Sidedoor: Season 11, Episode 12 – Right Stuff, Wrong Sex Transcript

Lizzie Peabody: This is Sidedoor, a podcast from the Smithsonian with support from PRX. I'm Lizzie Peabody.

Lizzie: *What is that like to get back to your email and be like, "Sorry for the delay. Just got back from space?"*

Emily Calandrelli: *Oh, it was my favorite out-of-office email message I've ever written. "I'm training to go to space this week, let me get back to you next week when I've returned to Earth." [laughs]*

Lizzie: *[laughs]*

Lizzie: Emily Calandrelli is an engineer, author and TV show host. And on November 22, 2024, she strapped into a space capsule on top of a rocket.

Emily Calandrelli: *I think when we talk to most astronauts, people are like, "No, I wasn't scared. I was—I was calm. I was collected." Not me! My heart was beating out of my chest!*

Lizzie: Picture this: Emily is buckled into a five-point harness—the kind race car drivers wear. Lying nearly flat alongside five other passengers aboard Blue Origin's NS-28 mission.

*[**ARCHIVE CLIP:** T minus 16. Guidance internal.]*

Emily Calandrelli: *That's when it felt like, "Okay, here we go. Deep breaths. Here we go. Here we go."*

Lizzie: The countdown begins.

*[**ARCHIVE CLIP:** Command engines start. Two, one ...]*

Emily Calandrelli: *And the engines ignite, and the flames surround you. You don't lift off for about seven seconds, and you see the inside of the capsule aglow with this orange-y-red flame. And then you lift off.*

*[**NEWS CLIP:** New Shepard has cleared the tower and is heading to space. We have velocity picking up. We're gaining altitude as New Shepard pierces through the atmosphere.]*

Emily Calandrelli: *The Earth is slowly falling away from you. You could see the sky change color from blue to light blue to black. You've never seen a black like this before. It's—it's empty, a void.*

Lizzie: But then the capsule separates from the rocket.

Emily Calandrelli: *And that's when you have three-and-a-half, four minutes of weightlessness. And that's the point where you unstrap, you float around, and you get that view of the Earth.*

*[**ARCHIVE CLIP, Emily Calandrelli:** I'm here! I did it!]*

Lizzie: The Earth, our island home.

*[**ARCHIVE CLIP, Emily Calandrelli:** That's our planet!]*

Lizzie: Emily made a recording of that moment, seeing Earth from the capsule window.

Emily Calandrelli: *I think I said, "I love you," like, 12 different times, sometimes to specific people, and sometimes I heard me say, "I love you" to nobody or anything at all.*

Lizzie: *[laughs]*

Emily Calandrelli: *I was just feeling so much love and adoration for the planet, for the people who got me to where I am today. Just everything all at once.*

Lizzie: Emily didn't go to space alone—literally or figuratively. In the capsule with her, she brought a piece of paper with portraits of 99 women—the 99 who went to space before her.

Emily Calandrelli: *And then there's one little box that's empty that would note the 100th woman.*

Lizzie: And that's Emily, the 100th woman to go to space. And bringing this paper with her was her way of honoring the others.

Emily Calandrelli: *Yeah, just to honor the work that they've done because, especially for the women who came, like, much earlier before me, they had to work so much harder to be able to earn their spot in this industry.*

Lizzie: But there are some women whose pictures are not on Emily's paper. A group known as the Mercury 13. There was a time before Neil Armstrong stepped foot on the moon, when some scientists thought women would be better suited for space travel than men. So what happened?

Lizzie: This time on Sidedoor, we tell the all-but-forgotten story of the women at the frontier of early space flight. That's coming up after the break.

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Lizzie: When Dr. William Randolph Lovelace II boarded his flight for Stockholm and buckled his seatbelt, he probably knew he was sitting on some big news. He was headed to the Space and Naval Medicine Congress in Sweden, an international gathering of doctors, scientists and military leaders all trying to figure out what it would take to get a human being into space in one piece.

Lizzie: It was August, 1960. The space race was well underway. The Soviets had launched Sputnik three years before, in 1957. But nobody—I mean, no human body—had yet been to space, so nobody knew what would happen up there.

