

The Wright Idea

**A play in three acts written by
Alison D. Moncrief
for the New England Air Museum
in honour of the Centennial Anniversary
of the Airplane**

CHARACTERS

Orville Wright
Wilbur Wright
Katherine Wright
Newspaper Boy

PROP LIST

at least one full bicycle
bicycle parts
inner tube box
paper and pen
tool box and tools
2 tables and 1 clock
camera set up
coffee mugs
harmonica
mandolin
lamp
newspapers
wind tunnel
propeller sound
notepad
bell

COSTUME LIST

Wilbur: dark suit, white shirt, dark tie, laced boots/shoes, dark socks, apron, bowler hat
Orville: mustache, dark suit, white shirt, dark tie, laced shoes, check socks, apron, cap
Katherine: long dress/skirt, ruffled top, hat, spectacles, shawl, laced boots
Newspaper Boy: knickers, shirt, suspenders, tall socks, shoes, cap

Act I

*The stage opens, lit only by the over-head projector projecting **Slide 1** - Wilbur and Orville 'on the back porch of their Dayton, Ohio house in June 1909' (pg.4). 1900 music is playing. The two actors, Wil and Orv, sit in the same position as the two in the photo. They will be on a similar stoop, and the actual set will fill out the projected photo. The building behind them is the brick bicycle shop. Overhead is the sign Wright Cycle Co. The actors will be wearing clothes similar to that of the two in the photo, but they will have work aprons on. At the time of this scene, it is probably spring 1899; they begin to talk as the slide projection fades to stage light and the music dies out.*

Wil: *(handing Orv some papers, as they both look on.)* I received these essays from the Smithsonian. It seems that Langley uses a steam-driven engine to propel his model, sound enough idea. Can't imagine that weight lifting though.

Orv: Yes, but, think about it, how is he going to control such a gigantic machine?! You could have all the power you need, steam engine, gas motor, or manual, whatever..but, if you can't control the aircraft, then you can never get off the ground, look at Lilienthal... Langley hasn't done it yet.

Wil: Well what do you think about his idea for the craft's tail? Do you think that the tail will work as a rudder, just like on a ship, because I'm not...

Orv: sure if a yaw in the air works the same as in the water. Surely air doesn't work in strait lines, does it?

Wil: Well that's why Lilienthal used his own body to steer his gliders. He would just counteract the wind with his body and balance the craft that way. But a lasting flight, we just can't...

Orv: be sure of that type of balance and depend on that type of control, look where it got him...*(motioning a crash)*

Wil: I know, but, it does seem that there must be a way of controlling an aircraft that is effective.

Orv: There must be a way of powering an aircraft that allows for precise control throughout the entire flight, an entire flight.

Wil: A consistently precise control! *(who has taken out his harmonica and begun to play a bit, Orv hums along simultaneously with Will)* Like our bicycles, balance in motion, we have to have balance in motion.

Orv: Or, that hawk, there (*pointing to the sky*). Look how he keeps adjusting the proportions of his wings as he circles. He is continually changing his wings to remain balanced.

Wil: 'Birds are the most perfectly trained gymnasts in the world'. Think that thousands of the most dissimilar body structures: insects, reptiles, and birds..

Orv: and mammals who-

Will: fly every day- for pleasure. The difference between the praying mantis who flies and that buzzard is just as great as the difference between that buzzard and us! Man must be able to fly, simple flight should somehow be available to man...

IN UNISON: (*looking at one another*) To us.

Orv: There is nothing about that buzzard that can't be done on a larger scale...surely..(*humming a bit*) It's common belief you know that flight by man is an impossibility. (*jokingly to brother*)

Wil: When a man says, 'It can't be done'

Orv: 'A man may as well learn to fly.'

A little laughter and a more enthusiastic tune on the harmonica as a bell rings from inside the shop for service. A young boy with a cap wheels a bike with a flat and dislodged tire around from the left of the brothers.

Wil: (*slipping his harmonica into his back pocket and stands to greet the boy*) Hello son, what can I do for you and your bicycle?

Boy: My tire's gone flat and wonky, and I need it for the paper route.

