

## THOSE AMAZING PIONEER AVIATORS

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AWE Conference, Varese, Italy  
16 September 2006

### 1. Pioneer Women Aviators: What can we learn from them?

Good morning to all of you air-minded ladies and gentlemen! First, my thanks to Trish Beckman, who alerted me to the very existence of this conference, and to Michelle Bassanesi for allowing me to speak to you this morning. It is a real privilege. I should add that it was Michelle's website notes that inspired me to investigate the lives of these pioneer women aviators. And I also want to thank Trish and Clare Walker, for their help in forwarding valuable research material.

Though I have promised to talk about "pioneer women flyers," I will be limiting my remarks. American pilots like Harriet Quimby and Ruth Law have received plenty of press over the years, so I'm going to ignore them in this talk. Instead I'd like to focus on their lesser-known--but equally remarkable--European sisters. In the five years leading up to WWI, at least 45 of them took to the air. They are a fascinating group of women, and I think we can learn something from their lives and careers. I'll speak briefly about 10 of them and then draw some conclusions that may be of some use to us.

### 2. Wright brothers' flight

As we all know, the Wright brothers took off from Kitty Hawk in December of 1903. But for another five years few people knew of their achievement and fewer yet believed it was true. In Europe too, the early experiments in aviation attracted little attention. All this changed in 1908, when the Wrights made public flights both in the US and in Europe.

### 3. Wright Type A Biplane

Wilbur's flights near Le Mans electrified the French--not just the government (which promptly signed a contract for military planes) but also the European designers who watched him (Bleriot, the Farman brothers, Santos-Dumont and others).

### 4. Early flight in Europe Bleriot, first to cross the Channel / Henry Farman & Gabriel Voisin, gifted aircraft designers

These are the names and faces we associate with early flight in Europe. And these are typical aircraft of the pre-WWI years:

### 5. Voisin Farman biplane 1908

### 6. Bleriot XI Monoplane

The Le Mans flights by Wilbur Wright also thrilled the admiring crowds of civilians. As part of his demonstration Wright took a number of women up as passengers. Here we see one of them.

### 7. Wilbur Wright and Mrs. Berg

Mrs. Berg isn't very important in aviation history. But the picture does allow me to make a point. In the photos I'll be showing this morning I'd like you to notice what people are wearing. It is a question that the flyers themselves paid a lot of attention to.

When we think about clothing styles, we quickly realize that men's fashion usually emphasizes authority, power, seriousness and mobility. Men's shirts and trousers and shoes allow them to move.

But for much of history and certainly at the beginning of the 20th century, women's fashion evoked frivolity and helplessness. Clothes were restrictive and cumbersome. (Note the scarf keeping her hat on and the rope she needs to keep her skirts from whipping up in the wind.)

When men began flying, they remained eager to project authority and power (Wright is wearing a rather formal starched collar), but they had to improvise garments to combat the cold, the rain, the oil and the dirt, and to allow for manual work on engines. Often this meant crossing class boundaries (wearing workmen's caps, like the one we see here, and often the overalls usually worn by mechanics.)

Women flyers faced the same physical problems and they solved them in part by crossing gender boundaries—we'll see this in their use of goggles, helmets, gauntlets, high boots, and trousers. They also used leather and fur in ways traditionally reserved for men. No kid gloves or patent leather handbags for them, but tough leather coats and fur ear flaps. German aviator Melli Beese attracted a lot of publicity because she wore trousers when flying.

Beese was primarily interested in comfort, but other aviators consciously tried to be stylish too. Early women flyers often deliberately created an image in order to emphasize their celebrity status. This wasn't just narcissism. They often needed to attract publicity as a prerequisite for sponsorship, as a way of making their presence known (and thus make it harder to exclude them from aviation events), and also sometimes to promote their business enterprises. This often meant combining feminine glamour with those supposedly masculine qualities of seriousness and capability.

