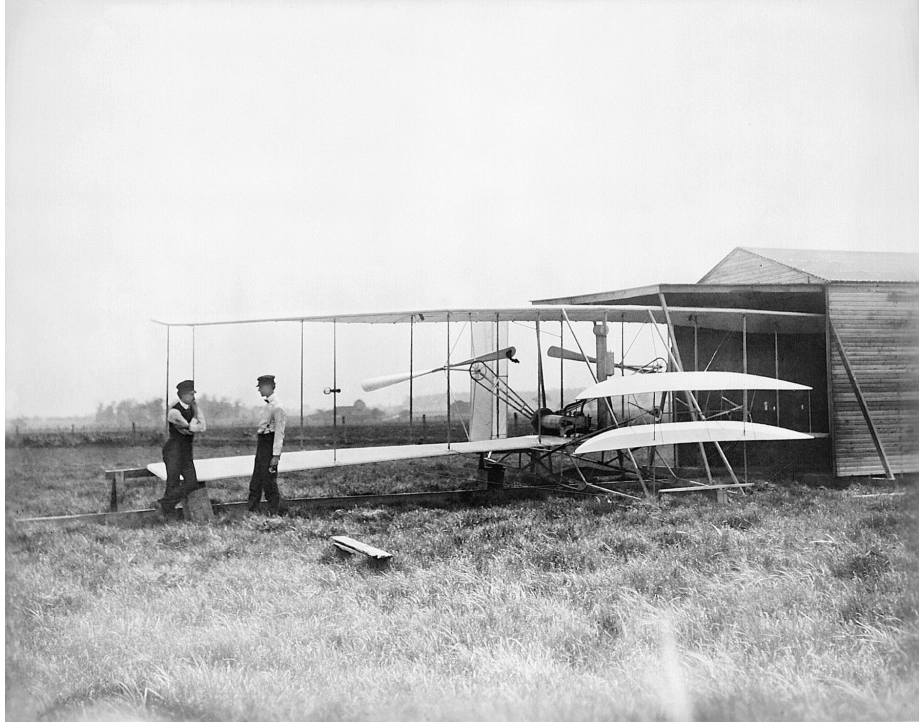


DAVID McCULLOUGH



THE WRIGHT BROTHERS

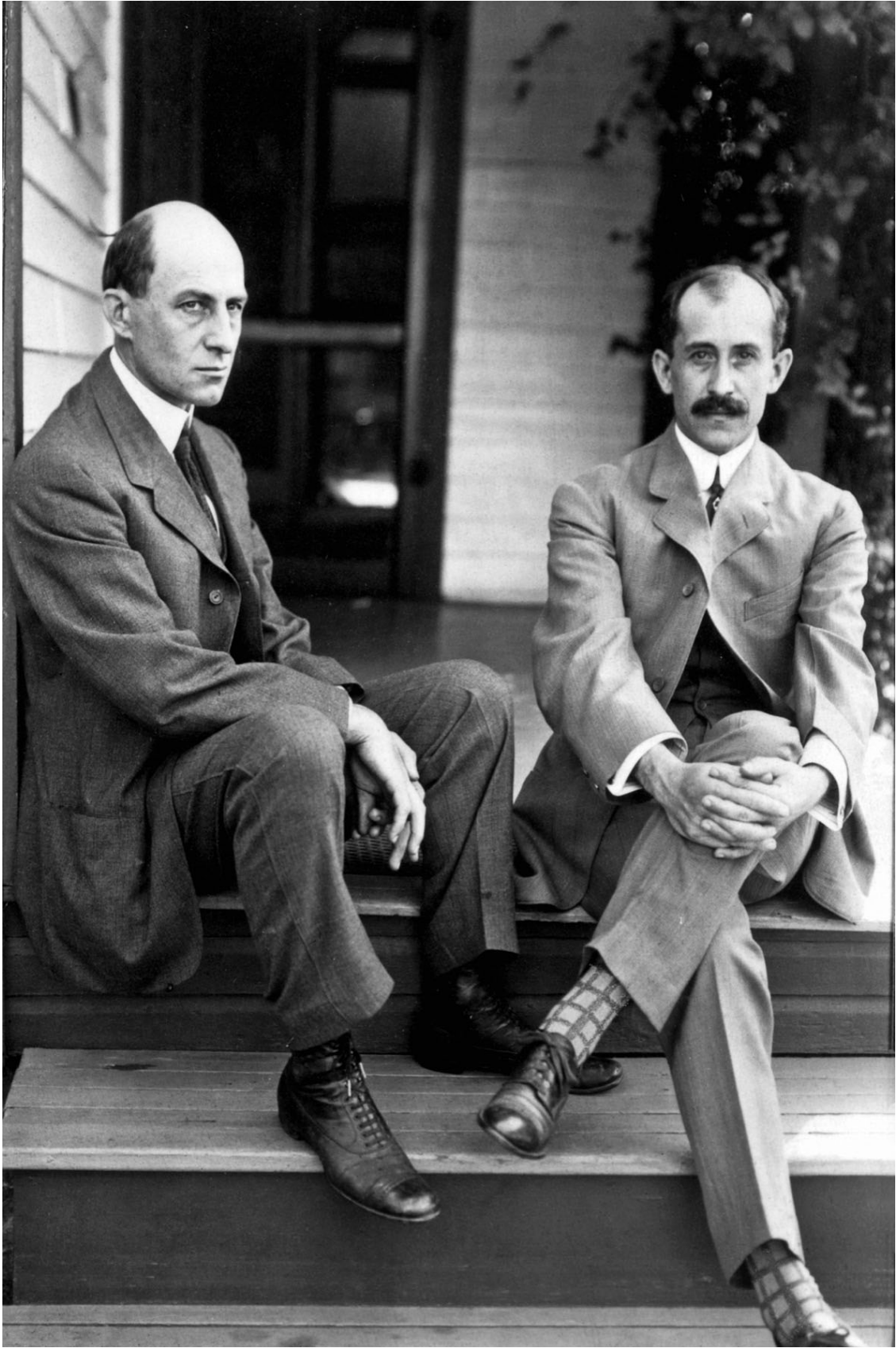


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THE
Wright Brothers

David McCullough

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For Rosalee

No bird soars in a calm.

