

## NASA ORAL HISTORY

INTERVIEWEE: Wally Funk  
Mercury 13

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## ORAL HISTORY TRANSCRIPT

WALLY FUNK  
INTERVIEWED BY CAROL BUTLER  
COCOA BEACH, FLORIDA – 18 JULY 1999

BUTLER: Today is July 18, 1999. This is Carol Butler, and I'm doing an oral history for the NASA History Office, with Wally Funk, retired NTSB [National Transportation Safety Board] investigator, senior flight instructor, chief pilot, wonderful woman of aerospace.

Thank you for joining us today.

FUNK: Thank you very much for having me.

BUTLER: To begin, if we could talk briefly about your early career and your interest in aviation developing, and how you moved forward into the aerospace career as a woman.

FUNK: Well, aerospace really was not a name in my young life, but flying airplanes was. I got my first try at flying, just pure flying, by flying my Superman cape off my daddy's barn when I was about five years old. I was allowed to make airplanes out of blocks of balsa wood and hang them from my ceiling.

When I went on to college, I was allowed to take flying, as my mother had dearly loved flying, and her father wouldn't allow her to, so they encouraged me then to fly into my aviation career. I was at a girls' school for two years, got my private [license] there. Then I went on to Oklahoma State University, who was the best flight school in the United States at that time, from, say, the fifties, mid-fifties on through to the seventies. I'm a national/international judge for SafeCom [or NIFA] performances for all schools, universities, and colleges, so now I'm giving back the safety that I've learned over my forty-

four years of instruction to the kids just starting out in the flying that I started in, in the late fifties. So it all has come around full circle.

Oklahoma State afforded me most of the rest of all my ratings. I would trade off mowing grass between the runways for my glider rating or my seaplane rating, and that was a great experience as a kid of nineteen doing such things, and there was never any eyes raised or eyebrows raised about, "What's that girl doing?" I had great parental enthusiasm and helping me to continue my education that I wanted in aviation.

And it wasn't until I graduated from Oklahoma State and went down to Fort Sill, Oklahoma, where I was a flight instructor, that I learned about Jerrie Cobb had been in phase two, off the magazine cover of *Life* magazine, and I wrote immediately to the doctor that had used her as a subject, was Dr. Sechrist at the VA [Veterans Administration] Hospital. He puts me in touch with Dr. Randy Lovelace at Albuquerque, New Mexico, and within two days Dr. Lovelace writes back, "Fill out this form and your date is a month away. Can you come?" So I was not on the original list, and I was twenty-one and I was too young, so they had to get extra permission for me to take the same test as the Mercury 7 astronauts took.

Now, they have picked twenty-five women candidates out of the records. There [were] records in Washington, D.C., in those days. Or, yes, there were, and at 99 Headquarters, but it wasn't as it is today, so comprehensive. They found women that had a college education, over 1,000 hours of flight time, and had to have a commercial instrument rating, top physical condition, and be willing to go through these tests. So I said, "Yes, of course I want to go, and, yes, of course get information for me to go, because I'm just a kid."

Well, it turned out that was to my benefit, because I had no preconceived ideas of what was going to happen in any of these tests. I had no idea that things could be done to my body and to my mind that they did do, as a youngster, as you will. Being a grownup now, I might have had some reservations going in, as many of these other women probably did.  
[Laughter]

I took a lot of pain that was associated with some of the tests that we took. I took it in stride. It was going to get me one step closer into space, and this is where I wanted to go. Of course, I did as much as I could in space exploration for physical tests, psychologist tests, as possible, to get me into absolutely a race for space against Russia in those days.

So it's interesting to know that twenty-five women were put through the tests, but thirteen passed, so that's why we're called the Mercury 13. Now, unfortunately, the lady that I—we went through by twos, but the lady that I went through never made it through the first day, and I really didn't know—we all didn't know who each other were. Not until four years ago did we know who each other were in total. Of course, I was in a flourishing field of my own, so I didn't get to go to some of these meetings that the other women could go to, because they were retired and I was still working. But we finally all got together and exchanged stories, and I hope that you're going to get many of these gals' stories.