### 8. Jeanne Herveux in flying gear

There is a larger issue raised here by the evolution of women's flying costume, and that is the gradual integration of clothing to the shape and needs of an active woman's body. Increasingly the costumes adopted by women pilots (and later by other Western women in these years) can be seen to express their modern character: these are mobile, self-propelled, independent women, at home in their bodies. A century later, we owe them a debt of gratitude.

Anyway, Mrs. Berg was not the first woman to go aloft.

### 9. Peltier & Delagrangé

Two months earlier, in July 1908 a 35-year-old French woman **Thérèse Peltier** accompanied the famed aviator Léon Delagrangé in a flight 200 meters long in Torino (only a hundred kilometers from where we are now). Subsequently, Peltier made solo flights and even trained for a competition "to be the first woman to fly one kilometer" for a prize of 1000 French francs. But then, sadly, in early 1910 her sponsor Delagrangé was killed in a crash and Peltier gave up flying, having never gotten her license.

### 10. Reims Air Meet, 1909 poster

August 1909 brought another major event in the history of early aviation, the **first Reims air meet**, where competitors included Bleriot, Farman, Delagrangé, Glenn Curtiss & others--but no women.

This poster, however, is a bit misleading.

### 11. Reims Air Meet, 1909 audience

Many women were in the audience and apparently several of the future women flyers, including **Raymonde de Laroche**, **Marie Marvingt** and possibly **Hélène Dutrieu**. These ladies are worth knowing.

### 12. Raymonde de Laroche in Voisin plane

**Raymonde de Laroche** began training with the Voisin brothers at Mourmelon, the major center of flying activity in France. She took her first solo flight in October 1909. Then in February 1910, she went to Cairo and flew in an international air meet, where she came in 8th out of 12 participants (all men).

She earned her license in March 1910, thus becoming the first woman in the world certified to fly a plane.

### 13. de Laroche close-up

Raymonde was one of the most exotic of these pre-war women. She was born Elise Deroche, daughter of a plumber, but she rose from her humble beginnings to become a figure in the Parisian world of art and fashion. A strikingly beautiful young woman, she began a career in the theater, taking the stage name Raymonde and adding an aristocratic-sounding "La" to her surname. Once she began to make a name flying, the press began calling her "La Baronne de Laroche"--a title she seemed to relish. Like Dutrieu and others whom I'll mention later, she "graduated" to aviation from an earlier interest in racing bicycles, motorcycles, and automobiles. And like Thérèse Peltier and others, she got her start as the protégée of a recognized male star of aviation. Charles Voisin, brother of Gabriel and himself a famed pilot, was her sponsor, teacher and constant companion until his death in a car accident in 1912 (she was critically injured in the crash).

After earning her license, de Laroche flew in a number of meets around Europe that spring. Her April flight in St. Petersburg (when she was congratulated by Tsar Nicholas) was probably witnessed by Lydia Zvereva (who, a few months later, in August, became the first Russian woman to earn her license).

Certainly there were other Russian women in that St Petersburg audience who aspired to be pilots. In the next five years at least half a dozen Russian women learned to fly - I'll speak more about them later.

On a personal note, I like to think that my own grandmother, Elfa Pavlinova, was watching Raymonde fly over St. Petersburg that day. Though she didn't become a flyer, she too was an extraordinary woman. I owe her a great deal.

### 14. de Laroche at Reims

July 1910 marked the **second Reims air meet**--a week-long affair even grander than the first. This time Raymonde de Laroche was the sole woman participant, a real celebrity figure. But following five days of successful flights, on the sixth day she crashed, suffering multiple fractures and internal injuries. It took her a full two years to recover from this accident.

This was a major setback for her--but also for women flyers in general. Following the negative publicity generated by her accident, women were soon to be relegated to separate women's aerial events and excluded from competing directly with men.

But de Laroche was back in the air by 1912, training again at Mourmelon. In 1913, she won the Coupe Femina (an annual women's prize for single-flight distance & time aloft). By this time she had also learned to fly hydroplanes, and she continued to fly in numerous aviation events until the outbreak of WWI in August 1914, when all civilian pilots were grounded.

