

NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT

EDITED ORAL HISTORY TRANSCRIPT 3

SHANNON W. LUCID
INTERVIEWED BY JENNIFER ROSS-NAZZAL
HOUSTON, TEXAS – MARCH 25, 2021

ROSS-NAZZAL: Today is March 25th, 2021. This interview with Shannon Lucid is being conducted in Houston, Texas, for the JSC Oral History Project. The interviewer is Jennifer Ross-Nazzal.

Last week we talked a little bit about your background and religious upbringing. But one of the things that we didn't talk about is a quote that I found in *Newsweek*. Your dad is quoted saying that you once told him, "The Baptists wouldn't let women preach, so I had to become an astronaut to get closer to God than my father," which I thought was an interesting quote.

LUCID: I can't see father or me saying the last part of that, but you just have to know my father. He was sort of a loose cannon sometimes when he got a little older. When I landed from Mir, he was down at the Cape [Canaveral, Florida]. Evidently the next morning someone called my brother up, who was there, and said, "We can't find your father. Where is he?" He was scheduled for an interview. He was very happy to do interviews. They said, "Well, he needs to be here in 15 minutes."

My brother says, "Hey, he's an 80-year-old man. He does what he wants to do. He most probably went home." But anyway, no. Father would say things.

ROSS-NAZZAL: So, you didn't have any plan at any point to become a minister?

LUCID: No, no.

ROSS-NAZZAL: I was just curious about that, because I hadn't heard that about you before.

LUCID: It's because you weren't listening to my father.

ROSS-NAZZAL: Speaking of your dad, what did your dad think of you majoring in chemistry at that point?

LUCID: Just before I went to college, father asked me, "Now what are you going to major in at college?"

I said, "I'm going to major in chemistry."

He said, "If you're going to do that, then you better get a lot of education courses so you can teach, so that you can get a job."

I said, "Father, father, let me explain the world to you. The world is hungry for chemists. As soon as I graduate from college, I'm going to be making \$10,000 a year." That's the largest sum I could think of for a salary. I didn't know anybody that made anything like that.

My father said, "Well if that's what you're going to do, you're on your own. I have no idea how to help you."

But interestingly—I'd have to calculate it exactly, but it was over 15 years from the time I graduated college till I made more than \$10,000 a year. I worked the whole time; I was always working or in graduate school. I topped \$10,000 when I got hired by NASA.

ROSS-NAZZAL: It worked. You were proven correct.

LUCID: Yes, but it took a lot longer than I realized.

ROSS-NAZZAL: Yes, I think we all tend to be optimistic about our salaries.

LUCID: You did expect to get paid for the work you were doing. When I was working at Kerr-McGee, there was a person there and we worked together, but he was a he and I was a she. He was very forthright with what he was making salary-wise. So I went in one day, and I asked my boss, I said, “Why is the person I was working with getting this, and I’m just getting this?” He just looked at me and he said, “But Shannon, you’re a girl. Don’t you know that?”

ROSS-NAZZAL: What year was that, Shannon?

LUCID: I don’t know, in the ’60s sometime. After ’63 and before ’67.

ROSS-NAZZAL: Was that your first job after you had been changing bedpans at that point?

LUCID: No, I worked at OMRF [Oklahoma Medical Research Foundation] before then, but I went to Haiti for a week with my father, because every year my father would go down to Haiti for one or two weeks, two or three times a year to preach. I took a week vacation, and I went to Haiti with my father. As soon as I got back in the lab the boss said, “Well, you’re out of a job in a week,” because the grant hadn’t been renewed.

I was just obviously really desperate, because by this time—we already talked about how my first airplane was destroyed. By this time, I had another airplane, which I had to make payments on every month. I was pretty desperate.

ROSS-NAZZAL: You were probably scrambling.

LUCID: Oh yes.

ROSS-NAZZAL: What sort of job were you able to find at that point?

LUCID: I went everywhere. I was desperate. I needed something within a couple weeks. I went to employment agencies. I went to everything. This one place said, “Well, there’s this temporary job out at the Kerr-McGee research facility you could apply for, but it’s just temporary. They just want somebody for six months or less.”

I said, “Oh, that would be great because my plan is that I’m going to get a good job. I’m leaving Oklahoma, and I’m working really hard to do that. So, I’m more than willing to work for just six months.”

ROSS-NAZZAL: Is this the story that I have read where your future husband said that you were overqualified for the position; he didn’t want to hire you?

LUCID: Oh yes. I went out, and I interviewed. Mike was one of the people that I interviewed with because he was directly in charge of the project. He voted not to hire me, and the reason

why is because he had been working hard—he had just recently started there—to overhaul the salary. Here I was, a college graduate, and I had some graduate school experience. The person that I was replacing in the job, I always thought he was a high school dropout. Later Mike claimed he wasn't. Anyway, he had to go do his National Guard duty for six months, so they had to hold the job open. That's why it was only open for a few months, but Mike's boss overrode him, so I started working out there.

ROSS-NAZZAL: You mentioned you had some graduate school experience at that point. It was my understanding that you didn't start grad school till after Kawai came along.

LUCID: I had some hours. Did I do a semester? They were desperate for someone. Someone got drafted, so they had to have a TA [teaching assistant]. So I did that for a short period of time. But then as soon as he came back then I had no job.

ROSS-NAZZAL: What sort of work were you doing in the lab originally for OMRF, and then what were you going to be doing for Kerr-McGee at that point?

