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Interviews of the Margaret MacVicar Memorial AMITA Oral History Project

Barbara Lawrence– Class of 1963

(interviewed by Jean Choi)

July 2013

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Lake Wales, Florida
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CHOI: I'm here with Barbara Lawrence, class of 1963. Where were you born? What was your childhood like?

LAWRENCE: I was born in Ohio. However, I didn't live in Ohio for part of my first six years. I lived in Michigan while my dad was going to medical school at the University of Michigan. My mother was a nurse, and she had to work while he was studying. So I ended up living with one set of grandparents, and my brother ended up living with another set of grandparents, both in Ohio. Then we were back in Michigan for a little while. We moved to Ohio when dad went to do his internship and residency. Through third grade, I lived in a suburb of Cleveland. From fourth grade until high school graduation, I lived in a little town in Ohio called Lodi.

CHOI: What was it like being shuffled around like this and being separated from your brother initially?

LAWRENCE: Well, it was good in some ways because my grandfather (I was the first grandchild) spent time with me. He was, of course, working at that time.

CHOI: What was he working as?

LAWRENCE: He was an accountant for a car dealership or something. He taught me to add simple numbers before I went to kindergarten (laughs).

CHOI: Interesting!

LAWRENCE: Later when I would spend summers with them, they would take me to the library in Lakewood, Ohio. And so, they spent a lot of time in terms of my development. My other set of grandparents, my father's parents, were school teachers and had a farm. So my brother was with them.

CHOI: So different environments.

LAWRENCE: Yes. It was good. My grandmother, with whom I stayed, played the piano, so she tried to teach me simple piano things.

CHOI: Did you learn it?

LAWRENCE: Some, yes. I've always enjoyed piano work, and I have a daughter-in-law who was a concert pianist in China from four and a half years old until she was out of high school.

CHOI: From four and a half years old?

LAWRENCE: Yes.

CHOI: Wow, that's impressive.

LAWRENCE: She was a prodigy in music. She's still very good. She lives in Phoenix and teaches students now.

CHOI: Piano.

LAWRENCE: Yes.

CHOI: So from a young age you were, before you even entered school, you were adding numbers up. Did you like numbers?

LAWRENCE: Yes. Oh yes. Math, I thought, was fascinating at that time.

CHOI: During elementary school were you encouraged to study a lot? Were you a good student? Were you playing a lot?

LAWRENCE: I think I studied a lot. After when we moved back to Ohio for dad to do his internship, I went to public school for part of first grade and for second grade. Then, for third grade, I went to a school where you had to be tested before you could attend. I used to ride a city bus to go to that school.

CHOI: By yourself?

LAWRENCE: By myself.

CHOI: Wow, that's brave!

LAWRENCE: Well, back then you didn't think anything of it. It was before all the horror stories that have come out about children and stuff. It was good and my parents were sad, when they moved away when I was ready for fourth grade, because I couldn't continue in the school. So I went back into a regular public school. My class was like fifty students.

CHOI: In one class?

LAWRENCE: Overall. My graduating class was 50 students.

CHOI: That's small.

LAWRENCE: Yes it is.

CHOI: Did you get a lot of attention then?

LAWRENCE: No. Because they had to pay attention to everybody. The teachers were busy. But I was kind of like a geek loner anyhow (laughs).

CHOI: Really? I was going to ask about your personality as a student. Also I'm curious because clearly your father's profession kind of moved the family around a lot, and your mother was educated as a nurse. So was it an environment that encouraged a lot of learning?

LAWRENCE: Oh yes. [Once we moved to Lodi, my parents stayed there until sometime in the 1970s, even though I left in 1959.]

CHOI: For your brother and for you as well.

LAWRENCE: Right, and for my sister who was born while we still lived in Michigan, about a year before we moved back to Ohio.

CHOI: So you have one brother and one sister.