Orv: (*Standing up and heading back into the shop*) Wil, you handle this young man's tire and I'll get back to work on the St. Clair repair work for Mrs. Stevenson. (*To boy*) I sure hope we get our paper tonight!.

*To the side of the stoop the inside of the shop will be represented. **Slide 2** - with the picture of 'Wilbur in the bicycle shop workroom, 1897' (pg.13) will be shown there. The projection will fill out the setting of a workroom. Wilbur will walk into that room and walk into the position of the Wilbur in the photograph. He will then tinker a bit, (perhaps there will be a real workbench with miscellaneous real tools about) and begin talking. The boy has followed him there with the bike and stands stage right of Wilbur.*

Wil: Now, it looks like you have bent that back rim, and that caused the tire to come off , you must have been doing some stunts on that cycle young man. (*turning to the audience with a wrench and a cardboard box in his hand.*)

Boy: Yes sir, I was. Down at the Dayton Gorge there's a big dirt mound that my brother Terence dared me to jump over with this bicycle, and I nearly killed myself in the process-he laughed.

Wil: (*Tending to the bike while talking*) Is that right? Have you ever raced your brother on this cycle?

Orville appears, smiling wiping his hands on a cloth, looking as dapper as ever, he watches Wilbur and listens to the boy, he hums a bit of the tune Wilbur was playing before. Wilbur at this stage has taken an inner tube out of the cardboard box and has mounted the tire and secured it with a tube of cement.

Boy: I raced him down Hawthorne street yesterday and I was winning 'till he cut me off and skidded in front of my path...That's how I got this cut. (*showing his scraped knee*)

Orv: You can't have eaten as much dust in your cycling career as I have, sonny, so don't give up.

Wil: (*Pumping up the back tire of the repaired bike*) stick to the long roads. You may be able to cover more distance than your brother, sure-you get great practice on your paper route. Now you know what to challenge him in next time. There. (*Wilbur begins to fiddle with the inner tube's cardboard box absent-mindedly as he talks to the boy*) Now, I have just re-cemented your tire securely and it should stay, provided you don't take it back down to the gorge for another....

Wilbur suddenly looks down at the cardboard box moving in his hands. He turns to Orville and shows him what they both now see in the movement of the box.

Wil: 'A spiral twist...!

Orv: running along the wings' ...

Wil: One wing can tilt up and the other can tilt down...

Orv: (*Demonstrating*) Yes Wilbur! 'If a bird adjusts the angles of its wings to make turns or balance itself, why not..

Wil: apply the same idea to the wings of an aircraft! Our aircraft!

The boy has been watching the two in both confusion and excitement.

Boy: An aircraft! You mean to fly with? In the air? Can you give me a ride?

Wil: When we are in the air, son, you can get your ride. Now that's 25 cents for the inner tube, and get you back to your work. We've got to start working on this thing if we are going to get you your ride.

Boy: Thank you Mr. Wright, Thank you Mr. Wright, see you later. (*exits on bike*)

Wil: That must be it Orv, this way (*showing the box*) we can attain balance...

Orv: and control.

They both turn to the worktable or kneel to the ground after Orville has grabbed a bit of paper and Wilbur has provided the pen. Orville begins to sketch the bi-plane kite that they are to build. Slide 3 (pg.31) of the sketch is projected as the lights on the brothers fade...they add lib excited mumbles to one another and concentrate on the paper before them.

Act II

The scene is the inside of a house, the drawing room. Slide 4 shows Katherine. Katherine, the actress, stands in a similar position, then sitting as lights fade and light on stage comes up. Katherine is sitting stage left at the end of a round wooden table. Behind her there is a tall grandfather clock against the wall and a doorway to the right. Katherine is dressed in looser fitting Victorian clothes and her hair is pulled back to a bun on the top of her head. She wears small eyeglasses. She is holding a letter from Orville in her hands and is smiling a little bit. Bishop Milton Wright is heard off stage right.

Father: (*off stage*) Katherine, will you read it aloud again please?

Kath: (*sigh*) Dear Father..

Father: from the very beginning please!

As Katherine reads the letter, Slides 5 and 6 will be projected to the right of her - landscapes of Kitty Hawk and perhaps one or two of the first glider.