Margaret Weitekamp: *Will your eyes distort without the pull of gravity and you won't be able to see well?*

Lizzie: This is Margaret Weitekamp, chair of space history at the Smithsonian's National Air and Space Museum.

Margaret Weitekamp: *Your heart right now as you're listening to this, is working very hard to pump blood to your brain. That's one of the most important places that it needs to go. What happens to that system If you're not in gravity?*

Lizzie: These were important questions, and Dr. Lovelace was one of the guys interested in figuring them out.

Margaret Weitekamp: *Just an ideas guy!*

Lizzie: Lovelace had been working at the frontlines of technology and medicine for decades. In the 1930s and '40s, as engineers were thinking about how to make machines fly higher and faster, Lovelace was thinking about the people flying the machines. Working out of his private clinic in New Mexico, he helped invent the oxygen mask that became a prototype for the ones we still use today, though he nearly died jumping out of an airplane testing it.

Margaret Weitekamp: *He was not a details guy.*

Lizzie: Now believe it or not, as the space program got going in the 1950s, NASA didn't have its own aero-medical research center. But Project Mercury planned to send humans to space, and they needed to test the physical and mental fitness of the men who would become America's first astronauts: The Mercury 7.

Margaret Weitekamp: *So NASA chooses to use Randy Lovelace's Lovelace Foundation in New Mexico as an independent center for this testing.*

Lizzie: Lovelace became NASA's de facto medical department.

*[**ARCHIVE CLIP, NASA:** The nation's Project Mercury astronauts are here after a long and perhaps unprecedented series of evaluations.]*

Margaret Weitekamp: *When there's the famous press conference in April announcing the Mercury 7, Randy Lovelace is one of only three or four other people who are on the dais.*

*[**ARCHIVE CLIP, NASA:** And now I'd like to call on Dr. Lovelace who will tell you a little bit about the physical examinations which were given these young men. Dr. Lovelace.]*

*[**ARCHIVE CLIP, NASA: (Randy Lovelace)** I just hope they never give me a physical exam, because it's been sort of a rough, long period that they've been through.]*

Lizzie: For the Mercury 7, Lovelace had designed a grueling set of physical and mental exams. But after watching these brawny military guys go through them, he starts to wonder how a woman might do. Thinking purely pragmatically, women tend to be smaller than men so they require less food, water and oxygen, meaning less fuel would be required to get them into space and keep them alive there. Plus, women have fewer heart attacks, and their reproductive organs are inside their bodies, so less susceptible to radiation. He had a hunch women might actually be better equipped for space flight than men.

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Lizzie: But if Lovelace was gonna put a woman through the astronaut testing program, he knew he'd have to do it off the radar. This was the 1950s, women weren't even included in medical trials.

Margaret Weitekamp: *Everything in medical science at the time says women are defective men who have this extra piece of their physiology, and we can't possibly understand how that would affect all of their other systems.*

Lizzie: The fact that Lovelace was willing to dedicate time and money specifically to test women's bodies flew in the face of convention.

Margaret Weitekamp: *This was a medical research program that was looking at women as physically capable. That's amazing!*

Lizzie: But Lovelace wasn't doing this because he was a feminist. He was a visionary. He said ...

*[**ARCHIVE CLIP, Randy Lovelace: (voice actor)** There is no question but that women will eventually participate in space flight, therefore we must have data on them comparable to what we have obtained on men.]*

Lizzie: The way he saw it, the exploration of space would mean large orbiting space stations run by both men *and* women, like big space-bound 1950's offices. *Mad Men* in orbit.

Margaret Weitekamp: *He's thinking about traditional pink collar jobs.*

Lizzie: *Is pink collar like white collar but for women at the time?*

Margaret Weitekamp: *Like white collar but for women at the time. You're going to need nurses, you're going to need lab assistants, you're going to need telephone operators. And those are all women's jobs.*

Lizzie: *Space secretaries.*

Lizzie: *Space secretaries, space telephone operators. You know, running a trunk line.*

Lizzie: *[laughs] In space!*

Margaret Weitekamp: *In space.*

Lizzie: But Dr. Lovelace's first test subject would be about as far from a secretary as you could get. In 1959, Lovelace was at a meeting of the Air Force Association when a colleague introduced him to a woman named Jerrie Cobb. Cobb had been flying planes since she was 12. She got her commercial pilot's license at 18, and by the time she met Lovelace, she was in her late 20s, had been named Pilot of the Year by the National Pilots Association, and had broken world records for speed, distance and altitude. She was a powerhouse.