I applied to NASA four different times, to be turned down four different times because I did not have an engineering degree, and they gave me nine months to obtain such a degree, which was an impossibility. Jerrie Cobb and I had at one time described that we would buy a jet aircraft from England, which was called a small Vampire, but then NASA reorganized their nomenclature, so to speak, that you had to have jet test pilot time. This was impossible for a girl to have in those days. It's taken us thirty years for Eileen [Collins] to go up into space, and she was the first girl to be able to go through Edwards Air Force Base [California], so she was twenty years in front of us.

So the thing that I'm most happy about is that Eileen is going to be in that left seat in less than two days. She had a vision, and at five she knew that she wanted to fly. She patterned her life. There was at least enough knowledge out there to pattern one's life, to know that she had to get her licenses, she had to go into the Air Force. She blossomed in the Air Force, got on with NASA. This is her [third] trip up. But we've got a girl in the left seat, and that is just absolutely incredible. And this is going to show youngsters and young ladies

that are going to see this particular program that you can do anything you want to do with your life. Math, sciences, engineering, very important to stick with and have as your personal goals. Eileen's tenacity, her personal goals, her dedication, has made it possible for you and I to come together and a lot of people from around the world to come together.

BUTLER: Absolutely. It's fabulous. Absolutely. Before you got involved in the testing program, had you thought about even the possibility of going into space before?

FUNK: Before I read about Jerrie Cobb?

BUTLER: Yes.

FUNK: I didn't even know about it. It was not something we knew about. It was just as new as new. We didn't know what "astronaut" meant.

BUTLER: So you just jumped into it.

FUNK: Absolutely.

BUTLER: Not knowing anything.

FUNK: I knew that was for me. I wanted to go into exploration. I've always sort of been an explorer in my youth.

BUTLER: Great. And you've continued to be an explorer. You're exploring still.

FUNK: Yes. I hope to go on to Russia with the Zegrahm Voyages and be a part of a cross-training of American astronauts and Russian cosmonauts so that we can use their facility at Star City and go through some of the same tests that Eileen's gone through in Houston. I've been down to Houston many times. I've observed what she has done and what the astronauts are doing down there, but I could never have the chance of partaking in such a wonderful schooling.

BUTLER: It will be interesting to see how the training that you're able to go through in Star City measures up with the testing and training that you did do earlier when you first started out as a twenty-one-year-old, not knowing anything about the space opportunities.

FUNK: Well, what's interesting about your statement is, we've come such a long way in technology, that the things that I was tested on people aren't tested on anymore. They were testing us to our extremes, to how much can we take of ten-degree water being injected into our ears, and how fast is our eye going to stare at a particular object, and I'd have no control over my body. And was I going to fall off or not? Yes, I would have if I wouldn't have been strapped into a dentist chair. Or what would I do in a tank of water, and the humidity of the room that was so perfect controlled to my temperature that I couldn't feel the water on my hands or my face because there was no hearing, smelling? All your senses were taken away from you, and you were to stay in there as long as possible. And I broke the record of ten hours and thirty-five minutes.

BUTLER: That must have been a very interesting experience.

FUNK: Well, you know, it was so easy for me. As a youngster then, you didn't have a lot on your mind as youngsters today do. The question always comes up, well, how could you

stand ten hours and thirty-five minutes? On the contrary. When they said, "How long do you think you've been in there?" I said, "Oh, I wasn't hungry. I didn't have any bodily needs. About five hours." So everybody that has taken this particular test has cut their time in half, which is unbeknownst to the scientists today in an isolation situation. Everyone cuts their time in half.

Now, the guys, the Mercury 7, were set in a lit room. Well, you know, you can count a lot of things in a lit room and entertain yourself, where I was on my back, floating in this water, with all my five basic senses taken away, couldn't smell, touch, taste anything. I just had to lay there. Now, they wanted me to talk or sing, but in those days I didn't talk. This would be a very difficult interview if this was a long time ago. [Laughter] But I've learned to talk since then.

BUTLER: Well, that's good. You mentioned a couple of the other tests, the water in the ear. As you came down for the first phase of testing, what were some of those tests? At any point did you stop and think, "What am I doing?" or anything along those lines?

FUNK: To answer your last question first, no. I had not a shadow of a doubt. I was their subject. They could do anything with me that they wanted to do. I didn't know that you could get X-rayed from head to toe and it would take a whole day, and every single tooth and every single bone, but they wanted perfect specimens at that time.

Now, let's go back to the men, the Mercury. There were 159 men selected from the armed services to go through these tests at Lovelace. How many were selected?