Returning to the air after the war ended in 1918, de Laroche set two women's altitude records and a women's distance record. She also had hopes of becoming a test pilot. But in the summer of 1919, de Laroche was a passenger in an experimental aircraft when it crashed - killing both her and the pilot. A sad end for this remarkable woman.

### 15. Hélène Dutrieu & Henry Farman

**Hélène Dutrieu**, a 31-year-old Belgian woman, had been among those in Wright's audience at Le Mans in September 1908. Seeing him fly inspired her to take up flying herself. In fact, this was a logical step for her. A champion bicycle racer by the age of 20, she had gone on to become a popular stunt performer, accomplishing spectacular acrobatic feats first on bicycles, then on motorcycles, and finally in automobiles.

By late 1908, she had fully embarked on her airborne career, flying test flights on the new "Demoiselle" airplane. Asked later on about her initial flight training, she said, "I ask a mechanic

what needs to be done to fly and he replies, 'Pull to climb and push to descend.'" With that, she was off! She continued to train, practicing on a number of different airplane types.

And on April 9, 1909, she flew for a full 20 minutes, a record for a woman--and the first of many records for her. She also caused a scandal when, after a minor accident, it was revealed that she flew without wearing a corset.

With over 18 months flying experience already behind her, Dutrieu rather belatedly took the French test for her license on 23 August 1910, thus becoming the first Belgian woman certified to fly a plane. Ten days later, while participating in an air meet, she flew non-stop from near Ostend to Bruges and back, about 20 km each way, taking her mechanic along as a passenger--setting several records in this one flight. Also this year, she won the Coupe Femina. Her career over the next few years is a string of achievements and honors. Here she is rejoicing at news of one of them.

## 16. Dutrieu rejoicing

With the outbreak of World War I, Dutrieu volunteered to join France's Air Patrol. Some reports say that she was accepted to fly reconnaissance missions, but this story may well be apocryphal. We do know that during the war she organized ambulance services for the French army and became the director of a military hospital.

## 17. Marie Marvingt in an Antoinette

Another quite wonderful pioneer flyer was **Marie Marvingt** of France. She too began her flight training at Mourmelon, getting her license in November 1910. Had she watched Raymonde flying there during her previous visits to the field in 1908 and 1909? Had they met? A tantalizing question. A group photo taken at the field shows them in the same line-up, but the historical records say almost nothing about the relationships among these early women flyers.

Marvingt herself was an amazing woman. She was a world-class athlete who won multiple awards in swimming, fencing, shooting, ski jumping, ice skating, mountain climbing and bobsledding--also canoeing, tennis, golf, polo and boxing. In 1908 she took part in the Tour de France, one of only 36 cyclists (out of 114) to finish the event. In 1909 she became the first female pilot to fly a balloon across the North Sea to England, traveling c. 1000 km in 14 hours.

Naturally, as soon as she got her pilot's license she began competing throughout Europe, winning yet more awards.

## 18. Marvingt in Duperdussin

She also made a more lasting contribution to aviation. Soon after getting her license, Marvingt proposed to the French government the development of an aerial ambulance service. Her idea is sketched here:

## 19. Marvingt, air ambulance sketch

This project became her passion, and she devoted the next 40 years of her life to the promotion of the air medical service she called **Aviation Sanitaire**. The plane she designed in 1910 could have carried an injured person in a litter slung under the fuselage, taking him from the battle field to the nearest hospital. But the plane, though ordered in 1912, was never delivered. And, sadly, the French government did not make use of her idea in WWI. After the war, however, the **Aviation Sanitaire** did become a reality, employing women pilots and women nurses, trained to parachute from planes to rescue the wounded.

Like everything else she did, Marvingt's WWI experience was exceptional: first, disguised as a man, she served on the front lines as an infantryman. Then she used her skiing skills to bring supplies to troops fighting in the Dolomite mountains. Then she trained as a surgical nurse, working with the Red Cross. And in 1915 she apparently served as a volunteer pilot flying several bomber missions

over Metz (thus she may be the only European woman aside from the Russians to take part in aerial action during the war).