LAWRENCE: I had one brother, two sisters. There was another sister who was born when I was in fifth grade. She was kind of a, "Oh we're having a child!" kind of an afterthought there (laughs).

CHOI: She was a surprise.

LAWRENCE: Yes.

CHOI: It's clear that your parents were sad that you had to leave the test school, so there wasn't any concept of, "Oh girls don't need to study as much as boys?"

LAWRENCE: Not in my family.

CHOI: So your family was a bit progressive for the time?

LAWRENCE: Correct. Well, like I say, my dad's parents were school teachers, and so they pushed education. When they retired they came to Lodi and started up a one-room library, because we had a county library but nothing in the town, although the bookmobile would come around. Both sides pushed study and education and that sort of thing.

CHOI: That's really wonderful.

LAWRENCE: But you do feel kind of on the outside, especially as a girl who is studious.

CHOI: Can you describe that a little bit? Why did you feel on the outside?

LAWRENCE: Well, in high school they make fun of you for everything. No matter what you are. There's the jocks and the geeks and the lower ranks. So if you weren't too up to snuff you would get beat on for that (not beat on, but put down).

CHOI: That's terrible.

LAWRENCE: You don't get as many dates. Well, it was a small class anyway, there wasn't too much to choose from. I felt kind of like I wasn't where I wanted to be because I've valued education and intelligence. I've always enjoyed—well I'm a sci-fi geek (laughs).

CHOI: And learning new things.

LAWRENCE: Learning new things.

CHOI: So then were you more into math and science or were you interested in everything?

LAWRENCE: More into math and science, but of course we had to take like home economics as a student. That was one of the things you had to take as a girl, or shop as a boy. You couldn't take shop as a girl.

CHOI: You couldn't?

LAWRENCE: You couldn't take home ec if you were a boy. There was a strict division of the sexes back when I was growing up. Everybody expected to graduate and get married and have kids.

CHOI: Out of high school?

LAWRENCE: Out of high school or fairly soon, yes.

CHOI: Interesting.

LAWRENCE: But that was the mindset back in the 50s. The “father knows best” generation and that sort of thing.

CHOI: But your family was different because they wanted you to pursue your education. Were you at the top of your class?

LAWRENCE: Yes. I was the valedictorian.

CHOI: Oh wow.

LAWRENCE: My dad was valedictorian of his class of six [?] people. My daughter, the one that I haven’t talked about was valedictorian here [Lake Wales] out of two or three hundred people.

CHOI: Oh my goodness.

LAWRENCE: So we have had a third generation of valedictorians. I realize now how little I knew back then when I was valedictorian.

CHOI: But for your time you studied hard and you did very well! And you enjoyed it?

LAWRENCE: Oh yes.

CHOI: Where did the concept of MIT come up?

LAWRENCE: I don’t really remember anymore.

CHOI: How did you apply to college? What was the process like?

LAWRENCE: We filled in a lot of forms and took the SATs and ACTs. I applied there [MIT], I applied to Northwestern, and I applied to a liberal arts college in Ohio (Oberlin).

CHOI: Only three schools?

LAWRENCE: I think so.

CHOI: It’s very different from now. Nowadays you do 20, 30 schools. Do you remember how you chose those schools? Did someone advise you?

LAWRENCE: Probably. I read up on schools. I used to in high school, I would read "Scientific American" and stuff. I enjoyed science and so I thought I wanted to go to a school that had science, but I also liked Oberlin because it had a music program.

CHOI: You liked music?

LAWRENCE: I liked music more to listen to than to perform. I'm not a performance person. I know my skills are limited. I enjoy listening to classical music. My dad would play records when he was home. He and my mother had a huge classical record collection, and he swapped them out for CDs when they came out.

CHOI: Do you have any of his records?

LAWRENCE: No, he donated them somewhere when he started swapping them out. He lived in Lake Wales at that point. They retired here in the 70s after my mother inherited her parents' house.

CHOI: Did you remain close with your grandparents?