BUTLER: Seven.

FUNK: Twenty-five women were selected, and how many passed? Thirteen. So do we have a little bit of information here on how well do women do things? How well did they come across on the Mayflower? Terrific. How well did they go across the prairies and settle the West in their covered wagons? Great. Big families. Didn't think anything about it. Why can't we fly and go into space? The men today that think that we can't, as women, do things, sorry, folks, we can do it. A woman—and I'm sure Eileen has tried extra hard to do her best, because nobody wants to fail, and failure is not a part of my makeup. I do the best I can do and I kick as many doors in as I possibly can, no matter where I go.

BUTLER: And you have fun doing it, I'm sure. [Laughter]

FUNK: Oh, yes. I love life. You bet.

BUTLER: That's wonderful. That's the way to do it. You've got to enjoy life. As you were doing the testing, you said you didn't know any of the other women that were going through it, but you had, of course, read about Jerrie Cobb. After you were done with the first phase, what contact did you have with people running the program or with Dr. Lovelace? How did it continue that you could go on with the next phases of the testing?

FUNK: I found out what Jerrie Cobb had done down in Pensacola [Florida], because she had done this about six months to a year prior to my going through. [Interruption. Tape recorder turned off.]

BUTLER: We were talking about how you became involved in the second round of the testing and how you found out even about the opportunity.

FUNK: Well, the second round of testing would be what Jerrie Cobb had gone through in Pensacola, Florida. We were to have had a chance to go down, but it was all scrubbed. Most likely a political situation. A lot of the girls were disappointed in that, but I kind of went on and went on to an alternate, if you will, and I went overseas for three years. I learned a lot about many countries. I was in fifty-nine countries. I did a lot of camping and met a lot of neat, neat people that I still stay in correspondence with.

But anyway, I learned what the Pensacola tests were all about, so I kind of made a list of what I could do in California and various states. So at USC [University of Southern California] I was able to take the centrifuge test. Now, being a civilian and being a girl, they would only give me 3 Gs, and I could not have a G suit. Only men could have those things. So I called Mother up in Hemet, California, and I said, "Mom, I need your worst Merry Widow and girdle when you were a girl. Can you get those to me?" "You betcha." So I modified and made my own G suit out of her Merry Widow, and just stuffed my body in this tight little thing, then put my flight suit over it, because I knew once they started to twirl me around in the centrifuge, obviously they thought that I was going to go out within the first go-round of 3 Gs, but I knew to keep the blood rushed up in my body and up in my head. So obviously they gave me three 3Gs for two minutes at a time, and the cameras were set at different places. Okay.

We went second round. No big deal. I punched out the buttons of lights that were coming up for my assignments. Third time around, no big deal. Feeling a little tired, but it was okay. Fourth time around, I don't know if the guy really hit the button and gave me a few more Gs or it was really that many more Gs or that same amount of Gs but my body not having a rest in between, but what happens is when you're going around this long arm, extended arm, going around this room very, very quickly, and trying to punch out the different lights that they're giving you as assignments, you start the gray-out, and when the gray-out effect starts is when the blood is coming down from your brain at about half-mast to

your eyes. Part of it's gray and the rest I could see you. Well, I knew that was happening, so I just closed up my body and my neck and I pushed all that blood back up in my head, and it cleared up. So then I could keep doing my thing. I never told them until it came out in "Dateline" twenty-five-some years later that I had made my own G suit and I passed with flying colors.

BUTLER: That's great.

FUNK: Then the other test was the Martin-Baker seat ejection test at El Toro [California], and that is where I was placed in a particular flight suit and parachute rig, and I was shot up on a long, long pole. It's almost like to go hit the gong and then come down with a crash. I was a lightweight; I only weighed about 110 pounds then. So obviously I went up as far up as the slide would go, but came down with a terrible thud, not really realizing what was happening. To make this thing go, there was kind of like a lot of powder. Not dynamite or not like a lot of firecrackers, but like a bunch of firecrackers, I guess you could say, underneath my seat. And what I did was I pulled this canopy up over my helmet to keep my head rigidly back against the back head rest so that my head wouldn't come forward, because you could break your neck, and ride the post up.