Lizzie: Intrigued by meeting such an accomplished female pilot, Lovelace asks Jerrie if she might want to do the astronaut physical fitness test. She does.

Margaret Weitekamp: *And she does very, very well.*

Lizzie: And so in 1960, Dr. Randy Lovelace arrives in Stockholm, Sweden at the Space and Naval Medicine Congress with this news to share. He stands before the gathered scientists and military leaders. He clears his throat.

Margaret Weitekamp: *He then announces to the world that he's found a woman who can pass the same physical test that he gave to the Mercury 7 astronauts for NASA, and that this might have potential for opening a door to women in space.*

Lizzie: Not only had Cobb passed the tests, said Lovelace, she was so successful that ...

*[**ARCHIVE CLIP, Randy Lovelace: (voice actor)** We are already in a position to say that certain qualities of the female space pilot are preferable to those of her male colleague.]*

Lizzie: Once Dr. Lovelace made his announcement in Sweden, Jerrie Cobb found herself at the center of a small media storm. *Life Magazine* published a full photo essay on her. She was in the *New York Times*, *Time Magazine*, the *Washington Star*.

*[**ARCHIVE CLIP, voice actor:** Miss Cobb, who has a 36-26-34 figure, said she lost seven pounds during the testing but regained them.]*

Lizzie: Articles emphasized the 29-year-old's blond ponytail, dimples and physique.

*[**ARCHIVE CLIP, voice actor:** The first astronautrix, measurements 36-27-34, eats hamburgers for breakfast, is an old hand at airplanes, with more air time—over 7,500 hours.]*

*[**ARCHIVE CLIP, voice actor:** She stands five feet seven inches and weighs 121 lbs.]*

Lizzie: She was hailed as the first successful female astronaut candidate, or I guess ...

*[**ARCHIVE CLIP, voice actor:** Astronautrix.]*

*[**ARCHIVE CLIP, voice actor:** Astro-nette.]*

*[**ARCHIVE CLIP, voice actor:** Feminaut.]*

*[**ARCHIVE CLIP, voice actor:** Space girl.]*

*[**ARCHIVE CLIP, voice actor:** Space girl.]*

Lizzie: But there was one category of reader particularly interested in this news, and it wasn't the scientists. Women pilots across the country perked up.

Lizzie: Over a decade before, during World War II, over a thousand skilled female pilots had flown military planes in non-combat roles as part of the Women Airforce Service Pilots program, or WASPS. They'd gotten a taste of what it felt like to fly at the frontlines of aviation. But after the war ...

***Margaret Weitekamp:** Women are barred from military flying.*

Lizzie: Barred from flying the newest, fastest, coolest planes of the time: Jets. And so ...

***Margaret Weitekamp:** The opportunity to be even considered as a potential astronaut candidate, that's enough of daylight coming through a usually shut door that it really gets these women excited. Women pilots start sending in letters, volunteering themselves.*

Lizzie: And Lovelace starts making plans to test more women for astronaut fitness under the banner, "Woman in Space Program." But this was going to cost money, and NASA wasn't going to pay for it. It would take another female pilot to get this program off the ground. And

not just any pilot, one of the best: Jackie Cochran.

Lizzie: Jackie Cochran was a golden girl of 1950s aviation. She'd grown up poor, made her living as a beautician to the very wealthy. Then married rich, took up flying, got the need for speed and never slowed down.

Margaret Weitekamp: *She is the first woman to break the sound barrier. She led the Women Air Force Service Pilots during the Second World War.*

Lizzie: She was glamorous, ambitious, outspoken, competitive, smart and well connected.

Margaret Weitekamp: *Just a remarkable person and social figure at the time.*

Lizzie: She was friends with Amelia Earhart, Dwight Eisenhower, Lyndon B. Johnson, and ...

Margaret Weitekamp: *She was personal friends with Randy Lovelace.*

Lizzie: So when Lovelace needed money for his program, he picked up the phone and called his friend Jackie. And she was like, "Shut up and take my money." She would join the ranks as a financier, consultant and participant.

