different and should not be judged harshly for their separative behavior.

In this thought I am reminded of an event I attended several years ago. It was a fund raiser for The Leukemia and Lymphoma Society. The keynote speaker was a well known researcher in the field and a large part of his address was a lament on the lack of collaboration on the part of medical researchers. He was distraught that the major university programs and private research

foundations seemed to protect, even hide, their core research. Although these organizations may interact, it is generally polite chatter - nothing substantial, the medical equivalent of the weather. I continually wonder, are those who seek more collaboration behind in their “homework?” Do they see themselves as running second or a distant third and is the appeal for collaboration, made with heartfelt zeal, really a thinly veiled effort to get “back in the game?” Or, perhaps the appeal for collaboration comes from a position of strength. The proponents of collaboration, easily recognized as the leaders in a particular field, now calling for “full disclosures” in the interest of speedy progress, wherein their only true intent is to gobble up any stray data that they may have overlooked, pat the providers of such data on the back and send them on their way.

The spirit of competition in research and development is as real and alive as that of two grade school boys “duking it out” for control of the playground.

But back to Kitty Hawk. Kitty Hawk in 1903 was a smattering of houses and a few stores located in marshland along the Albemarle Sound. The only way in or out was by boat. When Wilbur, the first of the two to arrive at Kitty Hawk, embarked from Elizabeth City, North Carolina it took two days to cross over to the Outer Banks! The inhabitants lived in small, very plain houses, devoid of anything resembling luxury. The brothers’ upbringing was certainly more comfortable than anything Kitty Hawk had to offer, yet they complained little and that mostly of the mosquitoes. It should come as no surprise that what the brothers admired most about the local inhabitants of the Outer Banks was their sense of self reliance; imperative for survival in such austere circumstances.

The materials necessary to assemble the complete airplane were carefully packed into boxes and transported with the brothers by train and boat to Kitty Hawk. It should be noted that all design work, anything short of assembly itself, was performed or made in Dayton Ohio.

The site of that first manned aircraft was just south of Kitty Hawk, a place called Kill Devil Hills, huge mountains of sand that extend south all the way to Cape Hatteras, which is about forty miles away. It is from these hills, that the initial glides from 1900 to 1902 took place. It was September of 1903 when the Wrights left Dayton with all components necessary for powered flight. This season they had with them their gasoline powered engine weighing about two hundred pounds. The engine, the frame of the airplane and the weight of the pilot brought the total weight to about six hundred and thirty pounds. That was the approximate weight of the 1903 Wright Flyer.

It was December 14th when Orville and Wilbur decided that their fine tuning was complete and the time for trial had come. The sixty foot monorail was laid out, down which would roll the Flyer. This monorail was to assist in take off. And how do you think they decided which one would take the first try? According to witnesses they used a coin to settle the question. Wilbur won the toss.

In seconds, the first trial was over. After coursing about forty feet down the rail the airplane elevated nose up to about fifteen feet and then fell immediately to earth. Wilbur was both uninjured and unhappy. He felt that his angle of attack had been too sharp - the nose up coupled with the forward speed had actually compromised what should have been a smooth take off.

The next two days were spent repairing the craft and moving the monorail to flatter ground. Moving the monorail to flatter ground would smooth the angle of attack. December 17th was a frigid day with winds at twenty four to twenty seven miles per hour. With those winds and a relatively clear sky, there was no question that another attempt would be made that day. While the engine warmed up, Orville and Wilbur walked around the plane making sure all was in order. It was Orville's turn to man the plane. So after shaking hands with Wilbur, Orville positioned himself in the plane, checked the few handles which manipulated the plane, and indicated to Wilbur he was ready.

Earlier that day, Orville had set up a box camera with the focal point at the end of the monorail. He had instructed a man by the name of John T. Daniels, one of the locals who worked at the Kill Devil Hills Life Saving Service Station, on how the camera worked and told him that if the plane were to lift from the rail he should snap the shutter. While Orville was positioning himself in the plane, Wilbur now made sure Daniels was at the ready.

At about ten thirty five a.m. on December 17, 1903 perhaps the most reproduced photograph of all time was taken as the 1903 Wright Flyer lifted up off the rail, rose for a few seconds, and then settled softly in the sand not far from the point of lift off. It is impossible to improve on the distilled account given by Tom Crouch, present Senior Curator of the Aeronautics Department of the Smithsonian, at the National Air and Space Museum, in his book THE BISHOP'S BOYS :

“It was over very quickly. The airplane floundered forward, rising and falling for twelve seconds until it struck the sand only 120 feet from the point at which it had left the rail. You could have thrown a ball farther, but, for the Wright's, it was enough. For the first time in history, an airplane had taken off, moved forward under its own power, and landed at a point at least as high as that from which it had started - all under complete control of the pilot. On this isolated, wind swept beach a man had flown.”