But coming down with a thud, I didn't realize it, but the guys knew it, I would have a tremendous headache and you could have a back compression. Well, I had never told anybody I had broken my back skiing, trying to prepare for the Olympics. So I thought, "Ah-oh. Wonder if anything has happened here," but nothing happened. I was fine. So they took all the gear off me.

The next thing, they just ushered me right into the high-altitude chamber test, and in those days they could take a civilian up to 39,000. Today it's only 29,000. We zoomed on up there. And, boy, on 100 percent oxygen, I was feeling great. I mean, that's just the best

way, they say, to get over a hangover or to get rid of a headache, is to breathe 100 percent oxygen. So I was feeling great. And, of course, here comes the test. "Wally, take your mask off." So I take my mask off. "We want you to write your name and anything you want, and add some numbers on this piece of paper." So at that altitude you can only last a matter of ten, fifteen seconds without oxygen again. So I'm writing, and I think I'm doing just really terrific, because you have a euphoria and a feeling of well-being here without oxygen. This is how come a lot of airplane people have accidents, because they have a feeling of euphoria, and not getting the right oxygen to the brain to read their instrumentation correctly, and then they get into trouble.

Well, of course we had a lot of noses pressed up against every window looking at this girl in there, because they'd never had a girl before, wondering how she's going to do it with her mask off. So I'm just blithely writing down and doing my assignment, thinking I'm doing a great job, and I heard it, but I didn't respond, they said, "Wally, put your mask on. Wally, put your mask on." But, you see, I was already in another state of deterioration of no oxygen to the brain. They let me go as long as possible, and somebody just slapped the mask on me, and then everything came clear as a bell. I looked down at what I was writing; it was all scribble. And not only had I not stopped at the end of the page here, I had gone on into infinity, and thinking I was just doing great. So that was the high-altitude test.

The last test was phase three, which was conducted at the VA Hospital in Oklahoma City, and that's where we were put into the tank, as I had described earlier.

BUTLER: What an interesting array of tests that you went through.

FUNK: And then on top of it, in the eighties I went to Space Camp [Huntsville, Alabama] for a week. So I've done everything I could possibly do to learn and grasp more about the wonderful world of space travel.

BUTLER: That's great. It's good to see you being so interested in maintaining that enthusiasm. That helps to pass it on to others.

FUNK: Absolutely. Kids today have a wealth of knowledge, if they just have parents or a teacher to say, "You can do anything you want to do and go after it." The encouragement of going after it, taking all the math and science and engineering courses throughout. And kids are on computers today. The youngsters that I'm teaching to fly today, I've got a sixteen- and a seventeen-year-old this summer that I'm teaching. They're grasping flying, and I'm soloing them at seven and eight hours because of the computer industry, that they're learning to fly on the computers. So this is pretty neat.

BUTLER: A whole new way to learn.

FUNK: I mean, there's no way to teach me. When I learned, I learned by the seat of my pants. You show me, then I respond. And that's exactly how I learned to fly. It wasn't really out of reading a book; it was show and tell. In my acrobatic instruction, I would look at the picture, have somebody show me, and off I'd go.

BUTLER: A good way to learn, just by doing it as you go. While you were doing the testing, shortly after that they had congressional hearings actually dealing with bringing women in as astronauts when NASA was hiring the second group of male astronauts. Were you aware of those at the time?

FUNK: I can't really remember. I don't remember exactly where I was at that period of time, and I've been asked that over and over again. I don't think that any of us knew what Jerrie

and Janie Hart had to prepare themselves to do, to go and defend us as a group. Now, mind you, we didn't know each other yet. And so I knew Jackie Cochran. She'd been very generous to support phase one financially, and I've had wonderful letters from her and from Jerrie Cobb, but I didn't realize. Here I was out of the country, where I was so buried in my work that I didn't realize under after it was over with, that these hearings had gone on. And then that's when we found out the parameters are jet test pilot experience to be an astronaut, which let us out of the league.

BUTLER: For the time being, at least.

FUNK: Yes, yes. Thank you for asking that, because Eileen did it. Yes. We have three girl test pilots, and I think we've got two female, Eileen and another gal, that are testing, because Eileen has to have a backup, a girl backup.

BUTLER: And hopefully we'll be seeing more and more as time is going on.

FUNK: Absolutely.

BUTLER: As you said, you were traveling overseas for lengths of time. You had your career in aviation. Tell us some about that, if you would, an overview of what you continued to do.