LUCID: When I started working for OMRF—this is an interesting story. I went in to interview with the person that was in charge of the lab. They were doing enzyme kinetics. He was really desperate to get somebody to come in there and do it, because turns out the person that had been doing it was a graduate student but she had disappeared. They were desperate. He called me back, and he said—his words were, “In spite of the recommendation from” the professor down at OU [University of Oklahoma], “I'm willing to hire you and give you a chance.”

Oh, my goodness—in spite of? I couldn't imagine why. I felt like I had to work hard all the time to prove there had been no mistake in hiring me. When I knew I was out of a job in a week, I went down to the Personnel Office. I needed to ask, because the person I was working for had said that I was going to get a \$25 raise in January. It had never shown up.

I asked the Personnel Office. I said, "I was told I was going to get \$25 more a month, and it never showed up."

They said, "Oh yes, we just forgot to finish the paperwork."

Then I said, "Can I have my file? Because I'm looking for a job." They knew the grant wasn't renewed. They gave it to me, and I looked. There was a letter from the professor, and it was an absolutely glowing recommendation. I thought all this time I've been thinking that it was a horrible recommendation letter.

ROSS-NAZZAL: That's horrible.

LUCID: That was life. Anyway, we did enzyme kinetics on ribonucleic acid. We actually got a paper out of it.

ROSS-NAZZAL: Can you explain what that is for people who would be reading the transcript? What is that exactly? In simple terms.

LUCID: Enzymes go either fast or slow. It's important to get the rate of it. Back then my boss said it was related to cancer. Everybody was doing cancer research because that's where all the money was. I asked him. I said, "How does this relate to cancer research?"

He says, "Shannon, everything relates to cancer research. It doesn't matter what you're doing. We're finding a cure for cancer."

I said, "Okay."

ROSS-NAZZAL: What were you doing for Kerr-McGee once you moved over there?

LUCID: We were doing vanadium extraction. They had a pilot plant in Pocatello, Idaho. The plant produced a slurry with high vanadium content. Vanadium was worth a lot, so they were trying to figure out ways that they could get vanadium out of the slurry, so that's what I was involved in. They had a big pilot rig out there in the back; you'd put your solvents in there, and you'd put the slurry in there. You'd get all these samples and analyze them and test all different configurations as to what would work. I worked really hard.

ROSS-NAZZAL: I bet.

LUCID: They didn't know if I could do the job to replace the person, because you had to lift 25-pounds of slurry and pour it into the rig.

ROSS-NAZZAL: Sounds like you were the prime example of how a woman could do so many things that people thought women couldn't do.

LUCID: The whole time when I was working there, I was working hard to find a real professional job. I thought maybe the government would be less restrictive. I thought the government would

be more open to hiring people that were capable and not just based on if you're male or female. But I was wrong. I spent all my time, I think, filling out all kinds of forms and trying to get jobs everywhere. At the same time, I was applying to all the airlines trying to get flying jobs. Whatever would open up. Nothing did.

ROSS-NAZZAL: I have to ask. Jobs were announced by gender. A woman could apply for certain jobs and a man could apply for certain jobs. Was that the case when you were filling out these forms? Or had that been abolished at that point?

LUCID: I don't remember that because I just filled everything out. My name was Shannon, and back in those days people thought that was a male name. Whenever I got replies back that were addressed to Mr. Shannon Wells, I knew it was very positive. It was always very positive. Then they would generally ask for a picture. I sent the picture in. Then there were no jobs available. I remember one that I thought was—I don't remember the job particularly—it was a really neat job, so I thought I'd have a good shot at it. I got a letter back special delivery that there were no jobs as soon as I sent in the picture.

ROSS-NAZZAL: That's disappointing.

LUCID: But it's interesting, because literally just a couple years ago I threw them all away. Why keep them? But I had a stack at least this high [demonstrates] of rejects.

It was incredible; it was taking up a whole space in a filing cabinet. But then what I thought was so interesting was when my son graduated from college. He was looking for jobs in

wildlife management, which at that time was difficult to find jobs in. He got the same stack of rejects that I had gotten, because he was just a plain old ordinary male. He was a little more aggressive than I was. He actually called up the government places that give you the ratings to ask why he wasn't selected. They shouldn't have said this, but they were very open. They said, "Well, if you were a female and especially if you were a female of color and maybe had a handicap, you could get any job you wanted." They actually said that to him.

ROSS-NAZZAL: Usually you can't get anyone to talk to you about those things. That's interesting.

LUCID: I know, but he was very persistent. He told me that. It was the truth, but I was surprised that anybody said that. I just thought it was so interesting how life had gone full circle and how he was having the same problem that I had except from the opposite end.

ROSS-NAZZAL: That's a shame. You said that you wanted to leave Oklahoma, or you were planning on leaving. Why did you want to leave Oklahoma?

LUCID: Because there were no jobs, and there was nothing going on. There was a whole world out there; I needed to go out and live in the world. I didn't want to be stuck in the same place. I'd been in Oklahoma since I was in the third grade.

ROSS-NAZZAL: It was time to move on.

LUCID: Yes.

ROSS-NAZZAL: When did you start dating Mike?

LUCID: I told Kerr-McGee that I would work for them for six months. The six months were up, and the National Guard guy came back. Then the head of the lab, who was really my boss, he came in and he said, "Shannon, you've got to make up your mind." They offered me a job. He said, "We'll hire you full-time."

I said, "Well, I'm really looking for a real job. I'm really looking to get out of Oklahoma." I had been looking for six months and still wasn't getting anywhere finding a job. That's when he offered me the real job. He gave me the salary, and it was a fair amount less than my friend that was working in the lab was getting, and that's when he said, "Well, you know you're just a female." They kept putting pressure on me.