In the year 1911 the focus of female aviation in Europe shifts from France both eastward to Germany and Russia, and west to England. In Russia,

## 20. Svereva portrait

**Lydia Svereva** was the first to get her pilot's license. She trained at the first Russian aviation flying school at Gatchina (outside St. Petersburg). Daughter of an admiral, she earned her license in August 1911, at the age of 20.

Svereva hoped to participate in an air meet that fall but discovered that someone had put iron filings into the motor of her airplane. This didn't stop her from entering other Russian competitions in the next few years. In May 1914 she achieved fame by looping-the-loop--the first woman pilot in the world to do so. In the meantime, she had married her first flight instructor and, together with him, opened first a flying school in 1912 and then a factory, repairing and assembling airplanes.

In the year 1916 it turned out 80 aircraft for the Imperial Russian Air Service. But in May of that year Svereva died of typhoid fever. In honor of her achievements, she was given a state burial marked by an aerial salute.

Zvereva was not alone in her training at Gatchina. In the fall of 1911, two other Russian women gained their licenses there: **Evdokia Anatra** and **Lyubov Golanchikova**.

## 21. Lyubov Golanchikova

Little is known of Anatra, but Golanchikova was a colorful personality and keen competitor who broke many records and gained considerable fame. I'll speak of her further in a few minutes.

In western Europe, two major women aviators earned their licenses in 1911: in August **Hilda Hewlett** in Great Britain and two weeks later, in Germany, **Melli Beese**.

## 22. Hilda Hewlett and plane

Mrs Hilda Hewlett was the daughter of an English vicar. Like any proper young lady, she went to art school--but instead of dabbling in watercolors, she focused on wood carving, metalwork and sewing (very useful for a future builder of airplanes!). Like Marvingt and the other pilots we have mentioned, she was an enthusiastic bicyclist and motorist, a valued participant in car rallies because she could repair motors when needed. Married and with two children, she caught the flying bug at the age of 45. In 1909 Hewlett met a Frenchman, Gustave Blondeau, an engineer who had worked with the Farman brothers and who believed passionately in the future of aviation. Together they formed a partnership: she would find the money to buy a plane (£1000), he would learn to fly it--and then teach her. And that is exactly what they did.

Early in 1910, Hilda arrived at Mourmelon to study aeronautics. Adopting the alias "Mrs. Grace Bird" (so as not to embarrass her husband), she joined Blondeau in learning to repair motors, in observing aircraft being built, and in watching students try them out in the air. By June their new plane was ready. Blondeau got his license, and they brought the "Blue Bird" back to England, where they opened the first flying school in the UK. In the year and a half the school operated, they graduated 13 students without a single accident. Among them was Hilda herself, who in August 1911 became the first British woman to obtain a pilot's certificate.

In early 1912, the partners closed the school in order to concentrate on constructing aircraft. Hewlett gained admiration as a tireless worker, excellent manager, and good business woman. During the war, their factory expanded, eventually employing 700 people to produce ten different types of planes. Over 800 aircraft rolled off their production lines. Always a non-conformist, Hilda left England for New Zealand at age 62, seeking escape from "crowds, convention and

civilisation." She died there in 1943, leaving a note, "Dump me in the sea."

### **23. Melli Beese**

In Germany Fraulein Amelie (Melli) Beese was the first woman to get a pilot's license. Unlike Hewlett's, her story is a poignant, even a tragic one.

The daughter of an architect, as a young woman Melli studied in Stockholm as a sculptor. Returning home to Germany in the summer of 1909, she read of Louis Bleriot's flight across the English Channel, an achievement that fired the imagination of people throughout Europe. Determined to learn to fly, she went to Johannisthal, then the major German center for aircraft builders, including The Wright Brothers Company, the Albatros Works, Rumpler and others.