FUNK: I went over to Russia with two goals in mind: to see the Paris Air Show and to meet Valentina Tereshkova, because she had already gone up in '63. I was in Russia in '65. So I saw the Paris Air Show. I went to Russia by myself, scared to death, on a train from Vienna [Austria] to Moscow, and never got to meet her. I was being sponsored to get to Russia to meet her, but the Russians didn't—this was Cold War time—they did not want us to meet.

They sent she and her husband off, they said, to Japan. So there I was in Russia by myself for one week. That's what my ticket allowed me to be there for.

It was an interesting experience going over on the train. When you get to the border between Poland and Russia, they stop the train. Everybody has to get off for a good hour, and nobody knows what's going on. They tried to give me shots. They took my passport away. It was a little spooky. Got everything back, said, "No, you're not sticking me with any needles." And got back on board and no more knowledgeable about why they took us off, but when I went through—I was in Russia now, or in Moscow. I got to see a lot of the things that they wanted me to see—the university, the Kremlin, *da-da, da-da, da-da, da-da*. Didn't dare speak to anybody. Nobody would speak to me.

But getting back on the train to go back to Vienna, when we got to that border crossing, I decided to play sick and stay on the train. I wanted to know what was going on. So, of course, they came and pulled all the shades down, said, "Just stay right there." *Ya vol*. And when they left, the guards left, I peeked underneath one of the blinds and took a picture, and what they were doing is they had great big forks, and they came and they lifted each train car up and slid a narrower track underneath them and set it back down, so Russia had real wide tracks in their country and the rest of Europe had narrower tracks. This was one of their ways of protecting Russia from any high-speed train going into their country.

BUTLER: Well, that's interesting.

FUNK: And then in those days we didn't know how the Russians were landing. It was my second trip over to Russia, when I really got to meet Valentina Tereshkova, and I asked for two interpreters in Russian and two interpreters in English, because I wanted to know what was going on here. We were the first tourists ever to be taken into Star City, and this is like the astronaut center [Johnson Space Center] of Houston would be, but tourists were never

allowed in there. And on the wall you could see the reentry, which we all as Americans thought that the cosmonauts came down in the Soyuz and landed with their parachutes. Not so. When the Soyuz got into the troposphere, a manhole cover blew off the Soyuz and the astronaut was ejected out, and they came down in their own parachute stuff, and the Soyuz came down in its own parachute rig.

So this means they didn't reach all of the goals of making a first, because when you go into the rules of IAC in Paris are that when you want to make a record-breaking situation, you go up with your vehicle, you come down with your vehicle. And they didn't come down with their vehicle. So this is a first that we knew what kind of shenanigans they were pulling.

BUTLER: Interesting. Did you get to take a picture of that wall to bring back and show?

FUNK: I sure did.

BUTLER: Interesting.

FUNK: And I got forty-five minutes with Valentina. My first questions were, "How did your parents feel?" Well, she had been taken from her parents as a child. The father went to one labor camp, the mother went to another labor camp, and she was raised in a child labor camp. She was brought up as a textile factory worker. Everybody in Russia can have an extracurricular activity. Hers was parachuting. So then you put it together. Obviously they took her for her parachuting qualities. I think she had about 350 jumps. They say that she really hadn't been schooled that much on the capsule, and she was told what to do.

This is what kind of is interesting, the fact that we could have done it if they would just let us. A dog did it. A monkey did it. Man did it. Woman can do it. We had to wait thirty-some years for Eileen to do it, to show us.

BUTLER: Unfortunately, but good finally.

FUNK: Yes, finally for progress.

BUTLER: Was it fascinating to be able to meet Valentina Tereshkova and talk with her?

FUNK: Very, but she was very guarded. Of course she would be. She held a position in Moscow as the first lady. Rather interesting. If you lived in a block of buildings and you were to report to her if there was any misconduct in your building, it was your Russian duty to report to her if you overheard anything, if anything was against the government, and this is the way they worked their system.

BUTLER: Very different society.

FUNK: In fact, when our astronauts go over—and I've heard this from Shannon [Lucid]—it was a terrible time. The food, the quality, the housing, the clothing, the fact that Shannon didn't get all her gear for a month up into the Soyuz and into the module that they were circling the earth with, was really too bad, but she told me about her experiences. I'm looking forward to going to Russia, and I hope it will be a little bit different than what Shannon experienced, but yet when we have the Russians come over to America, what do we do? We put them up in a nice place to stay, a car or a chauffeur-driven car, clothing, great experiences. But this is just the difference in cultures. You're right.