He said, "Okay, Shannon, you've either got to leave, or you've got to come on full-time." Then they offered me a position with this person in another section to do X-ray diffraction. I was under a lot of pressure because I didn't have a job. I finally said, "Okay. I'll work full-time." They filled out all the paperwork. I was a full-time employee, and I was doing X-ray diffraction.

Wouldn't you know it, just a week after I had said that I would work full-time, I got a very nice letter from Los Alamos National Lab in New Mexico. They wanted me to come interview because they thought that there was a job there for me. I wouldn't have made the same decision now, but back in those days I had given my word that I would work for Kerr-McGee.

They had gone to a lot of trouble to fill out the paperwork, so I didn't feel morally like I could say I wasn't going to work there.

Once I started working in X-ray diffraction, Mike called me up one Sunday afternoon and said, "You want to go to the boat show?"

I said, "Well, it's too cloudy for me to go get my airplane," because it was getting an annual somewhere else, and I couldn't fly it. I said, "Okay, might as well." I was totally surprised. He had been my direct boss. He hadn't been friendly at all.

ROSS-NAZZAL: I wondered about that as well. I imagine even back then fraternizing was frowned upon.

LUCID: Oh yes. Mike had his own ethics, and he wouldn't have thought that was the thing to do at all.

ROSS-NAZZAL: You've told me over the years, and I've heard from different places as well, that you did not want to get married and have children.

LUCID: Oh, no. Because in the culture, I guess that is the right word for it, that I grew up in, if you were a female your role was to be at home and raise children, that was it. There was absolutely no way I wanted to do that. Absolutely no way. I was a human being, and I could do things. My mother was a nurse. She'd worked as a nurse. I always felt just a little bad that she didn't continue nursing. Of course, that wasn't even an option in the culture in which we were

living whatsoever. The only thing a female could do would be teach school, and who would want to do that and just be with kids all day? I've changed my mind on that a lot.

ROSS-NAZZAL: Yes.

LUCID: When that's the only option open, then it's not very attractive. That was the real problem. I just looked around, and there was just no way I wanted to live like any of the women around. In the church culture, you were a woman, just there to take care of the males. There just wasn't any option.

But if you weren't married, then it was okay to support yourself, because no one else was going to. It was just an obvious choice early on. There was no way I was going to get married. In high school, the one I went to, there was a general idea that if you weren't married by the time you graduated, or getting married that summer, life was over. It was just obvious to me that there was no reason that anybody that wanted to live a full life would get married. It seemed to me you were basically selling yourself into slavery. Back then, I saw life as very black-and-white.

ROSS-NAZZAL: Your family must have been supportive of that idea. They weren't nudging you in that direction.

LUCID: Which direction?

ROSS-NAZZAL: Towards marriage at that point.

LUCID: No, all my life I knew I was going to college. That's just what you did. Now I must say in the neighborhood I grew up in, and the kids I grew up with, I don't think anybody else had the feeling that they were going to go to college. But my father was a college graduate, and he had a master's degree. My mother was a college graduate, and she was an RN [registered nurse]. My grandfather, oh my goodness, had an MD [medical degree]. What else did he have? Oh, he had a ThD. That's a doctor in theology. He also had a PhD in public health.

It was just assumed that you would go to college. There was never any doubt. I'm not real sure when I was in high school how many people had that assumption. I can still remember when I was a senior, the person I had for an English teacher, who disliked me intensely—I'd had her several years, and she just couldn't stand me. She gave us this assignment the first week of school that we had to do four book reports that semester. That first week, I turned in my four book reports. Oh, my goodness, she was so angry. First of all, she said I couldn't report on those books because they were boy books. *Ben-Hur*? That wasn't an appropriate book for me to read? I still remember that one. And *Quo Vadis*? That wasn't appropriate? And *John Brown's Body*? I don't remember what the other title was. Anyway, she said that she wasn't going to accept them. I said, "Well, I've turned them in, and if you want to give me a zero, fine, but I've done the work."

We had a fractious relationship from then on. Unfortunately, I had her several times. The only way I could stand the class, and this says something really bad about me, but I had to sit sideways in my chair so I could be looking out the window and couldn't look at her. I just couldn't take it.

When I was a senior, one day she asked me. She said, “What are you going to do when you get out of high school, Shannon?”

I said, “I’m going to college.”

She looked at me, and she said, “Why on Earth would you go waste your parents’ money doing something like that?”

I said, “Well, I’m going to work.” This wasn’t very nice of me. I knew it would make her very upset. I think maybe she had some issues in life. Who knows? But you’re not too sympathetic to adults when you’re young.

She had this assignment one day that we were supposed to write a letter to apply for a job. I gave her my opinion of this. I said I’d been applying for jobs and applying for things ever since I was in the seventh grade, so I didn’t see any point in doing this, but she insisted. She had certain requirements—that the letter be written in ink and whatever. I went home, and I wrote a wonderful, wonderful letter. I was applying to be the master explorer of the universe. The one requirement that she hadn’t mentioned was the physical length of the letter.

I took tissue wrapping paper, and I cut it to the right width. Then I just pasted it together. No kidding, it went from the top of the door to the bottom. It was that long. It was a full letter; it was full of all my qualifications and why I could be the master of the galaxy.

I folded it up nicely. I put it in an envelope, and I addressed it. I started off with the address and went through the solar system and the galaxy to a place in the universe. Had a nice address.

When we were in class and she said we could turn them in, I said, “Oh, I’ve done mine, but I didn’t know we could turn them in today. I thought it was the end of the week. I have it at home. Can I run home and get it?” I lived close by.