WILBUR WRIGHT

PROLOGUE

From ancient times and into the Middle Ages, man had dreamed of taking to the sky, of soaring into the blue like the birds. One savant in Spain in the year 875 is known to have covered himself with feathers in the attempt. Others devised wings of their own design and jumped from rooftops and towers—some to their deaths—in Constantinople, Nuremberg, Perugia. Learned monks conceived schemes on paper. And starting about 1490, Leonardo da Vinci made the most serious studies. He felt predestined to study flight, he said, and related a childhood memory of a kite flying down onto his cradle.

According to brothers Wilbur and Orville Wright of Dayton, Ohio, it began for them with a toy from France, a small helicopter brought home by their father, Bishop Milton Wright, a great believer in the educational value of toys. The creation of a French experimenter of the nineteenth century, Alphonse Pénaud, it was little more than a stick with twin propellers and twisted rubber bands, and probably cost 50 cents. “Look here, boys,” said the Bishop, something concealed in his hands. When he let go it flew to the ceiling. They called it the “bat.”

Orville’s first teacher in grade school, Ida Palmer, would remember him at his desk tinkering with bits of wood. Asked what he was up to, he told her he was making a machine of a kind that he and his brother were going to fly someday.

Part I



Beginnings

If I were giving a young man advice as to how he might succeed in life, I would say to him, pick out a good father and mother, and begin life in Ohio.

WILBUR WRIGHT

I.

In as strong a photograph as any taken of the brothers together, they sit side by side on the back porch steps of the Wright family home on a small side street on the west end of Dayton, Ohio. The year was 1909, the peak of their fame. Wilbur was forty-two, Orville thirty-eight. Wilbur, with a long poker face, looks off to one side, as though his mind were on other things, which most likely it was. He is lean, almost gaunt, long of nose and chin, clean-shaven, and bald. He wears a plain dark suit and high-laced shoes, much in the manner of their preacher father.

Orville gazes straight at the camera, one leg crossed nonchalantly over the other. He is a bit stouter and younger-looking than his brother and has a touch more hair, in addition to a well-trimmed mustache. He wears a lighter-toned, noticeably better-tailored suit, snappy argyle socks, and wingtips. The argyles were about as far in the direction of frippery as any of the Wright men would ever go. Prominent, too, in the pose, appropriately, are the hands, the highly skilled hands that, by the time the picture was taken, had played a substantial part in bringing miraculous change to the world.

To judge by the expressions on their faces, they had little if any sense of humor, which was hardly the case. Neither liked having his picture taken. “Truth to tell,” one reporter wrote, “the camera is no friend either to the brothers.” But what is most uncharacteristic about the pose is that they sit doing nothing, something they almost never succumbed to.

As others in Dayton knew, the two were remarkably self-contained, ever industrious, and virtually inseparable. “Inseparable as twins,” their father would say, and “indispensable” to each other.

They lived in the same house, worked together six days a week, ate their meals together, kept their money in a joint bank account, even “thought together,” Wilbur said. Their eyes were the same gray-blue, though Orville’s were less predominant and closer together. Their handwriting was quite alike—consistently straight and legible—and their voices so alike that someone hearing them from another room had trouble knowing which was doing the talking.

If Orville was always noticeably better dressed, Wilbur, at five feet ten, stood an inch or so taller and as would be said more often in France than Dayton, women found him somewhat mysterious and quite attractive.

Both loved music—Wilbur played the harmonica, Orville, the mandolin. At work they sometimes found themselves spontaneously whistling or humming the same tune at the same time. Both were strongly attached to home. Both liked to cook. Biscuits and candy were Orville’s specialties. Wilbur took pride in his gravy, and for the Thanksgiving or Christmas turkey insisted on taking charge of the stuffing.

Like the father and their sister Katharine, the brothers had tremendous energy, and working hard every day but Sunday was a way of life, and if not on the job then at home on “improvements.” Hard work was a conviction, and they were at their best and happiest working together on their own projects at the same waist-high bench, wearing shop aprons to protect their suits and ties.

Everything considered, they got along well, each aware of what the other brought to the task at hand, each long familiar with the other’s particular nature, and always with the unspoken understanding that Wilbur, the older by four years, was the senior member of the partnership, the big brother.

Not that things always went smoothly. They could be highly demanding and critical of each other, disagree to the point of shouting “something terrible.” At times, after an hour or more of heated argument, they would

find themselves as far from agreement as when they started, except that each had changed to the other's original position.

As often said, neither ever chose to be anything other than himself, a quality that rated high in Ohio. Not only did they have no yearning for the limelight, they did their best to avoid it. And with the onset of fame, both remained notably modest.