BUTLER: Very interesting differences. Quite. You continued to be a pioneer in aviation for women, went on to work with the FAA and the National Transportation Safety Board. How

did those opportunities arise for you? How did you find out about the openings and move into them? What did you do?

FUNK: Quite by accident. [Laughter] Being in the right place at the right time. I was chief pilot for a company out in California. I took a lot of wealthy people back and forth to [Las] Vegas [Nevada] at all times of the night. Interestingly enough, men made their decision-making and shook hands over deals in the airplane that I was carrying them in going to Vegas and back, not necessarily so much going back, but going.

I was applying for a professorship in University of Alaska, and I'd used an FAA chap's name that I had known. He said, "Wally, what is this? You be in my office at nine o'clock Monday morning."

I said, "Oh. Okay." I was there and he said, "You're set up for an interview next Monday morning because we want you to be an inspector for the FAA."

I said, "Oh my goodness. Well, that takes an awful lot of education. I don't know if I can—of course I can do that." I caught myself. "Of course I can do that. I can be the first girl inspector for the FAA."

And I had my interview, and my first boss was Bill Glenn [phonetic], and I answered all their questions, and then I asked them all about the FAA and what they expected of me and what I was going to—where was I going to go with the FAA? He said, "I like her line of questioning. You're hired."

So I was with the FAA, had a great time with them for four years. Then NTSB stole me over, and then I became an investigator for the rest of my tenure until I retired in '84. I've done over 450 accidents, whether large or small.

BUTLER: That must be a challenge.

FUNK: That was a great challenge, yes, but very interesting, and every accident investigation was different.

BUTLER: Absolutely. I'm sure it was a learning experience, too, to see all the different considerations, safety considerations and things to watch out for.

FUNK: That's correct. You hit on a very good word, of "safety," because most of the accidents, there has been a safety problem with that accident, either by pilot not taking heed or maybe the mechanic or maybe the aircraft itself.

That's one of the reasons why I retired early, because I wanted to take my Wally Funk Safety slide presentation around the world, in the United States, to universities and colleges, and show them why people crash into mountains on a clear day. It's incredible. I mean, in the middle of Arizona is Taylor Mountain. Or, no, excuse me. Flagstaff. Can't recall the name of the mountain right now. Looking around it, and yet I've done several accidents where people are coming and going right into that particular peak, and that was the only peak for maybe hundreds of miles. I climbed that one many a time. I've gotten to many accidents by horse, by mule, by helicopter, by repelling, by being dropped down, by boat, walking. You name it, I've gotten there.

BUTLER: Quite an active life you've had.

FUNK: Yes, I've loved every bit of it. Wouldn't change it for the world.

BUTLER: That's great. I hope that I'm able to say that and still be enjoying life as much as you in my own few years.

FUNK: Well, I've got a lot to do. I've got fifty more years of stuff to do, so—

BUTLER: Absolutely.

FUNK: —I've got to keep on going.

BUTLER: And I'm sure you will. I'm sure you will. You mentioned earlier that you hadn't known any of the women that went through the Mercury testing with you at the time. You knew Jerrie Cobb and Jackie Cochran, but not the others that had passed, and that you only got to meet them a few years ago. What was that like?

FUNK: It was pretty neat. Being the youngest, I was outvoted on who was going to talk first, so I sat there and listened a lot. And I did have my camera, so I got to film a lot of what was going on in the various impromptu little clutches that we would get into. And every time we'd get together, there's more stories that come out, because they've all thought of things, especially some of the girls that went together. See, I was by myself, so I didn't have anybody to talk to. But they, being older, could have each other to talk to or they'd talk more to the doctors and the nurses more than I would be. I just considered myself a subject, and I was there to take tests and I didn't ask questions. I just was there.

So I still listen. I listen to their stories, because I didn't have the fascinating stories. I've told you some of my experiences, but some of them, like Sarah [Gorelick] Ratley, she said she had her hair all done up the day before she went to Lovelace. And, of course, the minute you go in, you're handed a weekly sheet of expectations, and the first thing was "Wash your hair thoroughly and don't do anything with it. And you're going to take an enema." Da-da, da-da, da-da. So we did everything we were supposed to.