She said, “Sure.” She was so happy that I’d done the assignment. So I went home, and I handed it to her, and then the bell rang.

I could hear her. She opened it, and she pulled it out, and it went from the top of the door to the bottom. She was literally screaming. She says, “Wells has to be expelled from this school. We cannot have her here anymore.” I was back in the other hall, and I heard her. But my conscience was clear. I always obeyed very well. I had done nothing wrong. Finally, I heard another teacher go and calm her down a little bit.

ROSS-NAZZAL: Expulsion is pretty serious. Doing your work doesn’t seem quite appropriate.

LUCID: That was the second time that I was threatened with being expelled. The other time it really wasn’t my fault. They had the National Honor Society. We were practicing. We were going to do the induction. The whole school just hated the National Honor Society induction, the assembly, because it was so boring.

The person that was in charge of it, the sponsor, was a home economics teacher. We had been required to take home ec, and she and I had not seen eye to eye on anything.

ROSS-NAZZAL: I wonder why.

LUCID: She was explaining. The program was about being about the light of the world, and we were reading our parts and lighting these candles. I said, “What is this? This is so boring.” I told her this, and it was. It was absolutely totally ludicrous to be reading something like that.

The next day we were in the assembly, and it was my turn. We were lighting the candles. I lit my candle and, as I was reading about being the light of the world, the candle started to bend over. As I was reading, the kids in the audience started to titter a little bit. The candle is just going like this, like this [demonstrates]. But I had my part, and I was doing my part. Then it flopped over on the table, and it caught the tablecloth on fire, so there was this fire. I just took my skirt, and I put out the fire, which was the logical thing to do. Oh, my goodness, the auditorium just roared, it was just absolute uproar and laughter, because it was the best assembly anybody had ever been to.

I went backstage, and a friend of mine said, "Shannon, you better get home. Because" and she named this teacher, "is going to expel you; she is going to the principal to get you expelled." I ran home. I figured things would blow over. Later the kids, they all told me, "That was the best assembly we've ever been to."

ROSS-NAZZAL: Tell me about taking home ec. This is the time, like you said, they wanted women to stay home and raise families. What was it like for you having to take a class that you had zero interest in?

LUCID: Oh, well, see, I think maybe because they didn't have a whole lot of offerings, they had shop and they had home ec. The boys took shop, and the girls took home ec. I didn't see the point of that, so I asked, "Why can't I take shop?" It was perfectly logical, because in shop you got to use saws, table saws, and all sorts of things, and build something. I said, "We don't have that kind of equipment at home, and I haven't had a chance to use it, so I would really like to learn how to do it." I said, "We have a stove at home. I know how to open cans and cook, so I

don't need to do that anymore." Of course, that was not allowed. So, I was stuck in home ec, and it was really bad. She would write recipes on the board, and we were supposed to copy them. It was horrible.

I would keep asking, "Why do we have to write this recipe down for tomato soup?" I said, "You can get a can of Campbell's soup and put it in a pan. What is the purpose?" It was because we were going to be all these wonderful homemakers. I didn't have a very constructive attitude. Then the day we got out of school, I took all those mounds of recipes we'd copied, and I burned them in the backyard.

ROSS-NAZZAL: Instead of burning your draft card you burned your recipe cards.

LUCID: Yes.

ROSS-NAZZAL: That's funny. It sounds like you have multiple examples of why you're not interested in marriage. How did Mike convince you? How long were you dating before he decided to propose?

LUCID: Mike really wanted to get married, and I just wasn't interested. Obviously, we talked about it. I told him that there was no way that I wanted to end up being some trophy butterfly. I actually said that. He looked at me, and he said, "Shannon, that's the most ridiculous thing I ever heard of. There's absolutely no reason why you can't be married and live a full life; do whatever you want to do. We'll just support each other. Do whatever you want to do." I said,

“Well.” I really said this. I said, “Well, someday I most probably will want to fly into space.” Mike said, “That’s just real fine. Marriage shouldn’t stand in the way of that whatsoever.”

It is sort of odd how he grew up. He’s six years older than I am. He grew up obviously in a culture that was similar to mine but his family was very poor. His parents had very little formal education and worked long hours in the Van Camp bean factory. I was always sort of amazed that he had the attitude that he had, because I’m not just real sure where he had developed it.

ROSS-NAZZAL: Was he also Baptist at the time?

LUCID: Oh, no. That was a long discussion that we had before we got married. We decided what church to go to before we got married, because we both agreed that was one of the most important decisions that you could make.

ROSS-NAZZAL: What was your wedding like? I anticipate it was a small wedding, not a big event.

LUCID: I was fortunate that my father was a preacher, so we got married at home. It was very nice. My family was there, and Mike’s mother and his brother had driven down from Indianapolis. We just had a very nice small wedding at home.

ROSS-NAZZAL: That sounds nice. I haven’t seen any photos of your wedding, that’s why I assumed it was a small affair.

LUCID: Oh, all the photos were taken on a little camera. No, I have a very nice little book.

ROSS-NAZZAL: You continued to work after you got married?

LUCID: Yes. Mike and I were working at Kerr-McGee. I had switched and was working for another person. Things were going well. My boss was actually very appreciative of what I was doing, but then I got pregnant. But I sure didn't tell anybody, because they had a policy that you couldn't work when you were pregnant.

I don't know how I knew that. Maybe I just thought that because there was only one other female out there working. It's not like they had a host of females there working in the lab. I just knew that you shouldn't talk about this at work. Mike never mentioned it, and I never mentioned it. Then one day—because I wore a large lab coat, I didn't look pregnant until I was eight months along—my boss came in and said, “Shannon, are you pregnant?”