Lizzie: Lovelace now had the funds to assemble his test subjects. But who had the right stuff? Jerrie Cobb was on the case. She went through a list of nearly 800 commercial pilots, and winnowed it down to the most ambitious and accomplished. Pilots like Wally Funk.

*[**ARCHIVE CLIP, Wally Funk:** So Jerrie called me and said, "Wally, don't you want to be tested to go into space?" I said, "Absolutely!"]*

Lizzie: At 21 years old, Wally Funk was the youngest of the group. When she got Jerrie's call, she was working as a flight instructor at Fort Sill, teaching US Army officers how to fly. Here she is in an oral history recorded in 1997.

*[**ARCHIVE CLIP, Wally Funk:** So I wrote to Dr. Lovelace, got an inquiry back, mailed it back, I was to be there February of '61.]*

Lizzie: When Wally Funk showed up at the Lovelace's clinic in New Mexico, she didn't know what to expect. She checked into a little motel across the street, and each morning for five days she'd report to the clinic for a barrage of tests. And if you're imagining a montage of

pushups, sprinting on a treadmill or riding a stationary bike while a scientist holds a stopwatch, there was some of that. But a lot of it was less cinematic.

*[**ARCHIVE CLIP, Wally Funk:** We were drinking barium, we were drinking radioactive water, we were being x-rayed, every tooth, every bone. We had barium enemas.]*

Lizzie: The women were strapped to a tilt table, held their feet in ice buckets, swallowed tubes to collect stomach acid. One woman wrote to her parents, quote, "I never knew there were so many parts of the human body to be explored." Another recalled, "We did not have any secrets when we got out of there."

*[**ARCHIVE CLIP, Wally Funk:** One of the tests that really gets your attention is you're strapped in a chair and they inject 10-degree water in your ear. That is below freezing.]*

Lizzie: Wally says this was meant to induce vertigo, and then time how long it took her to get her bearings back.

*[**ARCHIVE CLIP, Wally Funk:** My eyes started fluttering like this, and I had no control over my body because they froze this inner ear, the inner-inner ear.]*

Lizzie: She regained her equilibrium until ...

*[**ARCHIVE CLIP, Wally Funk:** They called me up. Said, "Wally, it's time for the other ear!" Okay, let's go for it! And that one hurt a little more.]*

Lizzie: After the physical tests came the psychological ones. These were meant to find out who was mentally equipped to handle the stress of being in space. Wally Funk remembers one day they told her ...

*[**ARCHIVE CLIP, Wally Funk:** Bring your swimming suit. We want to put you in an isolation tank. I said, "Okay, this is gonna be interesting."]*

Lizzie: Wearing her swimsuit, she climbed into a pool about the size of a large hot tub. She lay down in dark and silence with a foam floaty under her neck.

*[**ARCHIVE CLIP, Wally Funk:** I slapped the water. Couldn't feel it. I slapped my face and I*

couldn't feel it. What was going on here? The temperature that they took of me was absolutely the same temperature as the room, the humidity and the water.]

Lizzie: The sensory deprivation chamber was meant to test the psychological impact of isolation during space flight. And previous research showed that six hours was the absolute maximum time before someone in this situation starts hallucinating. Wally Funk remembers lying there peacefully, until she heard a voice asking her to climb out. When she did ...

*[**ARCHIVE CLIP, Wally Funk:** They said, "Wally, congratulations. You stayed in 10 hours and 35 minutes.]*

Lizzie: That's more than four hours longer than previously thought possible. Of the 19 women who underwent physical testing, 13 succeeded—some might say with flying colors! In fact, in some categories they did significantly better than the men.

Margaret Weitekamp: *These women really did perform markedly better, especially in the cardiopulmonary tests, which was a great concern at the time.*

Lizzie: And unlike the Mercury 7, these women had gone through the testing alone or in pairs, so they hadn't had the camaraderie of a group. The 13 who passed ranged from age 21 to almost 40 years old, and included twin sisters. However, there was one notable name *not* on the list—the woman who'd made it all possible.