Yet in a number of ways they were unidentical twins. There were differences, some obvious, others less so. Where Orville moved at a more or less normal pace, Wilbur was "tremendously active of movement," gesturing vigorously with his hands when making a point, walking always with a long, rapid stride. Wilbur was more serious by nature, more studious and reflective. His memory of what he had seen and heard, and so much that he read, was astonishing. "I have no memory at all," Orville was frank to say, "but he never forgets anything."

Such were Wilbur's powers of concentration that to some he seemed a little strange. He could cut himself off from everyone. "The strongest impression one gets of Wilbur Wright," an old schoolmate said, "is of a man who lives largely in a world of his own." Morning after morning, lost in thought, he would hurry out the door without his hat, only to reappear five minutes later to retrieve it.

Wilbur also, it was agreed, had "unusual presence," and remained imperturbable under almost any circumstance, "never rattled," his father was proud to say. He was an exceptional public speaker and lucid writer, which seemed out of context for someone so often silent, and though reluctant to speak in public, when he did his remarks were invariably articulate, to the point, and quite often memorable. In his professional correspondence, the innumerable proposals and reports he wrote, and in private correspondence no less, his vocabulary and use of language were of the highest order, due in large measure to standards long insisted upon by his father. It had proven an ability of utmost importance to his and his brother's unprecedented accomplishments.

"Will seems to enjoy writing, so I leave all the literary part of our work to him," Orville would explain. In fact, Orville, too, greatly enjoyed writing, though in family correspondence primarily, and especially in letters to Katharine he did so with spirit and humor. That Wilbur, in the early stages of their enterprise, wrote nearly all letters concerning their interests

in the first person, as if he were operating entirely on his own, seems not to have bothered Orville in the least.

Orville was the more gentle of the two. Though talkative and entertaining at home, often a tease, outside the house he was painfully shy, something inherited from their deceased mother, and refused to take any public role, leaving all that to Wilbur. But he was also the more cheerful, the more optimistic and naturally entrepreneurial, and his remarkable mechanical ingenuity figured importantly in all their projects.

Where Wilbur was little bothered by what others might be thinking or saying, Orville was extremely sensitive to criticism or mockery of any kind. Then, too, Orville had what were referred to within the family as his “peculiar spells,” times when, overtired or feeling put-upon, he could turn uncharacteristically moody and irritable.

In public gatherings, it was invariably Wilbur who attracted the most attention, even if he had little to say. “By comparison,” one observer wrote, “Mr. Orville Wright does not possess any pronouncedly distinctive personality. That is to say, your eye would not be drawn to him among a crowd of men in the fashion in which it would instinctively dwell on Mr. Wilbur.”

Like their father, they were always perfect gentlemen, naturally courteous to all. They neither drank hard liquor nor smoked or gambled, and both remained, as their father liked to say, “independently” Republican. They were bachelors and by all signs intended to remain so. Orville liked to say it was up to Wilbur to marry first, he being the older. Wilbur professed to have no time yet for a wife. To others he seemed “woman-shy.” As remembered one associate, Wilbur could “get awfully nervous” whenever young women were around.

What the two had in common above all was unity of purpose and unyielding determination. They had set themselves on a “mission.”

They lived still at home with their father, an itinerant clergyman who was often away on church work, and their sister Katharine. Younger than Orville by three years, she was bright, personable, highly opinionated, the only college graduate in the family, and of the three still at home, much the most sociable. After finishing at Ohio’s Oberlin College in 1898, she had

returned to Dayton to teach Latin at the new Steele High School, where, Orville noted, she would flunk many of Dayton's future leaders. As she herself said of those she judged to be "notoriously bad" boys, "I nipped their smartness in the bud."

Neat and trim, with her gold-rimmed, pince-nez glasses, and dark hair tied back in a bun, she looked every bit the schoolteacher. "Of the sawed-off variety," as she said, she stood a bit over five feet, and all who knew her knew what a force she was. In a household of three men and one woman, she more than held her own. She was the most vivacious of the family, a tireless, all-season talker, and they all adored her for that. It was she who brought home her college friends and put on parties. Being the nearest in age, she and Orville were particularly close. They had the same birthday, August 19, and they had both been born there in the same house.

Bothered more by human failings than were her brothers, Katharine could turn "wrathy." Orville's practicing on the mandolin could set her off in grand fashion. "He sits around and picks that thing until I can hardly stay in the house," she complained to their father. "You have a good mind and a good heart," he would tell her. Still he worried. "I am especially anxious that you cultivate modest feminine manners and control your temper, for temper is a hard master."

To their friends they were Will, Orv, and Katie. Among themselves Wilbur was Ullam; Orville, Bubbo or Bubs; and Katharine, Sterchens, a variation of the German word *schwerchens*, meaning "little sister." Two brothers older than the three at home—Reuchlin and Lorin—were married and had families of their own. Reuchlin had moved to a farm in Kansas. Lorin, a bookkeeper, with his wife, Netta, and their four children, Milton, Ivonette, Leontine, and Horace, lived just around the corner from 7 Hawthorn Street. That both Lorin and Reuchlin had kept moving from job to job, trying to make ends meet for their families, appears to have given Wilbur and Orville further reason to remain single.

Their deceased mother, Susan Koerner Wright, had been born in Virginia, the daughter of a German wagon maker, and brought west as a child. Her children described her as highly intelligent, affectionate, and painfully shy. It was said that on her first visit to a grocery store after her marriage, when asked to whom the items should be delivered, she forgot her new name. But she was also cheerful and keen-witted, and to her family a

“regular genius” in that she could make anything, and toys especially, even a sled, “as good as a store kind.