LAWRENCE: Yes. I did. Not as much after they moved here because it was just too far away, but I was closer to them because I had lived with them. I spent summers a lot of times in their house [in Lakewood] because I had access to a library, which I was so happy about. I would come home with a stack of books and read through them, then I would have them take me back. But our county library was really good. The county librarian had two older children who were science fiction fans. So in their library, which was not huge, they had at least two library shelf units of science fiction for youth. They had other science fiction for grownups, which I also read.

CHOI: That was perfect for you!

LAWRENCE: Yes, it was wonderful. My first husband was her son. He is a graduate of the Aeronautics program at MIT, in the same class as Sheila Evans Widnall.

CHOI: So he was course 16?

LAWRENCE: Yes.

CHOI: I see. You applied to these three schools. Did you get into all of them?

LAWRENCE: Yes.

CHOI: How did you make the choice?

LAWRENCE: I really wanted to go to MIT (laughs).

CHOI: Really? What was your idea of MIT?

LAWRENCE: That it would probably be the most intellectually stimulating place.

CHOI: You didn't have any concept of, "Oh I hear there's not many women there."

LAWRENCE: I'd heard that.

CHOI: But it wasn't intimidating for you?

LAWRENCE: No, not until I went into chemistry class.

CHOI: So let's hear about this. When you decided to go to MIT, were your family and friends happy for you? Were they sad that you were leaving?

LAWRENCE: They were happy for me, but I'm not sure—it's hard to say in retrospect what they felt. I think they were happy for me.

CHOI: Were your parents proud of you?

LAWRENCE: Oh yes.

CHOI: Do remember taking the trip to Cambridge?

LAWRENCE: (Laughs) 53 or 54 years ago? No.

CHOI: Where did you end up living then?

LAWRENCE: At MIT [student housing].

CHOI: They had housing for you?

LAWRENCE: I think it was 120 Bay State Road [in Boston], in a women's dorm that was a converted house.

CHOI: Exactly. How many women were there?

LAWRENCE: Somewhere between 12 and 16, something like that. I think most of us lived in the dorm. I think there were two people who maybe lived with family in the city. Then we had—Sheila Evans Widnall was our dorm resident and Mrs. Korda was the house mother.

CHOI: Did they provide you with food and everything?

LAWRENCE: Yes, we had to help in the kitchen with clean up and serving and that sort of thing.

CHOI: I didn't know that.

LAWRENCE: Because somebody else cooked the meals. We just had to serve them, at least at dinnertime. I don't remember the other meals. I remember one day spilling hot fish chowder on myself (laughs). I had to go get that taken care of. It was a second-degree burn so (laughs) that stuff is really hot!

CHOI: Chowder! Did you like the living situation?

LAWRENCE: It was fun. It was good to be with other women because most of the time you're not there at that point.

CHOI: What do you remember your life being like? You would walk across the bridge?

LAWRENCE: Walk across the bridge.

CHOI: Any time, any type of weather.

LAWRENCE: Yes (laughs). That was interesting sometimes.

CHOI: In the winter especially I bet.

LAWRENCE: Living in Ohio, you know winters. I was used to winter.

CHOI: Then you would get to class. What was it like to go to class with no other women practically?

LAWRENCE: It wasn't bad in terms of student level. The one thing I remember about my chemistry class was Linus Pauling's textbook. I enjoyed chemistry in high school, but when I got into that class I felt like the instructor asked me to answer every question essentially. I felt picked on in the class.

CHOI: Why? Why would he do that?

LAWRENCE: I don't know, but that's the feeling I had at that point in time. I did not do well in that chemistry class because I was feeling pressured.

CHOI: Did you feel prepared for the coursework?

LAWRENCE: In some areas, yes. In other areas, no because of the school that I came from, which was small. I thought I would do well in chemistry because I loved it, but I didn't. I think I ended up with a "D." But I did pass (laughs)!

CHOI: It was a huge lecture right?