But Beese had a hard time getting anyone to teach her to fly at Johannisthal. Most of the pilots there were openly hostile to the idea of a woman flying, and her aircraft was frequently sabotaged by other pilots--practical jokes like draining fuel from her tank, loosening control wires, or replacing fresh spark plugs with clogged ones. One of the men gave as their excuse: "A woman who flies would take our glory away from us." He voiced the sentiments of many male pilots--and not just the early pioneers either. But Melli Beese pressed on, undeterred.

She got her license in September 1911, age 25, and in an air meet two weeks later, set a woman's world record for endurance and broke Helene Dutrieu's altitude record. It was a great moment--even those pilots who had scorned her now offered their congratulations. But Beese, like Hewlett, was less interested in competition than in aircraft design and teaching. In early 1912 she started her own flying school, keeping it running till April 1914.

The chief pilot at her flying school was the Frenchman Charles Boutard, whom she married in 1913. Together with Boutard, she established a factory at Johannisthal to produce first planes and then hydroplanes of their own design.

### **24. Beese and Boutard**

But the outbreak of the war in 1914 ruined them and their company, as the German government considered her French husband a potential enemy. Even before hostilities began, they were both arrested and their assets confiscated. Her business at Johannisthal was forcibly closed down. She was prevented from flying, teaching, or building aircraft. She and Boutard were interned and lived in poverty for the duration of the war.

Worse yet, her patented design for a single-engine flying boat, along with the finished prototype, mysteriously disappeared from her workshop after she was arrested. Some aviation historians suggest that the similarities between the first Dornier flying boat and the Melli-Beese Flugyacht are more than coincidental.

After the war, Beese and Boutard returned to aviation, and in 1921 they tried to plan a round-the-world flight, but they were unable to find sponsors.

Not long afterwards, the marriage disintegrated. And now, Melli's courage finally failed her. In October 1925, an accident on landing shattered the airplane she was flying. Two months later, she committed suicide, shooting herself with a revolver. I suppose we can say that she was true to her motto, often quoted: "Flying is everything; Living is nothing".

### **25. Lyubov Golanchikova**

As I mentioned earlier, several Russian women made a name for themselves in aviation. In 1912, **Lyubov Golanchikova** began to be noticed. Born in Latvia in 1889, Golanchikova began her career as a film actress, singer and dancer. After seeing an exhibition flight by several Russian pilots, she enrolled at the Gatchina flying school, where she gained her aviator's certificate in October 1911. Like Zvereva, she began flying in exhibition and stunt shows across Russia. But in an air meet in Riga the spring of 1912, she crash-landed when someone threw a piece of wood at her aircraft

(apparently a superstitious peasant, who thought he was attacking a flying devil). After recovering from her injuries, Golanchikova headed to Germany, to the Johannisthal field, where she met Anthony Fokker, the rising Dutch aircraft designer. Attracted to the glamorous young aviator, Fokker hired her as one of his company's demonstration pilots. In November 1912, she bettered the altitude record of Melli Beese, and managed, even though carrying a passenger, to reach about 2400 meters altitude.

The following spring Golanchikova met the French aviator Léon Letort, who had just made a non-stop flight from Paris to Johannisthal. Abandoning the heartbroken Fokker, she joined Letort on his return flight and remained with him in France, flying in air meets throughout the next year.

At the outset of WWI, Golanchikova returned to Russia, where she joined the Imperial Russian Air Service, as a factory test pilot. Three years later, with the outbreak of the Bolshevik Revolution, Golanchikova joined the Communist Red Air Fleet as an instructor. She also flew a number of combat missions during the Russian civil war. In 1923 she and her husband, Boris Philipoff, arrived as refugees in New York City. There she got a job as a taxi driver but managed to continue her flying, as late as 1929. She was active in American aviation circles and joined the Early Birds of Aviation.

Golanchikova was certainly a colorful figure.