BUTLER: Amazing. Interesting. Interesting. And now how have you kept in contact then since you've all met and kept up regular correspondence or meetings?

FUNK: Well, we have Jerri [Sloan] Truhill is our gal that everybody calls and gives information to, and when we come down here to the Cape to see Eileen off, we all get together, those of us that can still travel.

BUTLER: That's good. That's great to see you all still keeping together and keeping up. When did you find out that Eileen was going to have the opportunity to pilot the shuttle?

FUNK: Gosh. I think we met back in mid eighties. She had just been hired by NASA. At the Women in Aviation conference in Las Vegas.

The Women in Aviation is a large organization now that encompasses all girls that want to fly around the world, whether you want to fly for the airlines or for commuters or, as I am, a chief pilot, or just as a beginning flight student or a NASA individual like Eileen. We've all been speakers. This has opened the floodgates to let people know there's an organization for young people to come to, to find out about military, to find out what's out there for them. Peggy Baty from Dayton, Ohio, is the one that started this organization. We've just had our tenth anniversary. We meet the second week of every March somewhere in the United States.

Women in Aviation International has probably given out hundreds of thousands of scholarships for the airline industry, for anything that any girl wants to apply for. Those things are out there. We teach people how to get hold of scholarships, to use Pell grants. None of this was even remotely thought of fifteen years ago when I was struggling and getting my licenses and what Jerrie and all the rest of the girls had to do to get their licenses.

BUTLER: That's wonderful to be able to work with a young generation and to help them have the exciting experiences you have.

FUNK: Yes. And when you interview the WASPs [Women Airforce Service Pilots], you'll find you're going back in time even more. They helped open the gates for us in Women in Aviation and for us getting into some of the space program.

BUTLER: And I'm guessing many of them are involved in the Women in Aviation group.

FUNK: Absolutely. And also the Forest of Friendship inducted quite a few ladies in Atchison, Kansas, in middle of June this year, and I suspect there were about twenty there. You see, there's about four or five organizations where we all see each other through the year, whether you're a helicopter pilot, fixed-wing pilot, Women in Aviation, or Forest of Friendship up at Amelia Earhart's home town of Atchison, Kansas.

BUTLER: A good network.

FUNK: Yes, yes, a great network today.

BUTLER: You mentioned all the different types of pilots there can be, and you've flown a variety of different aircraft, if I'm correct. Was there a favorite that you had?

FUNK: Yes, a Stearman. It's an old bi-wing, open-cockpit airplane, and I owned one as a youngster. Well, "as a youngster," as a twenty-two-year-old in Hawthorne, California. Silly me, I sold it when I wanted to go overseas, because I couldn't get anybody to work on the radial engine. And jets were just coming in, and of course to find a mechanic to work on a

radial or a cylinder type of an engine when they could be out there working on a jet engine, nuh-uh, unheard of. I sold it for—audience will love this—\$3,000. Today that airplane is worth, in good shape, \$130,000.

And I'll go up to somebody that's got a nice Stearman and I'll say, "Can I have a ride? Can I pay you for a ride? I used to own one of these. I've got about 3,000 hours in one, and T-6s and WACOs, all the old war birds."

"Well, I don't know. You have to take our course."

"Okay, let's go for a ride." [Laughter]

BUTLER: [Laughter] Oh, that's—

FUNK: But I did make an advertisement in the early eighties for Merrill Lynch, and I flew a Stearman, and I did all kinds of acrobatics and did a big enough loop where I could have a helicopter run through. It was wonderful, because Mother could be in the chase plane, and she'd never seen me perform. For Merrill Lynch, as I went into the sun, the bull was coming out of the sun, and then I had some words to say. But as we were going back home and the sun was setting, Mother was in the chase plane and I was right next to her, and we were both tears coming down our eyes because we could be up in the air together. She had her wish and passed on to her daughter with the gene of flying.

BUTLER: That's wonderful. That must have meant so much to her.

FUNK: And I didn't know about the gene until about four years ago. She just had told me.  
[Laughter]

BUTLER: Your mother sounds like a really wonderful woman.

FUNK: She was. She was great. She was everything to me.

BUTLER: That's great. Nice to have so much support at home. That must have helped in your career in being able to have so much fun at what you did, to have her as such a support and a friend.