Katherine: Kitty Hawk Beach, Outer Banks, North Carolina. The second of October 1900. Dear Father and Katherine, I do hope this letter finds you both well. We have

moved out of Postmaster Tate's house in the center of town, and are now lodging quite comfortably in a small tent on the vast, expansive beach. **(Slide 5)** The three truckloads of camping equipment, canvas cots, canned and packaged foods are sustaining us well enough to experiment with the flights of our new glider. The U.S Weather Bureau was certainly truthful in their account that Kitty Hawk is one of the windiest stations in the country. We came down for wind and sand, and we have got them.' Our work inspired daily by the 'eagles and buzzards that soar overhead by the dozens. I hope you are not worrying about us, we are happy. Sister Katherine, thank you for supplying us with the two extra quilts, Wilbur and I have found excellent use for them. We are confident that our experiments are leading us somewhere unknown to man. With love to you both, Orville.

The grandfather clock behind Katherine strikes once and Katherine walks off stage, grabs a shawl, and then walks on again. This represents the passing of time. She picks up another letter that is on the table in front of her. Again, she reads aloud.

Father: *(off stage)* From the beginning Katherine!

Katherine: Yes, Father. Kitty Hawk Beach, Outer Banks, North Carolina. The twenty ninth of October 1900. Dearest Katherine and Father, we are soon on our way home. 'After the last three weeks of tests, measurements, adjustments and repairs, we attempted a free flight with myself as the pilot. We took the glider to the top of the biggest dune and launched it from there with the support of 23-mile winds. 'For a few thrilling moments I lay motionless between the glider's great white wings, sailing down the slope, picking up speed as I rode the sea-scented breezes above the dunes. It was exhilarating. That day I made twelve more flights, the longest lasting 20 seconds and covering nearly 400 feet in distance. We will need much more practice before we can operate the controls. The glider was wrecked by the wind and we shall leave it as is until we return hopefully in a few months. Orville and I are already scheming the flights of our next glider, and he is eager to get a ride himself. We will send word to you from Charlestown and should be home within the week. Love to you both, Wilbur.

p.s. Katherine, the muslin that we are using over the wings is called "The Pride of the West" it is most commonly used for women's undergarments, we strongly recommend it!

Slides 6 and 7 are projected - a final projection of the 1900 photo of 'the 1900 glider wrecked by the wind'.(pg.37&39) is shown for a moment.

The clock behind Katherine strikes again, and again, she walks off stage and returns with plates for two place settings. She is wearing an apron. This time she is setting the table for two and is slightly fatigued as she has been on her feet teaching all day.

Katherine: I don't want to read it again Father. *Appears from the right and fumbles for her spectacles, takes the letter from the table and reads and paraphrases and once again, slide 8 accompanies the story:* (pg.41&42). Kitty Hawk...July 1901. We have changed

the position of our tent so that we are closer to Kill Devil Hill, where we are launching this year's glider. (**Slide 8** – wooden shed) We have built a small wooden shed to use as a wood shop and to store the new glider....Octave Chanute stayed and helped us....*to audience* who is Octave Chanute?

To audience: those mosquitoes sound horrific. *She reads* 'We had scarcely settled in when torrential rains arrived, followed by the worst outbreak of mosquitoes in years. There was no escape, the sand and grass and trees and hills and everything was fairly covered with them. They chewed us clear through our underwear and socks 'Those mosquitoes were an omen, the glider refused to act like our machine last year and at times seemed to be entirely beyond control. We are quite puzzled and dejected and Wilbur is beginning to believe that man will fly, but perhaps not in our lifetime. I am looking forward to our return. Yours, Orville. (*Putting letter down*) (*To Audience*): Well, when tomorrow comes, we must be supportive of them as their spirits are low.

The shop area is lit up Wilbur and Orville are dressed in their suits and aprons and carry in their wind tunnel and other instruments that were used in their preparation for 1902 glider. The shop is loaded with miscellaneous bits and pieces that would aid to their wind tunnel experiments.

Wil: (*turning the wind tunnel while Orv records something on a notepad.*) After two years of our calculations, our experimentation has been unreliable. Lilienthal's calculations seem wrong! All of our data proves that this is entirely our own investigation. Orv, we are groping our way through the dark with this. (*Perhaps a bit nervous.*)

Orv: Wil, now that we are sure of that, it's just a matter of finding a way to fly. We know the way exists, we just have to learn how to get there. With all of these wings that we are trying, we are bound to find the one. What was the number on that one?