## **26. Shakhovskaya & Abramovitch**

But for the historian--even an amateur one like myself--**Evgenia Mikailovna Shakhovskaya** is the most flamboyant and most tantalizing of the early pioneer women pilots. The facts that we have suggest that she was a competent and courageous flyer, and a strong-minded, independent woman. Her pictures show her to be a striking beauty. And if even a tenth of the rumors attached to her life are true, the plotline of her story is worthy of a Hollywood movie. Unfortunately the accounts we have are so fragmentary and so contradictory that no single, credible picture of her emerges.

Let me tell you what we know--or think we know--about her.

Shakhovskaya was born in 1889, a Russian Princess, apparently a cousin to Tsar Nicholas II. Inspired by seeing Raymonde de Laroche fly above St Petersburg, she enrolled in the Gatchina flying school. After her initial training, she moved to Germany to continue training at Johannisthal with the famed Russian flyer Wssewolod Abramovitch, chief pilot of the Wright Company. She received her German license in August 1912.

Shakhovskaya seems to have been always eager to fly in combat. In the fall of 1912, when Italy and Turkey went to war, she offered the Italian government her services as a reconnaissance pilot, but was turned down. Returning to St Petersburg, she flew the Wright biplane to demonstrate its capabilities to the Tsarist military top brass. And then she returned to Germany, where she flew as an instructor pilot--perhaps for Melli Beese's flying school or for the Wright Company--or maybe for both. By this time she and Abramovitch were inseparable, on the ground and often in the air. But then in April 1913, possibly while they were testing a new model, their biplane crashed, killing Abramovitch and badly injuring Shakhovskaya. Despite her grief and her own injuries, she soon returned to Russia and resumed flying.

When the War began, she made a personal appeal to Tsar Nicholas for permission to join the Imperial Russian Air Service as a military aviator. This time she was accepted. By order of the Tsar, she was given the rank of ensign and assigned to the Northwestern Front. Some say that this assignment was strictly honorific and that she did not actually fly. Others claim that she flew only as an observer, not as a pilot. Still others report that she flew artillery spotting and general reconnaissance missions. She may also have flown missions harassing German troops and may have dropped an occasional bomb. In any event, she apparently became the first woman aviator to actively participate in aerial warfare. According to a Russian publication of 1916, "Shakhovskaya

executed audacious raids above German lines. In the course of a perilous reconnaissance, her machine was struck by gunshots-- the aviatrice was wounded. The Tsar decorated her with the Military Order of Saint George."

## 27. Shakovskaya portrait

At this point the historical record--like this photo--becomes more blurred, but even more fascinating. One story holds that soon after getting her medal she was charged with treason, supposedly for passing information to the Germans on Russian troop concentrations. Was she so accused? If so, was she guilty? Or might she have been falsely accused? Had her pre-war flying experience in Germany aroused suspicions of her loyalty? Or did she face hostility from her military leaders? Or was the accusation due to a jealous lover? (She was reputed to have had several liaisons within the squadron). Was she formally tried and convicted? Was she then--as some sources relate--sentenced to death by firing squad? And did Tsar Nicholas then commute her sentence to life imprisonment in a Russian Orthodox convent? The questions multiply.

By late 1917, in any case, the Tsar had been deposed, Lenin and the Bolsheviks were in charge, and Shakhovskaya was presumably free to leave the convent, if that is where she was. It is said that she then joined the Bolsheviks.

But while other Russian women pilots flew for the Red Air Fleet, Shakovskaya's story--if we believe the sources--had a different end, a lurid and finally tragic one. It's said that during the Russian civil war she joined the Cheka (the secret police, forerunner of the KGB) and was sent to Kiev, where she acted as an executioner, shooting prisoners with her pistol. Also it is claimed that, following her earlier wounds, she had developed an addiction to morphine, and that now she gave full vent to her drug problem. And then--perhaps while in a narcotic delirium? --she allegedly shot and killed one--or maybe two?--of her fellow revolutionaries--an assistant? a lover? For this she was supposedly shot to death by other Bolsheviks.

Telling her story, I find myself wishing to learn Russian and vowing to spend the next decade or two scouring the Russian archives to find out the truth about this complex, mysterious figure.