FUNK: They both were. Mind you, I grew up in an area where you had free spirit. There was no reins. I was brought up by the Indians of a Taos pueblo, and they taught me how to fish and hunt and camp at a very early age, and survive the wilderness. So I had all that going for myself, where a youngster today is in a city, in an apartment, and that's all they know. They don't know ocean and skiing and snow and air as I was able to know it, and that's why I thank the good Lord for putting me where he put me.

BUTLER: You were in a wonderful environment, it sounds like.

FUNK: Thank you.

BUTLER: The future. We were talking earlier, and you had quite an exciting future in front of you. You mentioned going over to Russia to do the training, but you're also gearing up for—

FUNK: Yes, I'm gearing up to go into space, and it's really going to happen. I always knew, even though the Mercury tests were stopped, I knew that I would one day go up. It's in my bones. I knew it. And, sure enough, a company called Zegrahm Voyages out of Seattle, Washington, has the plans to put a vehicle into space with a space cruiser attached

underneath. And what will happen is that the mothership will take the space cruiser up to the troposphere and peel off, and then the space cruiser will then go into orbit. And they'll only have nine of us on board. It's going to take a lot of training before we get to go up, but by space Star City training will help for that, of course. And I'm going to have my nose pressed against that window as hard as it can go and watch what the astronauts see when they could around. And I'm not going to have any duties.

BUTLER: That's the best way to go. [Laughter]

FUNK: I'm going to go as a paying passenger.

BUTLER: And be able to look all you want.

FUNK: That's right.

BUTLER: That will be fabulous. Hopefully we'll be able to have a chance to sit down and talk afterwards.

FUNK: You will. Maybe you can come to the launch, because the launch will be somewhere in California. Because, you see, the vehicle will be able to take off and land at an airport.

BUTLER: That's great.

FUNK: That's how it's being designed.

BUTLER: I'll put it in on my calendar. I'll definitely be there.

FUNK: 2002 or 2003.

BUTLER: Absolutely. Looking back, what was the most challenging aspect for you in your career?

FUNK: Ooh. Career. Not tests?

BUTLER: Well, tests, too.

FUNK: No, I can't say that my tests have been a challenge, because I went in not knowing what was going to happen to me. So nothing was preconceived.

Challenging. I suspect when I was an investigator and going to all the schools that the NTSB allowed me. I went to five schools a year. I went to every aircraft manufacturer, engine manufacturer, propeller manufacturer, and any of the parts that go with any of the engines. That was challenging. Going to an accident investigation of a large magnitude was challenging. But we always came up with a solution.

Today it takes much longer because we've having more accidents, unfortunately, and we don't have the manpower—excuse me—the peoplepower. But in my tenure in the office in Los Angeles [California], we had three states, the entire South Pacific to have as our territory, and there were only six of us. So we were really scattered, and I was on the road about every third or fourth day. So I had a life that was on to the beeper. We didn't have faxes in those days. We didn't even have ways of transmitting information. It was the good old phone and pagers were just coming in.

BUTLER: You certainly have seen a lot of change in technology since you started out, both in aviation technology and just—

FUNK: General

BUTLER: —general technology.

BUTLER: Anytime I teach somebody to fly, it's a challenge. Of course, going back to our earlier conversation, the kids of today are great. But if I take a person who has not had any athletic abilities, they're a challenge, because I've got to teach them eye-hand coordination, and that takes a long time. One thing I can't teach, and that is good old common sense.

BUTLER: And that's very important. What would you consider your most significant accomplishment?

FUNK: Well, golly, gee whiz. I haven't gotten there yet. [Laughter] If I can make it through Star City and I can make it into space, that would be it. But everything has been like building up to it, and I've had wonderful experiences and wonderful accomplishments, and I couldn't do it without all the people that were helping to push behind me and seizing opportunities. It's recognition of the opportunity.

BUTLER: That's a very important factor that I'm sure you pass on to your students, to take advantage of those opportunities when they come up.

FUNK: That's right.

BUTLER: I want to thank you for sharing so much with us today. It's been fascinating.

FUNK: It's been my pleasure to be here with you, and I hope that all your viewers will enjoy it as much as I have.

BUTLER: I'm sure they will. They'll enjoy as much as I have. Thank you.

FUNK: My pleasure.

[End of interview]