Here they will be busy with making recordings. They continue to work and move the wind tunnel off stage as the shop fades slightly. The house lights come on to Katherine, once again at the kitchen table. Katherine is sewing or reading or correcting essays.

Katherine: (*To audience*): Frankly, I will be quite looking forward to them getting back to Kitty Hawk. I am really quite worried for the boys' health. 'Will is thin and nervous and so is Orv. They will be alright when they get down in the sand where the salt breezes blow. Kitty Hawk seems to cure all of their ills you know.

To audience: No doubt this time next week when they are gone we'll be wishing to have some of their bubbling racket around. (*getting up*) Yes, well we'll deal with that next week. I'll get dinner started. You (*pointing to someone in audience*) can tell Wil and Orv to be over in an hour, and tell them they must come to eat. They are getting too thin, the pair of them!

The light fades on the house and to the right where the brothers were working in the shop and it is now clear. There is a small table with a lamp on it with one chair. Wilbur sits at the table writing a letter. As he does, slides of the 1902 camp and the 1902 flights are projected according to the monologue.(pg. 50&51). Orv can be in the background also writing in his journal.

Wil: (*writing and reading his letter*) Kitty Hawk, 10 September 1902. Dearest Katherine and Father, When we arrived at our beloved Kitty Hawk, we came to find our tent from last year battered severely by winter storms. So, we have set to work making repairs and rebuilding what we had, and our living arrangements are now amicable. ‘We are much more comfortable than we were last year.

Orv: Tell Katherine about our kitchen. (**Slide 9**)

Wil: You will be pleased to know, Katherine, our kitchen is immensely improved, and we now have our beds on the second floor and sleep aloft- (**Slide 10**) Orville recons these new beds will help us in our lofty pursuits. They are a considerable improvement over our cots in any case. (**Slide off**) We now have a bicycle that runs much better over the sand, so that it takes only about an hour to make the round trip to Kitty Hawk instead of three hours as before.

Orv: (*concerned and stepping closer to Wil and into the light of the lamp.*) I don’t understand it Wil. With the wing warping on our new design, the balance that we have set out to achieve should be more consistent than our flights have proven.

Wil: I know.

Orv: (*motioning with arms*) ‘I was sailing along smoothly without any trouble and one wing was getting a little too high and the machine was slowly swinging off in the opposite direction. The next thing I know, the wing was so high in the air and I was thinking that I must have worked the twisting apparatus the wrong way.

Wil: So you threw the wingtips to their greatest angle...

Orv: and started descending backwards-fast!

Wil: You fell 25-30 feet Orv!

Orv: Horrible! So, as a result, ‘we have a heap of a flying machine! and me-

Wil: without a bruise or a scratch. Well, I am glad that you’ve still got your head on those shoulders and can help me figure out why the glider lost control so suddenly.

Orv: And why does it only do it on 30% of the test flights?

Wil: (*Turning back to his letter writing and reading aloud to Orv who paces nervously.*) 'Our new machine is a great improvement over anything we have built before and over anything anyone has built. We believe that the flying problem is nearing the solution'. (*To Orv, looking up*) I am trying to be as optimistic as possible, so they won't worry.

Orv: (*distracted*): We just have to make it consistent.

Wil: (*having finished and sealed the envelope, turning to Orv*) What about the tail of the glider? 'The new machine has a vertical tale and the earlier ones were tailless; the wingtips are on a line with the center, while the old machines..

Orv: (*motioning*) had the tips drawn down, like a sea gull's wings.

Wil: The trouble might be due to either one of these differences. (*Fatigued, Standing and turning away from the audience as if walking to bed.*) Good night Orv. I am glad that you were not hurt today, we will figure this out. I feel it. I cannot wait to glide again tomorrow, but I need to go to bed now. Try to get some sleep. Night.

He and Orv start whistling the same tune as Wilbur exits and Orville still paces, pensively. He lifts the envelope that Wilbur has written to Katherine and drops it back on the table.