## 28. Rosina Ferrario

It seems fitting that I can conclude this chronology of pre-war flyers with the Italian aviator **Rosina Ferrario**, whose history is so closely tied with the site of our conference.

Born in Milan in 1888 into a wealthy bourgeois family, Ferrario showed an early interest in sports, and especially mountain climbing. She learned to drive a car, and pedalled to her flying lessons on a bicycle. She attended Giovanni Caproni's Flying School at Vizzola Ticino--now part of Malpensa Airport--which had opened a year earlier, in 1911.

Rosina Ferrario got her license on 3 January 1913, the first Italian woman to be certified. Her first public flight took place at Como, just east of us. She subsequently flew in meets in Napoli, in Rome, with the King as her audience, and at other exhibitions in Italy. And in 1914 she was invited to go to South America, to promote aerial tourism. But the outbreak of the war forced her to cancel the trip.

Like so many other women flyers, Ferrario hoped to contribute her flying skills to the war effort, offering to organize a "women aviators' volunteer squadron" to transport wounded soldiers from the front. But her many petitions to the Italian government were repeatedly rejected. She had to give up flying.

Ferrario's history is all too typical. The outbreak of WWI brought an abrupt halt to the careers of almost all of the pioneer women pilots in both Europe and the US. As we have seen, only a handful were allowed to fly in a military capacity, and only two or three of the early flyers returned to aviation in the post-war world.

Why did they not return to the air? A number of reasons are often cited:



- They were left behind by technology. The flimsy aircraft they had flown were by now hopelessly obsolete. Wartime needs had accelerated the pace of innovation in aircraft design--and the challenges of flying the new planes were enormous. Compare these three pre-war models:

29. Voisin Farman biplane 1908

30. Wright Type A Biplane

31. Bleriot XI Monoplane

with this one:

32. Spad Fighter 1917

That Bleriot monoplane, made of wood, wire and linen, had only a 25 hp engine and a top speed of less than 60 km/hour. The Spad, in contrast, had a 235 hp V8 engine, and could achieve a speed of 222 km/hour. We are talking quantum leaps in technology.

- Also, while women's skills were necessarily rusty, male flyers had the benefit of four years of wartime flying, an "excellent free apprenticeship," as one historian has put it. Women would have to pay enormous sums to gain comparable training and experience. And while they were playing catch-up, the men were forging ahead on ever newer, faster, heavier planes, mastering new instruments and techniques.
- Another reason: Flying was no longer just a sport or an entertainment. By the 1920s aviation was beginning to be recognized as both a military and commercial enterprise--and throughout Europe women were specifically forbidden to participate in either activity.
- We can perhaps blame the war itself for this retrenchment. The glorification of the "aces" had reinforced the earlier view of the sky as an exclusively male space.
- Women could (and did) match these men in daring and courage--but they were necessarily excluded from the popular image of the "ace" as representing the *real* aviator.

## Conclusion

Having sketched the lives of some of these pioneer women flyers, I'd like to end this talk by considering several questions:

- What issues did they face as women in the field of aviation?
- What talents and circumstances helped them to succeed in the sky?
- What can we learn from their stories?

## 33. What can we learn from them? (Laroche, Beese, Marvingt, Golanchikova)

Inevitably, the early women flyers were often compared with their male counterparts. Their supposed disadvantages include accusations that will perhaps sound familiar to you:

- Women are too emotional, it was claimed.
- They lack cool judgment, discipline, mental capability.
- They lack the physical strength and coordination necessary to fly an aircraft.

As we have seen this morning, these supposed frailties were not evident in the early women flyers.

But they did suffer other real disadvantages, and these were serious:

- They usually had to combat resistance from their families
- They faced resentment by male pilots, who often feared that their own achievements might lose heroic stature if they were matched by women pilots.
- They encountered the hostile attitude of society in general, with its stereotypes for women's roles and its increasing suspicion of feminism in any form. This kind of hostility seems to have been less pervasive in France and Russia, but a major problem in England and Germany--and probably here in Italy too.