I said, “Well, maybe just a little.”

ROSS-NAZZAL: Just a little.

LUCID: He said, “You know, you're not allowed to work in the lab when you're pregnant.” So that was my last day of work.

ROSS-NAZZAL: You were laid off?

LUCID: I like to use the word fired. I wasn't offered anything to come back.

ROSS-NAZZAL: No severance or anything?

LUCID: I was lucky I was getting a check. Anyway, it was very, very sad. The next day Mike gets in the car, drives off to work, and there I am stuck at home crying my eyes out thinking life was over. Life had ended. There was nothing for me to do.

A month or so later Kawai was born. Kawai has always said that if she ever writes her autobiography she's going to say, "The day I entered the world, my mother spiraled into a massive depression." Or something like that. She had a more poetic way of putting it, I'm sure.

But anyway, it was just really bad. After a few weeks Mike said, "Okay, we've got to do something. What are we going to do?" We knew that nobody was going to hire me, because not only did people not hire females, but they also didn't hire females with a little baby.

He said, "Why don't you go to graduate school? You're a female and you need all the help you can get." Graduate school seemed like something that would work. I couldn't get a job, but I could go to grad school. So I applied. I asked my mother, "If it works out would you be willing to watch Kawai during the day?" She said that she'd be very happy to do that.

ROSS-NAZZAL: That's nice.

LUCID: Actually, it worked out well for her because I got a teaching assistantship, so I used my teaching assistantship and I paid my mother. She said, "Oh, I can't take money for watching my granddaughter."

I said, "Mother, you're not going to do it unless I pay you." It was the only right thing to do.

ROSS-NAZZAL: That's nice.

LUCID: Actually, that was the first money that she had made since she'd gotten married. I think she really enjoyed having a little bit of extra money that she could spend. Of course, she spent it on the kids. But she just thoroughly enjoyed having it. It worked out really well.

I applied to graduate school, and the reason I went into biochemistry—I'd always been sort of interested in physical chemistry, and I thought that that's what I liked. But to do physical chemistry I would have had to go down to the Norman campus. To do biochemistry I could go down to the medical center, because they had a graduate program at OU there. That was a much shorter drive. I could manage that commute and bring Kawai to my mother. That was manageable. That's why I applied to biochemistry.

But if I was going to do this, I needed a teaching assistantship. I applied for that, so I had to go in and be interviewed. The interview was in sort of an attic room because it was in an old building. There were all these guys sitting around that were professors. They were asking me all these questions like, "How are you going to manage school and a family?"

I said, "No problem. My mother is taking care of my child. It's like I don't have a child at all. It's no problem."

I still remember one guy, he looked at me, and he said, "If we give you a teaching assistantship, you certainly wouldn't think about getting pregnant again, would you?"

I looked at him straight in the eye, and I said, “I would certainly not think about it.” I had the sneaking suspicion that I already was, so I wasn’t lying. I wasn’t thinking about it. That’s for sure.

They talked, and they said, “Well, if we give you a teaching assistantship, would you work for this particular person?” This was a new person that they had hired. They had promised him a graduate assistant, but the graduate students that they had didn’t want to work for him because he was more into physical biochemistry.

I said, “Sure, I’ll work for whoever.” So, they ended up giving me a teaching assistantship. Then I started graduate school.

ROSS-NAZZAL: Were you one of the first women to get a TA position?

LUCID: No. Teaching assistantships, graduate assistantships, they were sort of like slave labor. They used a lot of foreigners and females—so it wasn’t like a real job.

ROSS-NAZZAL: But it helps. It helps offset the tuition.

LUCID: Yes. I’m trying to think. There were a couple of females from China that were my friends. There was another female there that was a graduate student at the same time that I was. But most of the people there were males, of course.

ROSS-NAZZAL: Tell me about the program and what sort of things you were studying at that point.

LUCID: I was in the biochemistry program. It was the OU Medical Center, but it was associated with OU. I still remember the first semester then that I was there. Like I said, I was pregnant again.

ROSS-NAZZAL: How did you hide it this time? Were you wearing lab coats most of the time?

LUCID: Any time it was appropriate I wore a lab coat. People didn't pay that much attention. I still remember it was just before Christmas. Back in those days the semester broke in the middle of January. The first semester went to the first part of January. I was xeroxing some things at the Xerox machine. The person that was in charge of the course that I was taking was standing there.

I asked him, "If for some reason I'm not able to make it for the final," because I didn't know when Shani was going to be born, we were just guessing. "If I can't make it for the final, is there some way that I'll be able to make up the final? Could my husband bring the final to me and I do it at home? Could we make some arrangements?"

He just looked at me and he said, "Why would you not be at the final?" Here I was, I was nine months pregnant.

I said, "Well, you just never know."

He looked at me and he said, "If you're not at the final, there's no credit for the class."

I said, "Okay, I'll be at the final."

I was also taking the lab associated with the class. It was a Thursday. I think it was a Thursday. I was in lab. I drove from the lab to the doctor's office. The doctor wanted to induce.

It turned out that he had a bunch of people possibly going into labor at the same time, and he didn't want to work late. He liked to get everybody in at once. I said, "There is no way."

Back in those days the draft was based on boys' birthdays. Of course, in those days we didn't know whether a baby was a male or a female before they were born. I said, "There is no way that I am picking the day that this child is being born and it turns out to be that they get drafted and they get killed in a war." I said, "I am not going to do that. This baby will be born when it's born. I'm not choosing the death date."