LAWRENCE: Yes.

CHOI: And he would pick on you?

LAWRENCE: I felt like it, yes.

CHOI: That's frightening!

LAWRENCE: Yes! It was.

CHOI: We didn't have experiences where professors would call on us because they were in such big lecture halls. Did you feel as though your peers who were male—were they prejudiced towards you?

LAWRENCE: I didn't feel that, at least in retrospect. That was the biggest negative feeling I got was from that particular class because I had other classes the next semester. I took Elementary Number Theory and loved it. I got an "A" in it.

CHOI: Oh wow.

LAWRENCE: I took one of Farre Pequigney's (?) English classes in literature. I think I got an "A" in that and loved it. I felt comfortable with those teachers. I just didn't feel comfortable in chemistry. That may have been just our chemistry between me and the teacher. I just couldn't relate to it. I took chemistry later at Arizona State University and had a wonderful, wonderful, wonderful teacher who made you love chemistry.

CHOI: That's why it's important who teaches the class. It changes the way that students learn the material.

LAWRENCE: Right.

CHOI: It can be a very emotional experience.

LAWRENCE: Yes, I got back on the horse later and took that chemistry class, and qualitative and quantitative analysis courses. So I had at least three or four chemistry classes outside of MIT and did A-level work, so I knew I could do the work (laughs). There was something that just didn't turn me on.

CHOI: Did you declare a major?

LAWRENCE: No, I didn't because I was only there for a year.

CHOI: In that year that you were at MIT, were there things that you remember enjoying?

LAWRENCE: Well, I enjoyed, like I say, the Number Theory class especially. That was a fascinating class because I had never had something like that before. I enjoyed the fact that there were events, concerts, and special guests that you could attend [at MIT or in Boston]. I saw Tom Lehrer in concert and enjoyed that.

CHOI: He came to MIT?

LAWRENCE: I think so. Either that or we went to see him. This must have been in the Boston area, because I did go out to see the Boston Pops. I enjoyed things like that.

CHOI: Did you enjoy the city?

LAWRENCE: Some, of course, because I didn't have wheels so I was dependent on public transportation which was pretty good for Boston, I thought. I spent a lot of time studying and that sort of thing (laughs) so there wasn't a lot of time to do much.

CHOI: In your day, you went to your classes and you studied for a long time?

LAWRENCE: Yes, and I started going out with the man who was going to be my husband.

CHOI: How did you meet him?

LAWRENCE: His mother talked to my grandparents, who introduced us. She was the librarian for the county. When she heard that I was going to MIT, she thought I would like to meet him. He was three years ahead of me.

CHOI: So you met, and then did you go on fun dates?

LAWRENCE: Well we didn't have a lot of time then. I remember we went out to an Armenian restaurant, and I had never had—when I had lived in Boston, that's the first time I ever remember having lamb. The Armenian restaurant had lamb kebabs and pilaf, and I thought, wow this is great food! When we would go out, sometimes we would go to the restaurant. He had a little motor scooter at some point.

CHOI: Well that's useful.

LAWRENCE: Yes, that was a help.

CHOI: Did you hang out in the Cheney room?

LAWRENCE: Not sure what that is.

CHOI: It was a women's only room in the main building for women to retreat to. They had showers.

LAWRENCE: I don't remember that. Was it available at that point in time?

CHOI: Yes.

LAWRENCE: I may have, but it doesn't come to my mind. [I do remember one time that I was using an elevator, in the main building, and Norbert Wiener joined me. I said "Hello" and a few other words to him, and he remarked that I had a Canadian accent. I told him that my mother's parents were both Canadian, so that was probably where I had acquired it.]

CHOI: For the most part were you kind of enjoying the school or no?

LAWRENCE: Yes.

CHOI: How did you make the decision that you wanted to leave?