Margaret Weitekamp: *Jackie Cochran ultimately does not pass these tests.*

Lizzie: Keep in mind she was nearly a generation older than the rest of the women at that time. Still, she was not accustomed to failure. Margaret spoke with many of the Lovelace women while working on her book, *Right Stuff, Wrong Sex: America's First Women in Space Program*.

Margaret Weitekamp: *One of the women who I interviewed remembered being at the Lovelace Foundation when Randy Lovelace was breaking that news to Jackie Cochran that she would not be a participant in this program, and remembers some raised voices on the other side of that door.*

Lizzie: The 13 women who did pass were now ready for the final phase of testing. And if you're thinking, "Jeepers, what more could they possibly go through?" Well, this was a test the women were looking forward to, because it was flying on military jets.

Margaret Weitekamp: *Jets only come online during the Second World War, and women don't*

have access to that.

Lizzie: But Lovelace didn't have his own jets, so he had to call in some favors with the Navy medical research center in Pensacola, Florida. The women would finally have a chance to come together as a group for two weeks of testing on jets. They were stoked! They called each other up to compare packing lists, arranged for childcare, and requested time off work—and if they couldn't get it ...

Margaret Weitekamp: *More than one of them had quit a job, a good aviation job, in order to participate in these tests.*

Lizzie: But just five days before they were expected in Florida, each woman received a telegram from the Lovelace Clinic. It said ...

*[**ARCHIVE CLIP: (voice actor)** Regret to advise arrangements at Pensacola cancelled.]*

Margaret Weitekamp: *The tests had been brought to the attention of military leadership at the Pentagon.*

Lizzie: And just like that, the Woman in Space Program was over. Or was it? Ms. Cobb goes to Washington—after the break.

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Lizzie: Space is a vacuum. But Lovelace's Woman in Space program was not operating in a vacuum. While Lovelace was conducting his tests and trying to secure jet access for the future feminauts—just kidding, astronauts—America's space program was at a crucial junction.

Margaret Weitekamp: *In 1961, the US is losing the space race. And John Kennedy is very concerned about this and sends a note to Lyndon Johnson, who's head of the Space Council. "What can we do that will increase our visibility in the eyes of the world?" And it's in that exchange of memos that they come up with the idea of a moon landing.*

Lizzie: In May of 1961, President Kennedy gets up before a joint session of Congress and throws down the gauntlet.

*[**ARCHIVE CLIP, John F. Kennedy:** I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him*

safely to the Earth.]

Lizzie: Kennedy's announcement redirects NASA's focus.

Margaret Weitekamp: *They go from being this expansive, "we're trying to figure out what this new space age means," to a very focused program that says the president has said human beings on the moon by the end of the decade.*

Lizzie: And it's as Lovelace is carrying out his testing program that these national priorities are shifting.

Margaret Weitekamp: *The terrain is really changing under these women as they are going through these tests. And by that summer of 1961, following Kennedy's declaration, the possibility of including women to see how they would do has just fallen off the table as an option.*

Lizzie: But Jerrie Cobb wasn't one to take a loss sitting down. After learning that the Pentagon put the kibosh on the Woman in Space Program, she heads to Washington to see what she can do. And she's got a secret weapon.

Margaret Weitekamp: *Her partner in that is Jane Hart, who is the wife of Senator Philip Hart of Michigan.*

Lizzie: But Jane Hart wasn't just the wife of a senator, she was one of the Lovelace women—the oldest to pass the test at nearly 40 years old.

Margaret Weitekamp: *She is a very influential woman pilot, both fixed wing and helicopter pilot.*

Lizzie: And the mother of not two, not four but eight children! I mean, these women ...

Margaret Weitekamp: *These were outsized figures. If I wrote them in fiction, nobody would believe them.*

Lizzie: Janey Hart and Jerrie Cobb manage to get a meeting with Vice President Lyndon B. Johnson. Jackpot! He's a women's advocate, a space advocate, and they're thinking ...

Margaret Weitekamp: *We are in the room with exactly the right person to be able to push on*

both of these fronts.

Lizzie: In the meeting, Jerrie Cobb and Janey Hart make their plea. And Johnson hears them out. After they leave, his secretary pens a letter to the head of NASA.