Then he said, "Well, I think you're in labor already." I left, I went home, I got some stuff, and then I went back to the hospital. My daughter was born at nine o'clock that night. I'd been in the lab all afternoon, and then she was born at nine o'clock that night.

ROSS-NAZZAL: It was quick.

LUCID: My lab report was due the next day, on Friday. As soon as Friday morning came around—I'd had an epidural, so as soon as I could walk, I took my books out. I'd gone home to get my books, so I got my books out, and I wrote up my lab report. Then I called up my friend and I said, "Can you stop by the hospital and pick up my lab report and bring it in for me, so it won't be late?" She agreed, and she did. My lab report got turned in.

Back in those days you stayed in the hospital longer with a baby than you do nowadays, three days or something. My final was on Monday, and here it was Friday. I had to be in there for my final on Monday.

The doctor came around and I said, "I need to go home."

He said, "There's no rush."

I said, "Well, my little girl at home. She's missing me so much, and I just don't want to induce extra trauma. I need to get home to her."

He said, "Well, all right, you can check out. Now you do have help, don't you, that you can get?" I didn't lie. My mother had agreed that she was going to come over. It just so happened my mother had strep throat. She had said that she would come. I wasn't lying when I said I was going to have help. I got checked out of the hospital, so I went home, and there I had Kawai and Shani. Then it was Sunday afternoon. It was snowing. Oklahoma City, it doesn't snow all that much. It was snowing up a storm. I sat there, and I started to cry. Mike said, "What are you crying for?"

I said, "Well, my final is tomorrow morning. I have these two babies. What am I going to do? How am I going to get in? Mother's home sick. She has strep throat and can't come over. I can't bring the kids over there."

Mike said, "Well, no problem. I'll just take the day off. I can take the day off."

I said, "Really? You can just take the day off like that?"

He said, "Yes, I'll stay home with the kids; it'll be no problem." But then we had this little fight because he said, "But you have to take a cab when you drive down there because the doctor said don't drive." I didn't understand why. We went back and forth because I was insisting I was going to drive. Mike said if I was going to go down, I had to take a cab.

He ended up winning because he hid the car keys. I took a cab down. But I made the cab let me off in the icy snow three or four blocks away because I didn't want any of my friends seeing me getting delivered in a cab. My goodness.

I went in and took my final. The guy in charge never said anything. No one ever said anything. Then I had a week off before the next semester started. It all worked out.

ROSS-NAZZAL: How did you manage? I can't even imagine having two babies while going to graduate school. I know you had your mom helping. But that's still a lot. You're doing a lot of lab work. You're doing a lot of research and reading.

LUCID: Yes, but then I came up with this idea. Mike was extremely supportive. Mike was very helpful, but Mike had his job and the things that he was doing too. I wanted to make sure that I didn't take advantage of Mike's good nature and his support. I came up with the idea. I said, "Let's have nights."

He said, "What's that?"

I said, "Well, we'll just divide the week up. Monday can be your night and you do whatever you want. I'll watch the kids. Tuesday will be my night and you watch the kids and be in charge of everything."

He said, "What?"

I said, "It'll work. It'll work out just really great." That's what we did. That worked out.

My mother thought it was really weird, but then she sort of got into the hang of things. Then if she was going to ask me to do something she said, "Can you do this? Is it your night or Mike's night?" It worked out very well. Then for my birthday the next year Mike gave me a whole week of nights just to myself.

ROSS-NAZZAL: That's nice.

LUCID: No, it was. It worked out.

ROSS-NAZZAL: Were you doing anything in particular with your nights other than graduate school? Were you still flying at that point?

LUCID: Oh, yes, of course. As a matter of fact, I took Kawai, the firstborn, flying before she was a week old. I took each of the other kids flying before they were a week old, because my theory was they were living with us. We were not living with them. It was really funny because the doctor said, “Now you mustn’t drive a car for 10 days.” I don’t understand why they said that. I said, “Oh, okay, okay.” But he didn’t say anything about not flying an airplane.

ROSS-NAZZAL: You were very stubborn.

LUCID: When I was pregnant with Kawai then different people would say, “Oh, now you’re never going to be able to fly again.” That’s when I came up with, “They’re living with us; we’re not living with them. If you’re going to be a baby in this family, you just have to adapt to the family.”

ROSS-NAZZAL: Where would you take the kids? Were you going camping? You would fly somewhere?

LUCID: Yes, we’d just go wherever we went. We generally traveled flying and just put them in the back. Mike was pretty much in charge of them. That made it nice. But it was really funny one night. I had both girls—they were about 4 and 3—in the car, and we were rushing out to the

airport. We were going to meet Mike out there because we were going to fly over to Arkansas for the weekend. The youngest asked me. She said, “Do most mommies fly airplanes?” I said, “Yes, lots of mommies fly airplanes. That’s just what they do.” Then she said, “Yes, but daddies work the map and that is the hard job.”

ROSS-NAZZAL: Of course, if you have a house you have to do things like cook, clean, and do all the other domestic stuff. How did you break that up? Did you do a lot of the cooking and cleaning in the house? Or did you and Mike try and split that up as well?

LUCID: Yes, we really pretty much split it up. We would work together to clean the house up. We just divided everything up. Everybody pitched in and did everything, whatever needed to be done got done. Later on, when I was making more money and out of graduate school, I never hired anybody to help clean the house. I never hired anybody, because when I was in college I’d cleaned house for a job, and it was a horrible job. I thought somebody should have better job opportunities than that.