LAWRENCE: I felt ashamed that I hadn't done as well as I had wanted to, for example in that [chemistry] class. When I married my husband,

which I did in that first year, then it was kind of the push to get his degree. He was finishing up his bachelor's and he wanted to get an extra [engineer's (?)] degree at MIT. So he was doing a five-year plan, and I was typing up his thesis and stuff.

CHOI: You were helping him.

LAWRENCE: Yes. So there's all kinds of things tied together that made the decision.

CHOI: I see.

LAWRENCE: Then we moved away from Boston when he got his degree.

CHOI: Where did you move to?

LAWRENCE: Well, he interviewed in different places, you know, Huntsville, St. Louis, and we ended up in Phoenix back when there weren't very many people living in Phoenix.

CHOI: What was Phoenix like back then?

LAWRENCE: Spread out. Far between places.

CHOI: You needed a car?

LAWRENCE: You needed a car. There wasn't any kind of decent public transportation. We moved to Mesa first. We had my first daughter in 1962.

CHOI: What's her name?

LAWRENCE: Cynthia.

CHOI: Is she the one in Paris?

LAWRENCE: She's the one in Paris, and she's the one named for Cynthia Kolb Whitney.

CHOI: Oh you named her after her?

LAWRENCE: Cynthia and I were in the same class. I said, "Boy that's a pretty name. If I ever have a daughter I'm going to name her that (laughs)."

CHOI: Do you still keep in touch with her?

LAWRENCE: I had never heard from her or kept in touch with anybody, because I moved away and kind of lost track. In fact I didn't realize MIT considered me an alumna until...

CHOI: Yes, you come up in the roster.

LAWRENCE: My ex-husband is in Phoenix, and I saw him (he was having his 75th birthday this year). I was up there for three and a half weeks in May and went to his birthday celebration.

CHOI: That's nice, so you both keep in touch, and you're close?

LAWRENCE: Yes, well I keep in touch, and he said, "You know MIT is looking for you? Because they consider if you make it through one year you are considered an alumna." And I said, "I'll be happy to give them my information because I've lived here [in Florida] for 28 years." It's not like I'm hard to find. But I've changed names several times, which is why you had the wrong name. I don't know. I gave them the correct name when I emailed them in May from Phoenix.

CHOI: I will tell them because you want Barbara Lawrence, correct?

LAWRENCE: That is my name currently, yes. Ted may have told them that years back, but I haven't been a Rucker for 40 years (laughs)! I've received something that said Rucker on it. I had received something else that said Lawrence on it. Some part of your database isn't communicating with another part.

CHOI: So you were in Phoenix and what were you doing there?

LAWRENCE: Well, he was hired by a company, a division of Garrett called "AiResearch," and he worked in a Think-Tank group headed by Archie P. Kelly, who had worked previously with Admiral Rickover in the Navy. But it was a blue-sky group, and they worked on whatever they felt like they should. At one point we lived with a jet engine in our background on an Indian reservation (laughs). We had lots of fun. I've had an interesting life. I can't complain too hard!

CHOI: While he was doing that what were you doing?

LAWRENCE: Well I had my first child in 1962. My second child in 1964. My third child in 1970, and in between that I took a few classes at

Arizona State, as I was taking the chemistry. But I was taking just one or two or three courses a semester.

CHOI: Why were you taking them?

LAWRENCE: Because I wanted to. I didn't know if I would ever have a chance to get a degree, and I thought, well I need to get out from under this chemistry thing that is hanging over my head.

CHOI: You definitely did.

LAWRENCE: Between my second and third child, I discovered that they had a real computer area, and I took FORTRAN II, which is what they offered. It was offered in the Electrical Engineering Department. Then they had FORTRAN IV, so I took that. Then the instructor said, "Would you like to be a lab assistant?" So I did that for a year, part-time, and I got paid a dollar fifty an hour or something. I got to help students with their FORTRAN II and IV programs. So that helped solidify my love for computer programming. [It also helped me to see how others handled the same problem, which allowed me to think outside the box.] The same instructor also taught some assembly language programs, so I took those as well.