Orv: The tail, and the wings. What went wrong today? It must be the tail...(*pause*)... If we have the wings warped, then why do we not warp the tail? Yes. Warp the tail. (*He picks up the envelope again and bends the back of the envelope as if he is moving the tail of the glider.*) 'The fixed tail worked perfectly well most of the time, except during particularly drastic turns. Pressure must have built up under the tail and thrown the glider off balance and into the spin I had. The cure is to make he tail moveable, like a bird's tail. That is it. (*Has a quick, happy blow on Will's harmonica or strum on his mandolin and exits and a succession of slides are shown in that spot of the 1902 glider.*) (**Slides 10, 11, 12, 13**)

The lights then fade and come on to Katherine again reading a letter with great excitement.

Katherine: Today 'was the highest wind a gliding machine was ever in, 30 miles per hour! So that we now hold all the records; The largest machine ever handled, the longest distance glide in America, the longest time in the air, the smallest angle of descent and the highest wind! We have already begun to design a new machine that is powered by propellers and a motor. More when we are home again, sending you our love, Orville.

Lights out on Katherine smiling and holding the letter.

ACT III

The lights come up again on Orville is sitting at the table with a cup of coffee. Wilbur just walks in as Orv begins talking . They are again in their suits, warming their hands on their cups while sipping coffee. It is the morning of December 17th 1903.

Orv: I have never been so thankful for the three extra quilts that Katherine sent us with as I am now. Five blankets, two quilts and a hot water jug and I intend to be comfortable here. We are so close and I really want to get home for Christmas. What is the date Wil?

Wil: It is the 17th today. Freezing rain and snow outside. The puddles are glazed over with ice. Listen, I just met with Old Man Tate and he gave this to me.

Hands Orv a newspaper with the article about Samuel Langley who on December 8th crashed his second attempt at a flying machine.

Orv: Langley crashed again, huh?! *(reads)* 'Once again, the Great Aerodrome and its pilot have crashed into the Potomac.' *(reads)* Indeed, the \$ 25,000 in governmental funding for this flying machine has also gone belly up.

Wil: We've spent only a fraction of that! We've got to test it today if we want to get going. Conditions are not favorable, but the wind could be our aid.

Orv: 27 miles per hour out there. It is today, I know, I was hoping the wind would die down a little. It is a shame for Langley, but he had no control in the air.

Wil: He had no warped tail! Let's go.

Orv: Alright, alright *(blowing on his hands trying to warm up)* Let's brave this Kitty Hawk air.

Wil: Tate and the others are meeting us at the starting track, are you sure that you have the camera set up.

Orv: *(joking)* Are we anticipating photographic moments today, big brother?

Wil: Why yes, we are. Now get your cap and let's go.

The screen or panels are pulled open to reveal the 1903 Flyer and a camera set up on the side. Caps are hanging by the door. As they motion to start the propeller, a distant propeller sound is heard.

Orv: Right then, we'll flip a coin to see who will ride this morning. I call heads to fly.



Wil: *(taking a coin out of his pocket then looks at Orv.)* Orv, I won the coin toss on the 14th, this is your turn. Go on.

The two shake hands intimately and Orv gets into place, he can run behind the glider. Wilbur turns and talks to imaginary station men.

Wil: Come on men, don't look so sad! Holler and clap, try to cheer Orville up when he starts down the track. *(To Orv, loudly as propeller sound increases.)* Right, pull the restraining rope when you are ready.

Orv: *(Loudly, over propeller):* Lilienthal said, ' One can get a proper insight into the practice of flying only by actual flying experiments.'

Wil: Then fly, Orv!

The lights go on in the house Katherine is huddled around the famous telegram, now projected. (Slide 14 – telegram p.79)

Katherine *(reads from telegram)* 'Success four flights Thursday morning All against twenty one mile wind Started from level with engine power alone Average speed through air thirty one miles Longest 57 seconds. Inform press. Home Christmas. Orevelle Wright.

Katherine: *(emotionally to audience):* They spelled Orville's name incorrectly!

Katherine freezes and paperboy comes on his bicycle reading headlines of first flight as he tries to sell papers.

Boy: *Flying Machine Problem Solved By Ohio Men.*

(Blackout. Actors return to stage for bows. Music resumes.)