She was the most understanding woman [wrote Katharine]. She recognized something unusual in Will and Orv, though she loved us all. She never would destroy one thing the boys were trying to make. Any little thing they left around in her way she picked up and put on a shelf in the kitchen.

The mechanical aptitude of “the boys,” they all knew, came directly from their mother, quite as much as Orville’s shyness. Her death, from tuberculosis in 1889, had been the worst blow the family had ever known.

Bishop Milton Wright was a devoted father abundantly supplied with strong opinions and words to the wise, a middle-sized, dignified figure with a full, gray patriarchal beard, but no mustache, who liked to comb his thin gray hair most carefully over the top of his bald head. As with Wilbur, his characteristic “grave countenance” was not necessarily the best way to judge his mood of the moment or how he viewed life.

He had been born in a log cabin in Indiana in 1828 and had grown up with frontier ways and values. Though little is known about his mother, Catherine, his father, Dan Wright, a farmer and Revolutionary War veteran, had been a hero in the boy’s eyes. “He was grave in countenance, collected in his manners, hesitating in his speech, but very accurate,” by Milton’s account. He was an unyielding abstainer, which was rare on the frontier, a man of rectitude and purpose—all of which could have served as a description of Milton himself and Wilbur and Orville as well.

At age nineteen, Milton had joined the United Brethren Church in Christ, a Protestant denomination. He preached his first sermon at twenty-two and was ordained at twenty-four. Though he took several courses in a small college run by the church, he was not a college graduate. Founded before the Civil War, the United Brethren Church was adamant about certain causes—the abolition of slavery, women’s rights, and opposition to Freemasonry and its secretive ways—and so Milton Wright remained in his convictions, as all who knew him were aware.

His work as an itinerant preacher had taken him far and wide, by horseback and train, and he had seen as much of the country as almost anyone of his generation. Sailing from New York to Panama in 1857, he

had crossed the isthmus by rail on his way to two years of teaching in a church school in Oregon.

He and Susan had been married in Fayette County, Indiana, close to the Ohio line, in 1859, and settled on a farm at Fairmont, Indiana, where their two oldest sons were born. In 1867, they moved to a five-room, frame farmhouse in Millville, Indiana, and it was there, on April 16, that Susan gave birth to Wilbur. (Both Wilbur and Orville were named for clergymen greatly admired by their father, Wilbur Fiske and Orville Dewey.)

A year later, the family moved to Hartsville, Indiana, and the year after that, 1869, to Dayton, where they bought the then new house on Hawthorn Street. The Reverend Milton Wright had been made editor of United Brethren's national weekly newspaper, *The Religious Telescope*, published in Dayton, and this had meant a major increase of his annual income, from \$900 to \$1,500.

In 1877, after Milton was elected a bishop and his duties with the church were increased still more, he and Susan leased the house and moved the family to Cedar Rapids, Iowa. Responsible now for the whole of the church's West Mississippi District, he would help plan and attend conferences from the Mississippi to the Rockies, traveling thousands of miles a year. In another four years, they moved still again, to Richmond, Indiana, where ten-year-old Orville began making kites for fun and for sale, and Wilbur started high school. Not until 1884 was the family able to return to Dayton to stay.

With a population of nearly forty thousand, Dayton had become Ohio's fifth largest city and was growing steadily. It had a new hospital, a new courthouse, and was up with the rest of the country in the use of electric streetlights. A grand new public library in the fashionable Romanesque style was under way. In another several years the new high school would be built, a turreted, five-story brick building that would have been the pride of any university campus. As was said in Dayton, these were buildings proclaiming "a devotion to something beyond mere material splendor."

Located on a broad, rolling floodplain in southwestern Ohio on the eastern bank of a great curve in the Miami River, fifty miles north of Cincinnati, Dayton had been settled by Revolutionary War veterans at the end of the eighteenth century and named for one of the original investors in the site, Jonathan Dayton, a veteran, a member of Congress from New

Jersey, and a signer of the U.S. Constitution. Until the arrival of the railroads the town had been slow taking hold.

Once, in 1859, the front lawn of the old Greek Revival courthouse was the setting for a speech by Abraham Lincoln. Otherwise not a great deal of historic interest had taken place in Dayton. It was, however, spoken of proudly as a fine place to live, work, and raise a family, as indeed was all of Ohio. Was Ohio not the native state of three presidents thus far? And of Thomas Edison? Another of Dayton's notable sons, William Dean Howells, editor of *The Atlantic Monthly*, had written that the people of Ohio were the sort of idealists who had "the courage of their dreams."

By this courage they have made the best of them come true, and it is well for them in their mainly matter-of-fact and practical character that they show themselves at times enthusiasts and even fanatics.

In a speech years later Wilbur would remark that if he were to give a young man advice on how to get ahead in life, he would say, "Pick out a good father and mother, and begin life in Ohio."

If, in 1884, a new railroad station was plainly in need and most of the streets in town were still unpaved, the prospects for future prosperity were brighter than ever. Most importantly, the National Cash Register Company had been founded and was thriving. In little time it would become the largest manufacturer of its kind in the world. Bishop Wright knew his life on the road would continue half the year or more. Nonetheless, there was never a question that Dayton was home.

An important part of the family's education in geography, not to say a continuing stimulant for their curiosity, was supplied by the Bishop in long letters written during his travels, often while on board a train. However far his travels, his love of his country and its splendors remained abundantly evident. Minneapolis and St. Paul were "cities of marvelous growth, in a wonderful wheat-producing country." He wrote with enthusiasm and amazement. So steep were the grades over the mountains west of Missoula that three locomotives were required, two in front, one behind, he reported to those at home. His world, and consequently theirs, kept growing.