Margaret Weitekamp: *Making an official inquiry from the vice president's office, from the head of the national space council. "What are you doing about equality in terms of access to space flight? What are you doing about women?"*

Lizzie: All Johnson has to do is sign and send the letter.

Margaret Weitekamp: *And instead of sending that letter, Lyndon Johnson writes across the bottom of it, "Let's stop this now!" Exclamation point.*

Lizzie: *Why did he object so vehemently? What was he thinking?*

Margaret Weitekamp: *It's a distraction from the moon program, and a potential vulnerability in terms of where there could be criticism of the space program doing something that might be seen as frivolous.*

Lizzie: So LBJ was no help. But not all hope was lost. In the summer of 1962, Congress held a special meeting of the Subcommittee on Selection of Astronauts, and on the first day of the three-day hearing, Jerrie Cobb and Janey Hart make their case for women astronauts.

Margaret Weitekamp: *Janey Hart and Jerrie Cobb give impassioned testimony about this group of women who are talented pilots, who are standing ready to serve their country, and they just want the chance.*

Lizzie: In her opening statement, Janey Hart gives the room a brief lesson in history. She says ...

[**ARCHIVE CLIP, Janey Hart: (voice actor)** A hundred years ago, it was quite inconceivable that women should serve as hospital attendants. Their essentially frail and emotional structure, it was argued, could never stand the horrors of a military dressing station. Well, the rest of the story is altogether familiar to you. The women were insistent, there was a shortage of men to do the job. And finally, it was agreed to allow some women to try it provided they were middle aged and ugly—ugly women presumably having more strength of character.]

Lizzie: Of course, by the time of Hart's statement, nursing was designated "women's work."

*[**ARCHIVE CLIP, Janey Hart:** (voice actor) I submit, Mr. Chairman, that a woman in space today is no more preposterous than a woman in a field hospital 100 years ago. I am not arguing that women be admitted to space merely so they won't feel discriminated against. I am arguing that they be admitted because they have a real contribution to make.]*

Lizzie: Day one feels like a big success for the Women in Space program. The rocket has cleared the launch pad.

Margaret Weitekamp: *The committee is actually rather receptive to the arguments that Jerrie Cobb and Janey Hart are making.*

Lizzie: But on day two, that rocket comes crashing into a couple of stars when into the room stride none other than astronauts John Glenn and Scott Carpenter.

Margaret Weitekamp: *You need to understand the popularity of John Glenn in that moment.*

Lizzie: Just months earlier, John Glenn had become the first American to orbit the Earth, officially catching the US up to the Soviets in the space race. It's been said that the national fanfare around Glenn's orbital flight was even bigger than the moon landing.

Margaret Weitekamp: *John Glenn is a national hero.*

Lizzie: *He's Superman.*

Margaret Weitekamp: *Yes.*

Lizzie: And so right away, these astronauts walk in the room ...

Margaret Weitekamp: *And the committee is ga ga at these celebrities who are in the room with them, and they cannot say enough nice things about how honored they are to be with these real American heroes.*

Lizzie: And these real American heroes have an inspiring message to share.

Margaret Weitekamp: *Glenn and Carpenter come in to resell the committee on the vision of what NASA is doing going forward. We're going to the moon, and that doesn't involve a side quest to see if you could launch a woman.*

Lizzie: NASA frames this clearly as an either/or.

Margaret Weitekamp: *Women or space. Not women in space. They say, "We should be making the requirements higher, not lower. If there were women with jet time, we would be happy to consider them, but the military doesn't allow women to do that kind of flying."*

Lizzie: This is like saying sure, women can be head coaches in the NFL! There's just this tiny requirement that to coach the NFL you need to have played in the NFL. We don't discriminate based on gender, we just have certain standards. So even though Jerrie Cobb had more flying hours than John Glenn *and* Scott Carpenter, all the flying hours in the world couldn't make up for lack of jet experience. And without jet experience, Lovelace's physical tests? Irrelevant. John Glenn quips ...

Margaret Weitekamp: *"You know, my mother could pass the physical for the Washington Redskins, but it doesn't mean that she would be a good player for them."*

Lizzie: And the joke kills.