Three more flights were made that day, the longest and last of the day by Wilbur, 852 feet in fifty- nine seconds. And shortly after that flight, a rogue gust of wind lifted the plane over backwards, tumbling the craft into quick wreckage. John Daniels, our now famous photographer, had been dragged along with that plane, having tried to secure it by grabbing hold of a strut. Luckily uninjured, for the remainder of his natural life, he loved telling the story of how he survived the first plane crash ! After the famous flight in December of 1903, the Wright Brothers returned to Kitty

Hawk only one more time, spring of 1908. Many years later, a staunch native of Ohio is alleged to have said to a plucky North Carolina advocate-

“I’ll give you your sand and isolation, but you need look no farther than the Montgomery County Courthouse in Dayton, Ohio for sustained winds!”

The wreckage of that 1903 Wright Flyer was shipped back to Dayton, and was never seen again until it was reconstructed from the original wreckage and displayed at Massachusetts Institute of Technology for a brief period of time in June of 1916. The plane was then sent to the Science Museum of London in 1925. The Science Museum of London, England ? ! How in the world could that be?

In a controversy that would require several future papers to explain, Orville Wright sparred with the Smithsonian Institute with regard to the primacy of flight. In 1914 the Institute adopted a position that essentially stated that Samuel P. Langley could be considered the Father of Flight. The dispute was ultimately won by Orville Wright, with the eventual capitulation of the Smithsonian, acknowledging the Wright Brothers as the true Fathers of Flight – but this capitulation occurred after nearly thirty years of feuding. The plane, most appropriately, came to its official final rest at the Smithsonian Institute on December 17th, 1958, to the day, fifty five years after that historic flight in 1903.

In 1903, the Wrights proved that man could fly. Now the task was to make flying practical, useful. To that end they used Huffman Prairie, a cow pasture eight miles east of Dayton Ohio. Although accessible by train, it was remote – always a requirement of the Wright Brothers.

It was on Huffman Prairie, in 1905, that the Wright’s developed what has come to be

described as the first practical airplane. Flights of up to thirty minutes had now become routine for Orville and Wilbur. During this period of time, adjustments were made to allow for a single passenger to climb aboard as well. It is interesting to note that Orville and Wilbur flew together only one time in the hundreds of times they were in the air. This is yet another testimony to the cautious nature of the brothers.

Tom Crouch of the Smithsonian Institute has this to say about the 1905 Wright Flyer:

“They had done it. The 1905 Wright airplane was one of the most extraordinary machines in the history of technology. Capable of rising into the air, flying for an extended period under the complete control of the operator and landing safely, it was the world’s first practical airplane. Nine years of trial and error, discouragement and hope, risk to life and limb and brilliant technical effort had culminated in the air over this Ohio cow pasture.”

And that’s all Huffman Prairie is to this day, although the present land owner, the United States Air Force, no longer allows cows on the property. A site visit reveals it to be the flat field it was in the early 1900’s. There is one glaring difference from the days when Orville and Wilbur flew circle patterns over that pasture. It now lies just a stone’s throw from the major active runways at Wright Patterson Air Force Base. The view from the Wright Memorial, atop Wright Hill, a bluff just to the west southwest of the Air Force runways is worth the trip. It allows simultaneous visualization of the “then” and the “now” as the prairie and the base are both in view from this elevated vantage point. The 1905 Wright Flyer is on display at the Carillon-Deeds Historical Park along the banks of the Great Miami River in Dayton.

After the flights in 1905, the Wright Brothers never lost their dogged determination, their zeal for learning and developing, their lifelong thrust toward perfection. But these attributes were now used to wage the “patent wars,” to engage in military contract negotiations, to court the

European aviation community, to establish their own flying school, and to create their own production company. It is likely that in the Huffman cow pasture these two brothers made the inevitable transition from young, enthusiastic engineers, with the problems of flight as their morning wake up call, to the mature but guarded entrepreneurs, with lawyers and business associates now providing that wake up call.

Recently, during one of my many walks at Lunken Airport, an area the Wright Brothers would have truly enjoyed, I was accompanied by my next door neighbor, a retired Delta Airline pilot. I asked him “What do most pilots think of the Wright Brothers?” He responded immediately : “You mean those two crotchety old men who got there first?” As a Wright worshiper it was a stab to my heart ! The worst of all turbulence ! Of course I disagreed. But if correct at all, it was a response only partially correct. Wilbur Wright never saw “old age.” He died of typhoid in 1912, at the age of 45. Orville Wright did live to see his seventy-seventh birthday, dying in 1948 of a heart attack. He did live to see the dedication of the Wright Monument on Wright Hill in Dayton.

Today, when people mention the Wright Brothers, I prefer to think of the early years, the inventive years, the years of curiosity, of experiment and ultimate triumph. They not only ushered in the era of aviation but showed the world the power of determination, focus, methodical testing and plain and simple hard work.

Towards the end of his brief life, Wilbur was confronted by a friend suggesting that “sheer genius” might have been the chief reason that Orville and Wilbur had conquered the problem of flight. Wilbur’s response is quite interesting: “Do you not insist too strongly on the single point of mental ability ? To me, it seems that a thousand other factors, each rather insignificant in itself, in the aggregate influence the event ten times more than mere mental ability or inventiveness...If

the wheels of time could be turned back... it is not at all probable that we would do again what we have done... It was due to a peculiar combination of circumstances which might never occur again.”