“Yesterday, I came down here, starting at 1:40 a.m.,” he reported in a letter mailed from Biggs, California.

You ought to have seen [the] Siskiyou mountains which we crossed yesterday on the cars. We rose pretty high, and to make grades, wound about for miles to get only a few. After a mile’s run we would come back to 200 feet from where we were before, about 175 feet higher up. We [ran] through several tunnels, but none long, the last at the summit being the longest. It is the grandest scenery and highest rapid grade I ever went through.

From wide reading and observations of life, he had acquired what seemed an inexhaustible supply of advice on behavior, habits good and bad, things to beware of in life, goals to strive for. He lectured on dress, cleanliness, economy. At home he preached courage and good character—“good mettle,” as he would say—worthy purpose and perseverance. Providing guidelines he understood to be part of a father’s duty.

It is assumed that young folks know best, and old folks are fogies. It may be so, but old folks may be as right about new fangles as young folks are about foggy ways.

Make business first, pleasure afterward, and that guarded.

All the money anyone needs is just enough to prevent one from being a burden on others.

He made a point of treating the three of his children at home with equal consideration and affection, praising each for his or her particular talents or contributions to the family. But plainly his favorite was Wilbur, “the apple of his eye,” as Katharine said.

Wilbur had also been the cause of the greatest worry. In his youth he had excelled in everything. He had been a star athlete—in football, skating, and gymnastics especially—and outstanding as a student. In his last full year of high school in Dayton, his grades were in the 90s in everything—algebra, botany, chemistry, English composition, geology, geometry, and Latin. There was talk of his going to Yale.

But all such plans ended when, playing hockey on a frozen lake beside the Dayton Soldiers’ Home, Wilbur was smashed in the face with a stick, knocking out most of his upper front teeth.

What exactly happened is hard to determine, but to judge from the little that is known, there is much more to the story. According to an entry in Bishop Wright's diary written years afterward, in 1913, the "man who threw the bat that struck Wilbur" became one of the most notorious murderers in the history of Ohio, Oliver Crook Haugh, who, in 1906, was executed for the murders of his mother, father, and brother, and was believed to have killed as many as a dozen others besides.

At the time of the hockey incident, Haugh lived just two blocks from the Wrights. He was only fifteen, or three years younger than Wilbur, but as big as a man and known as the neighborhood bully. As would be written in the *Dayton Journal* following his execution, "Oliver never was without the wish to inflict pain or at least discomfort on others."

Whether he "threw" the stick at Wilbur accidentally or intentionally is impossible to determine. But it is known that he was then working in a drugstore on West Third Street and that the druggist, in an effort to relieve him of the pain of rotting teeth, was providing him with a popular cure of the day, "Cocaine Toothache Drops." In little time young Haugh became so dependent on drugs and alcohol, his behavior so out of control that he had to be committed for several months to the Dayton Asylum for the Insane.

Wilbur undoubtedly knew him, but how well, or whether Haugh had some sort of score to settle with Wilbur, or was under the influence of drugs at the time of the incident, are all unknown. Except for Bishop Wright's brief diary mention, nothing on the subject is to be found anywhere in the Wright family correspondence or reminiscences. Nor is there much in the way of detail or firsthand description about the devastating after-effect of the accident on Wilbur. The whole episode seems to have been something the family wished to put behind them and remains a dark corner in Wilbur's life about which too little is known. But clearly it changed the course of his life.

For weeks he suffered excruciating pain in his face and jaw, then had to be fitted with false teeth. Serious digestive complications followed, then heart palpitations and spells of depression that seemed only to lengthen. Everybody grew more and more concerned. All talk of Yale ended. His ailing mother did what she could to care for him, but as her own health kept steadily deteriorating, he began looking after her.

"Such devotion of a son had rarely been equaled," wrote the Bishop, who would credit Wilbur with lengthening her life at least two years. In the

morning she usually felt strong enough to come down, with some help, to the first floor, but at night Wilbur would have to carry her back upstairs.

Brother Lorin seems to have been the only one who disapproved. “What does Will do?” he wrote Katharine from Kansas, where he had gone to seek his fortune. “He ought to be doing something. Is he still cook and chambermaid?”

Wilbur remained a recluse, more or less homebound, for fully three years—three years when he began reading as never before.

The Wright house at 7 Hawthorn Street, the setting of so much of the family’s life, was modest in size and appearance, and located in a comparably modest neighborhood. Like much of Dayton, Hawthorn Street remained unpaved until shortly after the turn of the century, and Number 7, with two linden trees and a stone hitching post in front, was a narrow, white frame structure very like others on the street, except for a decorative, wraparound front porch built by the brothers.

There were seven rooms, three downstairs, four up, all of them small, as was the lot. Only two feet separated the house from Number 5 next door on the north side. To get between the houses required one to turn and walk sideways.

The brothers were well into their twenties before there was running water or plumbing in the house. Weekly baths were accomplished sitting in a tub of hot water on the kitchen floor, with the curtains drawn. An open well and wooden pump, outhouse, and carriage shed were out back. There was no electricity. Meals were cooked on a wood stove. Heat and light were provided by natural gas. House and property had a total value of perhaps \$1,800.

The front door opened from the porch into a small, formal front parlor, but most everyone came and went by a side door on the porch that opened into the sitting room. From there the front parlor was to the right, dining room and kitchen to the left. A narrow carpeted stairway led to the bedrooms above.