Margaret Weitekamp: *They all laugh. What really bothers these women in addition to the door being shut in their face, is that their qualifications that they have fought so hard to gather, and that are everything that is available to them at the time, are denigrated in front of Congress. Thousands of hours of private piloting or conventional piloting—not jet flying—just isn't the same kind of thing. And these women are literally asking, "Give us access to jets, and we'll show you what we can do." And they're being told no.*

Lizzie: These were tough blows: NASA's impossible standards, the astronaut rock stars hotdogging it before the committee, but what may have stung the most was Jackie Cochran's testimony. Jackie Cochran, who had personally funded the program Cobb and Hart were lobbying to defend, the woman who headed up the WASPS during the Second World War, comes in and says ...

Margaret Weitekamp: *"The nation is just not ready for women astronauts. You can't rely on them physiologically because of their monthly cycles. We don't know how this is going to work. We need more testing. We need more time.*

Lizzie: *Why, though? Why would Cochran of all people betray the Lovelace program in such a public way? My instinct is to say she was upset because she wasn't selected, she wasn't*

going to be one of the first women in space, so she thought, "Burn it all, even though I funded it!"

Margaret Weitekamp: *I will argue that Jackie Cochran was upset, but she was upset that Jerrie Cobb was being seen as the head of this group.*

Lizzie: So Jackie Cochran, whose autobiography is subtitled "The Greatest Woman Pilot in Aviation History," could have been upset that she was taking a backseat to Cobb. But this seeming betrayal was likely a strategic move. She wanted an official women astronaut training program to be created within NASA's auspices, and she wanted to lead it the way she'd led the WASPs. She figured by sticking up for NASA publicly here, they'd pay her back later.

Margaret Weitekamp: *And she really thinks that she has brokered this backroom deal, that she'll be the head of the next version of this.*

Lizzie: Between John Glenn's charm factor and Jackie Cochran's bucket of cold water, the chairman canceled the third day of hearings, disbanded the subcommittee.

Margaret Weitekamp: *So there's no chance for this to be revived. And that's the end of it.*

Lizzie: And that was that. The Woman in Space Program quietly faded from public view, to the extent that it had ever had it.

Margaret Weitekamp: *So the sad part of this story is that it's forgotten. At the time, it gets forgotten.*

Lizzie: NASA did give Cochran a position as a consultant to the agency, but that role never turned into the training program she'd hoped for, even when, the very next year, the Soviets send the first woman to space.

Margaret Weitekamp: *Valentina Tereshkova flies in 1963, and the US says, "We don't do publicity stunts."*

Lizzie: We don't know how Dr. Lovelace felt about the end of the program. Tragically, he and his wife were killed in a plane crash in 1965, just three years after the program ended. As for the Lovelace women ...

Margaret Weitekamp: *Jerrie Cobb takes the end of this program very hard. She turns her life*

over to God, And she becomes a missionary who flew in the Amazon up until very, very late in her life. She was actively using her flying to try to further that mission.

Lizzie: Janey Hart went on to become a leader in the feminist movement and a founding member of NOW, the National Organization for Women.

Margaret Weitekamp: *And then there's a whole mix of what the rest of the women do. Some of them have long careers in private aviation.*

Lizzie: But for one of these pilots, the dream of space never died.

Margaret Weitekamp: *Wally Funk later, at her own expense, essentially put herself through an equivalent of that third phase because she was very interested in making sure that she had gone as far as she could.*

Lizzie: She went on to a long flying career, and stayed up to date on all things space. In her 1997 oral history she said ...

*[**ARCHIVE CLIP, Wally Funk:** My quest for space is coming.]*

Lizzie: And in 2021, nearly 60 years after the Lovelace program, Wally Funk set a new record. She may not have been the first woman in space, but at 82 years old, she became the oldest.

*[**ARCHIVE CLIP, interviewer:** What was it like?]*

*[**ARCHIVE CLIP, Wally Funk:** Whoo! I can't tell you!]*

Lizzie: Here she is being interviewed on NBC, wearing her blue jumpsuit just moments after her flight on Blue Origin with Jeff Bezos.

*[**ARCHIVE CLIP, Wally Funk:** I've been waiting a long time to finally get it up there. I want to go again—fast!]*

[laughter]

Emily Calandrelli: *I loved watching Wally Funk fly.*

Lizzie: Emily Calandrelli was there.