Other people said, “Well, you can hire somebody, and it’d give them a job, because they wouldn’t have another job.” I thought well, if they didn’t have it, maybe they could get another job. I just never felt right about that. And if we couldn’t keep the house clean, then obviously we had too big a house.

We never had standards. My house was never—my mother’s house was always perfect. You could walk in her house, and it smelled like lemons. That wasn’t our house, but we were clean. The health department never came. We had things picked up. We would generally pick up on Saturday. Everybody had their jobs that they did.

I know one time; this is back when I was in graduate school. Mother called and said she was going to come over. Kawai, she wasn't even in kindergarten yet, she said, "Oh, quick, I'll help you put the dirty dishes in the refrigerator." We didn't have a dishwasher.

ROSS-NAZZAL: What did you decide to write your dissertation on at that point? I assume you had to write a dissertation for your degree.

LUCID: Yes. The person that was my adviser had a project in mind, but it just wasn't working. I was a little desperate because obviously I needed something. I just went and I spent the day in the library, for a couple days. Then I came up with my project idea, so I went and I told him and I said, "This is how we can do it."

He said, "Okay." Then I did. Got the research done.

The day I took Kawai to kindergarten—I told Mike, I said, "Okay, I'm going to start writing my thesis today." So, I took her to kindergarten, and I went up, and I sat in the library. Had a blank piece of paper, and I wrote down, "This is my first sentence of my thesis. This is the hardest sentence to write. Now that I've written it, we can get on with it." I was sort of in a time crunch because I had to get it finished up before November.

ROSS-NAZZAL: You made quick work of that if you started that in August, September?

LUCID: The work was all done; I just needed to do the writing. Yes, I didn't have a lot of time to waste.

ROSS-NAZZAL: Were you also looking for a job at that point?

LUCID: I wasn't actually looking because I didn't have time to look. I was concentrated on getting out. I was very concentrated on getting out. I knew that as soon as I got out then I would start looking for jobs, but I didn't think too much about it. It was difficult to think about that because number one, no one was getting hired as PhDs anywhere. The job market was really really down. I think it was in *Life* magazine. There was a picture of this guy who had just gotten his PhD. He had all his reject letters pasted on every inch of wall space. It was really bad.

I knew a couple of guys. One guy that got his PhD just a few months before I did ended up driving taxis in New York City—that's where he was from. It was a very difficult time. I was just concentrating on getting out, and then I was going to concentrate on trying to find something to do.

The other thing was that Mike had a good job. If we were going to move somewhere, then he'd have to find another job. It's not exactly an easy thing to do. So, we talked, but we didn't have any real plans. My plan was just to get out.

ROSS-NAZZAL: How did you find out about the opportunity at OMRF again?

LUCID: You mean as a postdoc?

ROSS-NAZZAL: Yes. How did that opportunity come about?

LUCID: Let me think. I got out. Things were really bleak. I told Mike—I got out just around Thanksgiving—I said, “Okay, I can hang on until after Christmas. But after Christmas then I’m going to get depressed if I don’t have a job; I can hold off till then.”

After Christmas things started to fall apart because I didn’t have a job. I was looking for anything. I wasn’t fussy. I didn’t need to have one that was at PhD level.

I got hired at the VA [Veterans Administration]. Somebody needed somebody. I’m not sure how I found it. I forgot. But anyway, I actually got hired at the VA for a few months. I was working there, and one thing I was doing was looking at slides. Different doctors would send in slides of kids with leukemia. We were classifying them. After looking at those slides for a long time, I would take home slides and a little scalpel, and I would chase the girls around the house and prick their fingers. I wanted to make a slide to make sure they didn’t have leukemia, because it just seemed to me that every child in the world had leukemia.

Then I think somehow—it’s hazy, I don’t remember exactly how—but then I got on with somebody. The guy that was at the VA hospital, he got hired over at OMRF, so I just went over with him. He needed a lab, so I set up a lab for him. Then he was going somewhere else because he was from England. There was somebody there at OMRF who needed a postdoc, so I became his postdoc.

ROSS-NAZZAL: What were you looking at at that point? I think I’ve seen that you were working at some point on HeLa [Henrietta Lacks] cells.

LUCID: Yes, he was doing cell culture and was doing HeLa cells. I was really good at cell culture. I still remember hearing him in the hall—of course they never said anything to you—I

heard him talking to the researcher across the hall. He was saying, “Yes, Shannon just has golden hands. The cells that she grows are just really magnificent.” I was just really good at growing the cell cultures. He was real good to me. We did a lot of work.

One day he said, I don’t know, maybe the NSF [National Science Foundation], some foundation, they have these grants for young researchers, and he said, “Why don’t you apply for this? This would be really good for you.”

I said, “Sure.” The first thing we had to do, we had to get a recommendation from the head of OMRF. He did write a recommendation, but it started out, “In spite of the fact that Shannon has two young children, she has managed to come into work every day.”

So, the guy I was working for said, “There’s no point in us applying.” That’s life.

ROSS-NAZZAL: Seems to have happened a lot to you. There’s a big pattern in your life of that happening.

LUCID: It wasn’t just to me. It was to anybody. That’s just the way things were. None of my friends were any better off than I was. They were scrambling just like I was. There was one guy that was doing some good work, so I went to him. He had a position open of some sort. I went and asked him about it, and he looked at me and he said, “Shannon, why on Earth would we hire someone that graduated from here when we have our pick of anybody from any institution we want?” That was the truth. That’s the way it was. Things were really hard. There were not a ton of jobs available.

ROSS-NAZZAL: So, you felt pretty fortunate in finding a job.