The first-floor furnishings were all of the inexpensive Victorian variety to be found in homes throughout Ohio, or for that matter nearly everywhere in the country at the time—the lace curtains at the windows in the front

parlor, the upholstered wooden rockers and Gilbert clock on the mantelpiece that chimed every hour and half hour, the mirrored oak sideboard in the dining room. High ceilings and the modest scale and simplicity of the furnishings made the rooms considerably less cramped in feeling than they might have been.

The decor upstairs consisted of bare essentials only—beds, bureaus, chamber pots—with the exception of the bookcase and rolltop desk in the Bishop’s cluttered bedroom at the front of the house overlooking the street. Wilbur slept in the room in the middle, Orville and Katharine in the two rooms at back. Since the gas fireplaces downstairs provided the only heat, bedroom doors upstairs had to be kept wide open during cold weather.

With the tracks of the Dayton Western and Union Railroad only blocks away, the sound of train whistles was part of the night in all seasons. The smell of coal smoke in the air was the smell of home.

The Wright family book collection, however, was neither modest nor commonplace. Bishop Wright, a lifelong lover of books, heartily championed the limitless value of reading.

Between formal education at school and informal education at home, it would seem he put more value on the latter. He was never overly concerned about his children’s attendance at school. If one or the other of them chose to miss a day or two for some project or interest he thought worthy, it was all right. And certainly he ranked reading as worthy.

Those works he considered “very serious,” on theology mostly, were in his bedroom, the rest, the majority, proudly in evidence in the sitting room in a tall, glass-fronted bookcase. There could be found the works of Dickens, Washington Irving, Hawthorne, Mark Twain, a complete set of the works of Sir Walter Scott, the poems of Virgil, Plutarch’s *Lives*, Milton’s *Paradise Lost*, Boswell’s *Life of Johnson*, Gibbon’s *Decline and Fall of the Roman Empire*, and Thucydides. There were books on natural history, American history, a six-volume history of France, travel, *The Instructive Speller*, Darwin’s *On the Origin of Species*, plus two full sets of encyclopedias.

Everyone in the house read all the time. Katharine favored the novels of Sir Walter Scott; Orville, Hawthorne’s *The House of the Seven Gables*, while Wilbur—and particularly during his homebound lacuna—read just about everything, but had a particular love of history.

In those interludes when the Bishop was at home, he insisted on time with his books or he could be found at the public library pursuing his love of genealogy. As one who so strongly believed in the importance of family, he could not know enough about those from whom he and his children were descended. He wanted to make them aware of that, too, just as he wanted them to have open and receptive minds and to think for themselves. As said, his was a mind that never slowed down. “He talked very freely to his children on all subjects,” Orville would say, “except money making, a matter to which he gave little consideration.”

Included among the ecclesiastical works on his bedroom shelves were the writings of “The Great Agnostic,” Robert Ingersoll, whom the brothers and Katharine were encouraged to read. “Every mind should be true to itself—should think, investigate and conclude for itself,” wrote Ingersoll. It was the influence of Ingersoll apparently that led the brothers to give up regular attendance at church, a change the Bishop seems to have accepted without protest.

Interestingly, for all the Bishop’s dedication to church work, religion was scarcely ever mentioned in his letters to his children, or in what they wrote to him. No framed religious images or biblical quotations were part of the home decor, with the exception of a color print of Saint Dorothy, hanging to the left of the fireplace in the front parlor, but that was the part of the room where Orville customarily propped his mandolin against the wall, and she was the patron saint of music.

Years later, a friend told Orville that he and his brother would always stand as an example of how far Americans with no special advantages could advance in the world. “But it isn’t true,” Orville responded emphatically, “to say we had no special advantages . . . the greatest thing in our favor was growing up in a family where there was always much encouragement to intellectual curiosity.”

II.

In early 1889, while still in high school, Orville started his own print shop in the carriage shed behind the house, and apparently with no objections from the Bishop. Interested in printing for some while, Orville had worked

for two summers as an apprentice at a local print shop. He designed and built his own press using a discarded tombstone, a buggy spring, and scrap metal. "My father and brother seeing my determination to become a printer, managed after a while to get a small printing press for me," Orville later explained, and with the help of Wilbur, who was ready to resume life again, he began publishing a newspaper, the *West Side News*, devoted to the goings-on and interests of their part of Dayton on the west side of the river.

A first edition of four pages appeared on March 1 carrying the advertisements of seventeen local establishments, including F. P. Nipkin's drugstore, W. A. Lincoln's Dry Goods (offering "BIG BARGAINS"), Winder's Grocery, the Cleveland Laundry, and the H. Ruse Feed Store. Orville was listed as publisher. The subscription rate was 45 cents a year, or two weeks for 10 cents.

The editorial content for this and the editions that followed consisted mainly of one short article of general interest along with numerous bits and pieces of local news, these selected by Wilbur apparently. One could read of a freight car breaking down on the Wolf Creek bridge or that the Shakespearean reading by Professor C. L. Loos at the high school was widely appreciated by the large audience present, that the trunk factory of W. I. Denny had burned to the ground, or that George La Rue of South Hawthorn Street had presented his large collection of bird eggs to the public library. Or that Miss Carrie B. Osterday of West Third Street, and G. J. Nicholas and Tula Paisly Street were all sick with typhoid fever. Or that police officers O'Brien, Urmev, and Kitzelman had arrested Ed Kimmel and another boy for stealing chickens.

At the same time one could also find mention of the disastrous flood at Johnstown, Pennsylvania, or the completion of the Eiffel Tower in Paris.