Emily Calandrelli: *At that first flight yeah, which was really fun to be able to see. She's such a dynamic person, and I loved seeing her get her shot to see that. But in some ways it also felt like—like, that's not enough. What we got to do was like the most beautiful magical experience, but it's not walking on the moon, It's not going into orbit. It's a very different space flight experience.*

Lizzie: It took over 20 years after the Lovelace program ended for Sally Ride to become the first American woman in space in 1983. The country had a lot more barriers that needed to come down before women could have a real shot at space. Title IX opened the way for equal access to graduate degrees and athletic scholarships. Military academies finally welcomed women in the mid-'70s. Margaret says once these doors opened, women could collect the credentials they needed to be considered as a NASA astronaut. The women going to space today ...

Margaret Weitekamp: *They have resumes that any of these gentlemen from the 1960s would have envied.*

Lizzie: But even with the obstacles they faced in the '60s, the pilots in Lovelace's program proved that women had the right stuff, even if the decision makers didn't recognize it.

Margaret Weitekamp: *Those doors were closed in their face, but they demonstrated—even if it was forgotten—that they were physically capable and willing. And I think that it begins an arc that we see being played out now in space flight.*

Lizzie: Most of the Lovelace women never went to space, but they opened the way for those to follow.

Emily Calandrelli: *All of the heart and soul and effort and fight that they put into trying to go was valid and was worthwhile.*

Lizzie: Emily Calandrelli says she dreamed of going to space for decades. It was the biggest goal she ever set for herself. And it was even better than she imagined. But as amazing as it was to get to see Earth from space ...

Emily Calandrelli: *If I could, I would have switched places with them so that they could have had that, because they fought for that view more than anyone.*

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Lizzie: You've been listening to Sidedoor, a podcast from the Smithsonian with support from PRX. To learn more about the Lovelace women, check out our newsletter. We'll include links to Margaret Weitekamp's book, *Right Stuff, Wrong Sex: America's First Women in Space Program*. And if you want to do your own research, the women who were part of Lovelace's testing program are often referred to as the Mercury 13, but Margaret says that is a misnomer, because ...

Margaret Weitekamp: *This group of women never assembled as a group, and they were never a part of the Mercury program, so the two parts of the name, Mercury and 13, are both misleading.*

Lizzie: You know what's not misleading? Our newsletter! We'll include photos of the people you heard about in this episode, including Jerrie Cobb, Jackie Cochran and Randy Lovelace. Subscribe at SI.EDU/Sidedoor.

Lizzie: For help with this episode we want to thank Margaret Weitekamp and Emily Calandrelli. You can find out more about Emily's work on her website, TheSpaceGal.com, and follow her on social media @thespacegal. And while you're at it, follow us if you don't already, @Sidedoorpod. Special thanks this episode to Andy Halterman, Josh Silver, PJ Tabit, Elaine Miller and Tom Peabody. Janey Hart was voiced by Chelsea Spirito. Thanks also to Wally Funk for the use of her oral history and for the Veterans Oral History Project of the Library of Congress. We'll link to Wally's full interview in our newsletter, too.

Lizzie: Our podcast is produced by James Morrison, and me, Lizzie Peabody. Associate producer Nathalie Boyd pitched this episode and fact-checked it. Our executive producer is Ann Conanan. Our editorial team is Jess Sadeq and Sharon Bryant. Mimi Plato writes our newsletter. Episode artwork is by Dave Leonard. Transcripts are by Russell Gragg. Extra support comes from PRX. Our show is mixed by Tarek Fouda. Our theme song and episode music are by Breakmaster Cylinder.

Lizzie: If you have a pitch for us, send us an email at Sidedoor[at]si.edu. And if you want to sponsor our show, please email sponsorship[at]prx dot org.

Lizzie: I'm your host, Lizzie Peabody. Thank you for listening.

Emily Calandrelli: *And And I just—whoops, one second. Pods never fit in my ears. Speaking*

of things not designed for women? AirPods!

Lizzie: *[laughs] I know! My ears are so tiny.*

Emily Calandrelli: *I know. This is why we need more women in science!*

-30-