LUCID: Oh, I was very fortunate that I had a postdoc. I was just very fortunate.

ROSS-NAZZAL: When do you recall seeing the ad for the Shuttle astronauts?

LUCID: I was working in the lab at OMRF. It was in the back of *Science* magazine. I saw that. I went home, and I told Mike. I said, “Look at this ad.”

He said, “Well, okay. Just apply.” I wrote off for the government form. I was aware who was the head of JSC, so I just wrote him a nice little letter. I said, “These are my qualifications and I’m interested in being an astronaut.” I never got an answer back, but I filled out the regular government form and sent it in. Of course, didn’t expect anything.

ROSS-NAZZAL: Did you have any qualms about doing so just given your experience having been a mother with young children? Did you have any fears about NASA just putting your application on another pile because of that?

LUCID: Back in those days I sort of trusted the government. I’ve grown up a lot since. But there finally was this law that said you couldn’t discriminate. It came out when I was still a postdoc. It did help. I could see that it helped some of the lab technicians. Of course, there was no help for postdocs and foreign students because they were beyond the pale. They weren’t covered by the legislation, but I did see things were a little better for technicians.

ROSS-NAZZAL: You mentioned things were starting to change.

LUCID: Yes, like for the lab techs, but it wasn't changing for graduate students. For instance, I had my postdoc, and I was very thankful that I had a postdoc, and I needed to keep my postdoc, otherwise there wasn't anything else to do.

I was pregnant with Michael. The head of where we worked, it was very obvious, he hated females and he hated foreign students. Everybody just knew that. Maybe hate is the wrong word, but he didn't think they were worth anything. Michael was due toward the end of August. As a postdoc, I did have some vacation days. I don't remember how many. But you couldn't hold it over from one year to the next, you had to use it in that year, and then it was gone. So, I had no vacation that I could bring over when Michael was born.

I went up for renewal right about the time that Michael was going to be born. If anybody knew that I was pregnant, I certainly wouldn't have gotten renewed. So, he had to get born without being noticed.

About three weeks before Michael was born, and of course I'd had a lot of big lab coats, I was in the lab and a couple of my friends came in and they said, "Shannon, tell us something, have you put on a lot of weight or are you pregnant?"

I said, "Well, there's certain things we just don't admit to."

They said, "We understand."

Then my boss came in. This was maybe a week or so before Michael was born. He said he was going on vacation, and I said, "Okay. I'm here."

He said, "Well, our HeLa cells have to be watched." They had to be taken care of every few days to keep the cell line going. He said, "Are you coming into work?"

I said, "Yes, I'm not taking any vacation."

He asked, “Okay. The HeLa cells are going to get taken care of?” Here I had a big lab coat on, but I was nine months pregnant.

I said, “Yes, the HeLa cells will all be taken care of.”

He said, “Okay,” and then he left on vacation.

Michael was born, I’d have to look, but in my mind I think it’s a Friday. I’m not sure. I was back, and I was changing the HeLa cells on Monday. I was driving Michael to my mother’s so she could watch him. When they’re a little baby like that you flop around a lot in the car seat. As I was driving to my mother’s, I thought, “Am I doing right by this child?” But you have to do what you have to do. My boss came back. Never once did he ever mention anything. I never said anything about having another child. In those days we didn’t discuss such things. I never talked about the kids at work because you didn’t want people thinking that you had kids—so it’s like you’re living two lives.

ROSS-NAZZAL: It makes sense. You don’t want that held against you.

LUCID: Oh, no. So, you didn’t bring up things that might hinder you in your job.

ROSS-NAZZAL: Things have changed so much now. People are so open about that now.

LUCID: Yes. When I started to work at NASA, and I can still remember, just after we first got there, all the guys were talking. “Oh, I have to go home because I’m going to take care of the kids for a few minutes because my wife has to go somewhere.” I thought, “Wow. How nice it is that they can mention that.” They thought it was like they were doing this big deal. That was

just at the beginning of the time when guys would admit that they helped out or they were fathers. They just felt so righteous that they were doing this. I thought, “Wow, you don’t know how fortunate you are that you can admit that you’re doing something like that!”

ROSS-NAZZAL: You had a pretty forward-looking husband though. He was doing all of that with you.

LUCID: Yes. Like I said, I don’t understand just exactly why Mike was that way—it wasn’t something he grew into. It was just that he always had that attitude. When I said I wanted to apply he said, “Okay, if you get a job then we’ll just move.”

ROSS-NAZZAL: That’s so unique, I think, for the time.

LUCID: Yes. I totally realize that. I was extremely, extremely fortunate. I remember one time I was on a PR [public relations tour]. It was in Japan. There were all these students that were going to ask questions. I think it was at a university. The guy in charge, said, “Oh, students here are very shy, they won’t ask questions.” But somebody did, and then they all lined up at the mic to ask questions. One person asked a question, something about what were the most important things to consider if you wanted to be a female and work. This was in the early ’80s.

I said, “Well, one thing is you have to make sure to pick the right husband if you get married.”

In a lot of the receptions that we were participated in on that PR I was the only female in the room; it was all these Japanese guys. Several times the guy in charge of me would say to me,

“Yes, a female needs to pick the right husband so that they can succeed.” Just really struck a chord with him. It was just sort of funny.

ROSS-NAZZAL: It’s true though. You need a partner.

LUCID: Yes. It has to be a mutual relationship. One person can’t just be supportive of the other. You have to support each other.

ROSS-NAZZAL: I wonder if this might be a good place for us to stop and then we can pick up with the interview next time.

LUCID: Okay.

[End of interview]