Now and then the brothers would include items from other publications that they judged worthy of the readers' attention, such as one titled "Encourage Your Boy," reprinted from *Architect and Building News*.

Do not wait for the boy to grow up before you begin to treat him as an equal. A proper amount of confidence, and words of encouragement and advice . . . give him to understand that you trust him in many ways, helps to make a man of him long before he is a man in either stature or years. . . .

If a boy finds he can make a few articles with his hands, it tends to make him rely on himself. And the planning that is necessary for the execution of the work is a discipline and an education of great value to him.

By the end of April, with the paper showing some profit, Orville moved the business to a rented space on West Third Street, where the city's electric trolley ran, and Wilbur, now twenty-two, was prominently listed as editor.

A high school friend of Orville's, Paul Laurence Dunbar, who had been the class poet and the only black student in the school, became a contributor to the *West Side News*. Later, when Dunbar proposed doing a weekly paper for the black community, Orville and Wilbur printed it on credit, but it lasted only a short time.

At some point, Dunbar is said to have chalked on the shop wall this quatrain tribute:

Orville Wright is out of sight
In the printing business.
No other mind is half so bright
as his'n is.

In 1893, through the influence of Bishop Wright, a first collection of Dunbar's poems was published by the United Brethren Church, for which Dunbar himself paid the cost of \$125. In another few years, having been discovered by the editor of *The Atlantic Monthly*, William Dean Howells, Dunbar had become a nationally acclaimed poet.

That July of 1889 the paper carried the obituary of Susan Koerner Wright. Which brother wrote it is unknown. Most likely it was a joint effort. She had died at home on July 4, at age fifty-eight, after an eight-year struggle with tuberculosis.

She was of retiring disposition, very timid and averse to making any display in public, hence her true worth and highest qualities were most thoroughly appreciated by her family.

She was buried two days later at Woodland Cemetery, her whole family present. Never afterward was July 4 to be a day of celebration in the family. As the Bishop would write in another July to come: "The Fourth had its

Chinese firecrackers . . . [and] Hawthorn Street furnished several displays, but No. 7 was not patriotic. Not a drum was heard, not a flag was [un]furled, and not a firecracker snapped there.”

A year later, the brothers changed the name of their paper to *The Evening Item*, and the year following the *Item* ceased and they concentrated on making money as job printers.

The printing business had been Orville’s idea from the start, and he enjoyed it most, working as hard as he could. But he seems to have found Wilbur’s performance lacking. “We’ve been so busy for the past few weeks that we’ve had very little time to write,” Orville reported to their father in the fall of 1892. “I’ve been making \$2.00 to \$3.25 a day in the office, but I have to divide it with Will so that when the week is over I don’t have much left. Will’s working on the press, at least he says he is, but I can see little signs of it from the appearance of things.” At home, however, he reassured the Bishop, they were “getting along real well.”

With Katharine away at college by this time, they had no choice but to get by domestically as best they could and in this they succeeded in good, even high spirits, to judge by a letter from Wilbur to Katharine.

We have been living fine since you left. Orville cooks one week and I cook the next. Orville’s week we have bread and butter and meat and gravy and coffee three times a day. My week I give him more variety. You see that by the end of his week there is a big lot of cold meat stored up, so the first half of my week we have bread and butter and “hash” and coffee, and the last half we have bread and butter and eggs and sweet potatoes and coffee. We don’t fuss a bit about whose week it is to cook. Perhaps the reason is evident. If Mrs. Jack Sprat had undertaken to cook all fat, I guess Jack wouldn’t have kicked on cooking every other week either.

About this time, too, they decided to proceed with major changes in the house, building the spacious wraparound porch. They installed new larger windows downstairs, shutters for the windows upstairs, doing all of it themselves.

Importantly, like much of the country, they had also taken up bicycling, and as Wilbur reported, they had lately headed off on a “run” to the south, down the Cincinnati Pike, stopping at the County Fair Grounds to pump around the track several times. From there they continued on to Miamisburg up and over numerous steep hills to see the famous prehistoric Adena Miamisburg Mound, largest of Ohio’s famous conical-shaped reminders of a vanished Native American civilization dating back more than two thousand years. In all they covered thirty-one miles.

Bicycles had become the sensation of the time, a craze everywhere. (These were no longer the “high wheelers” of the 1870s and ’80s, but the so-called “safety bicycles,” with two wheels the same size.) The bicycle was proclaimed a boon to all mankind, a thing of beauty, good for the spirits, good for health and vitality, indeed one’s whole outlook on life. Doctors enthusiastically approved. One Philadelphia physician, writing in *The American Journal of Obstetrics and Diseases of Women and Children*, concluded from his observations that “for physical exercise for both men and women, the bicycle is one of the greatest inventions of the nineteenth century.”

Voices were raised in protest. Bicycles were proclaimed morally hazardous. Until now children and youth were unable to stray very far from home on foot. Now, one magazine warned, fifteen minutes could put them miles away. Because of bicycles, it was said, young people were not spending the time they should with books, and more seriously that suburban and country tours on bicycles were “not infrequently accompanied by seductions.”

Such concerns had little effect. Everybody was riding bicycles, men, women, all ages and from all walks of life. Bicycling clubs sprouted on college campuses and in countless cities and towns, including Dayton. At Oberlin College, Katharine and a group of her fellow co-eds would pose for a memorable photograph with their new bicycles. Each looked highly pleased, but Katharine beamed with the biggest smile.