- Often they lacked financial resources. An aircraft builder such as Farman or Voisin often demanded that an aspiring pilot buy one of his planes before he or she could even begin training on it.
- Sponsorship by men sometimes gave women access to planes and training (as seen in the relations between Thérèse Peltier & Delagrangé, Raymonde de Laroche & Charles Voisin, or Shakhovskaya & Abramovitch), but this access could be precarious. If the personal tie to the sponsor broke (through death or break-up), their "protégée" status was lost.
- More generally, women lacked connections. Men's informal networks were closed to them, while women's networking--of the kind we are enjoying at this conference, for instance--had yet to be invented, I fear.

However, in the early days, women pilots did have certain advantages over male pilots:

- Their lighter weight and shorter stature put less strain on the small engines and fragile structures of pre-war airplanes.
- Their smaller hands and greater dexterity allowed a lighter touch on the controls in planes that were light-weight and quite unstable, both on the ground and in the air.

As aircraft developed, these advantages might not apply to later generations of women. But other apparently female traits are quite useful to flyers of any time.

According to the English journalist Harry Harper, writing early in the 20th century, the women he observed were better flying students:

- They listened to the instructor, accepted criticism, took nothing for granted, were willing to ask questions and request explanations, and generally were eager to learn everything they could. In other words, they had fewer ego problems than the male students he observed.
- Stella Murray (writing in the 1920's) argued that women were also safer pilots--since they drank less than men.
- Much later, the test pilot Anne Badour added this observation on the safety issue: "A woman never buzzes her boyfriend's house."
- Perhaps Hilda Hewlett said it best. When she was asked whether women were likely to become pilots, she replied: "I never could see the reason why they should not, there is no physical reason that I know of. They have ears, hands, nerves, and courage. What more do they want?" Indeed.

Finally, I'd like to summarize the personal characteristics shared by many of the early women pilots--those traits that brought them to aviation and that I believe contributed to their success:

- **An enthusiasm for sports**, especially racing and other high-risk performances. And they tended to star in individual sports rather than team efforts.
- Many were inspired to fly by watching other pilots perform, suggesting-- to me, anyway--a **powerful imagination and a robust self-confidence**.
- **A competitive spirit**, desire to break records, whether in speed, altitude, distance or endurance. This was a shortcoming only in that they may have failed to reach out to one another with encouragement or advice.
- **Artistic and mechanical skills** and interests. Many became competent mechanics, maintaining and repairing their own planes. And for those who went on to design and build aircraft, early training and talent in art or sculpture surely contributed to their success.
- **Flair and a sense of drama**. Several women had experience in theater, dance, singing, even circuses, while a number designed and wore distinctive flying apparel. These women found many creative ways to further their careers and stay in the air.
- **Willingness to withstand hardships**--from weather to financial penury to hostility in the air and on the ground.
- **Physical bravery and courage** to confront both the extreme risks and the extreme pain

resulting from aerial accidents (concussions, and broken arms, legs, ribs, noses all very common). They were tough!

- **Individualists**, mavericks, willing to ignore social conventions and to carve their own destinies. This is evident, by the way, in their often highly unconventional private lives--many had liaisons, but chose not to marry their partners. At least one (Raymonde de Laroche) was a single mother.
- Above all, they shared a **dedication to flying** that overrode differences in class, nationality and background. They were prepared to go where they had to go, do what they had to do, buck the rules--all in order to pursue their dream.
- Now a century later, we honor the achievements of these strong-minded, pioneering women, knowing that we stand on their shoulders. And--through conferences like this one--we can recognize their strengths, develop them in ourselves, and build on them--together.

Thank you for being such a lovely audience.

Sources:

Note: Eileen Lebow's *Before Amelia: Women Pilots in the Early Days of Aviation* (Washington, DC: Brassey's, 2003) is essential reading for

anyone interested in the careers of the pioneer women aviators. I drew on it heavily. Other sources consulted include:

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For last-minute corrections, I am especially indebted to Dr. David Lam.