In the spring of 1893 Wilbur and Orville opened their own small bicycle business, the Wright Cycle Exchange, selling and repairing bicycles only a short walk from the house at 1005 West Third Street. In no time, such was

business, they moved to larger quarters down the street to Number 1034 and renamed the enterprise the Wright Cycle Company.

Of the two brothers, Orville loved bicycles the most. As an admirer who knew him in later years would say, “Bring up the subject of the shapes of handlebars or types of pedals on early ‘safety bicycles’ and his whole face lights up.”

Ever enterprising, incapable of remaining idle, the brothers now turned their off-hours to redoing the interior of 7 Hawthorn Street. They built a new gas fireplace and mantelpiece for the sitting room, redesigned and rebuilt the stairway, refinished all the trim, dressed up rooms with bright new wallpaper, ceilings included, laid new carpets, and with Katharine helping whenever she was home from college. Wilbur’s particularly distinctive contribution was the decorative carving on a new cherry newel post at the foot of the stairs.

The work was just about finished in time for the arrival of spring in 1894. On Saturday, March 31, Bishop Wright recorded in his diary:

Cloudy day, but moderate. At home. Orville and C[K]atharine arrange the house. First time for months, we had a room to sit in, all being torn up.

Business remained good, but with the opening of more bicycle shops in town, competition kept growing. When sales grew slack, Wilbur turned conspicuously restless, uncertain of what to make of his life. He had long thought he would like to be a teacher, “an honorable pursuit,” but that required a college education. He had no knack for business, he decided. He felt ill suited for it and, as he explained to his father, was now weighing the “advisability” of taking a college course.

I do not think I am specially fitted for success in any commercial pursuit even if I had proper personal and business influences to assist me. I might make a living, but I doubt whether I would ever do much more than this. Intellectual effort is a pleasure to me and I think I would [be] better fitted for reasonable success in some of the professions than in business.

In another letter, this to brother Lorin, Wilbur had still more to say. He was one who not only devoted much of his time to reading, but to thinking, and he had given a great deal of thought to the subject of business and reached a number of his own conclusions.

In business it is the aggressive man, who continually has his eye on his own interest, who succeeds [he wrote]. Business is merely a form of warfare in which each combatant strives to get the business away from his competitors and at the same time keep them from getting what he already has. No man has ever been successful in business who was not aggressive, self-assertive and even a little bit selfish perhaps. There is nothing reprehensible in an aggressive disposition, so long as it is not carried to excess, for such men make the world and its affairs move. . . . I entirely agree that the boys of the Wright family are all lacking in determination and push. That is the very reason that none of us have been or will be more than ordinary businessmen. We have all done reasonably well, better in fact than the average man perhaps, but not one of us has as yet made particular use of the talent in which he excels other men. That is why our success has been only moderate. We ought not to have been businessmen. . . .

There is always a danger that a person of this disposition will, if left to depend upon himself, retire into the first corner he falls into and remain there all his life struggling for bare existence (unless some earthquake throws him out into a more favorable location), where if put on the right path with proper special equipment, he would advance far. Many men are better fitted for improving chances offered them than in turning up the chances themselves.

But if not a “first corner” to fall into for the rest of life, what was “the right path”? As it was he felt trapped.

Bishop Wright offered to help with the cost of a college course. “I do not think a commercial life will suit you well,” he wrote in agreement. Then sales at the Wright Cycle Company picked up again, to the point where they were selling about 150 bicycles a year, and Wilbur stayed with it.

In 1895, their third year in business, they moved to a corner building at 22 South Williams Street, with a showroom on the street level and space for a machine shop upstairs. There, on the second floor, the brothers began making their own model bicycles, available to order. The announcement of the new product read in part as follows:

It will have large tubing, high frame, tool steel bearings, needle wire spokes, narrow tread and every feature of an up-to-date bicycle. Its weight will be about 20 pounds. We are very certain that no wheel on the market will run easier or wear longer than this one, and we will guarantee it in the most unqualified manner.

It sold for \$60 to \$65 and was called the Van Cleve, in honor of their great-great-grandmother on their father's side, who was the first white woman to settle in Dayton. With the Van Cleve in production, and available in all colors, a second, less-expensive model was introduced called the St. Clair, in tribute to the first governor of the old Northwest Territory, of which Ohio was part. Their income grew to the point where they were earning a handsome \$2,000 to \$3,000 per year.

"Van Cleves get there First," proclaimed one of their advertisements. And in the Van Cleve catalogue, the brothers declared:

Through fair and liberal dealing we have built up a large and successful business, and we are proud to number among Van Cleve riders the best judges of bicycles and bicycle construction in the city. Without their assistance in spreading the fame and praise of the Van Cleve, we could not have hoped to have pressed it to its present high position in popular estimation. Through their testimonies the name Van Cleve has become the synonym of excellence in bicycle construction.

At home, the enjoyment of Lorin's children coming in and out grew only greater for both Wilbur and Orville. Their niece Ivonette would say of Orville in particular that he never seemed to tire of playing with them, and that if he ran out of games, he would make candy for them. Wilbur, too, would amuse them in equally wholehearted fashion, though not for long. "If we happened to be sitting on his lap, he would straighten out his long legs and we would slide off. That was a signal to us to find something else to do.

When we were old enough to get toys, Uncle Orv and Uncle Will had a habit of playing with them until they were broken, then repair them so that they were better than when they were bought.

Perhaps it was because he was away so much of the time that Bishop Wright put such abiding emphasis on the importance of family life at 7 Hawthorn—"the home circle," as he said—and why it played so large a part in all of their lives however far those lives reached.