CHOI: So you continued your education.

LAWRENCE: Yes, bits and pieces, here and there.

CHOI: How did you manage while taking care of your kids?

LAWRENCE: Well one year my daughter, they had what they called a home management house which was in the home economics department. Every year they wanted to have a baby for their students to practice on. (Laughs) So I volunteered my baby for one semester or two semesters. They didn't keep her overnight, but they had her in the daytime, and I was still nursing her. I was breastfeeding. I would come by and feed her and then they would—

CHOI: What would they practice on her?

LAWRENCE: Diapering and bathing and soothing and whatever (laughs).

CHOI: What a good sport she was!

LAWRENCE: Well, you know this worked well for me, because then I could take some classes.

CHOI: And you trusted them obviously.

LAWRENCE: That worked out for one year.

CHOI: I had never heard of that before. But that sounds very convenient. So then you were taking classes, and she was the star baby of her class. As you continued to take courses you had your second baby?

LAWRENCE: Between when she was the baby there and my second one, we moved to the Indian Reservation with the jet engine in the backyard.

CHOI: For what reason?

LAWRENCE: Well, it was my husband's work. They wanted somebody to live on the property. It was a little trailer, and every afternoon at 3 o'clock they would run up the jet engine, liquid hydrogen, and then it was a huge drive back in the middle of nowhere in the Santan mountain area, south of Phoenix.

CHOI: Was it beautiful?

LAWRENCE: It was beautiful. You didn't see another soul most of the time. Occasionally you would see an Indian. Occasionally see a rattlesnake. I learned to shoot a rifle (laughs).

CHOI: Did you like living there?

LAWRENCE: It was good, but then I got pregnant with my second one and we wanted to move back before he was born. We were there for about a year.

CHOI: Were you taking classes then?

LAWRENCE: No, but at that point I don't think I probably was. It's hard for me to get the timeline at this point in my head.

CHOI: So at one point you were a stay at home mom?

LAWRENCE: Yes.

CHOI: What was that like? Did you enjoy it?

LAWRENCE: It was good, and of course I tried to read to them and this sort of thing. Both my husband and I believed in education for the children. Giving them whatever stimulus we could. When we could, we put them in a Montessori school. That was after we moved back of course.

CHOI: You moved back to Phoenix?

LAWRENCE: Well, back to the Phoenix area. We moved to Tempe for awhile. I'm trying to remember the timeline. I worked as the lab assistant, when my first and second children were little and were staying with a sitter. When I was taking some of the other classes, the instructor wanted me to help him with a program for Motorola. So I worked with him on that in assembly language. Then later I found a job with a company called Dickson Electronics.

CHOI: Doing what?

LAWRENCE: I've had various jobs when I was in the Phoenix area. When we first moved to the Phoenix area, I worked for the telephone company, but I didn't like having to sell princess phones and stuff, so I got away from that when I could. Then between the school classes and Dickson, I became a certified solderer for Motorola, so I used to solder electronic components.

CHOI: How cool! How did you end up doing that?

LAWRENCE: Looking for a job that sounded like something I could do (laughs). It paid money! Which was a good thing. When I started working for Dickson, my oldest was about four or five years old.

CHOI: Did you husband encourage your working?

LAWRENCE: Yes. I mean, he didn't discourage it. We needed the money. He helped with some of the housework, so I can't fault him for anything because he was helpful, he loved the kids, so it was a partnership that we had.

CHOI: You liked working?

LAWRENCE: I did because, well after I went to Dickson I was working in, I think, EASYCODER. But I was there for about three years working on programs. Then I got laid off when I was pregnant with my youngest. Of course at that point [in the early 1970s], no

business would hire you if you were pregnant, because I interviewed at several. But I enjoyed computers and programming. It was the challenge to outthink the computer or make it do what I wanted it to do.

CHOI: That's an interesting way to think of it. What did you do afterwards?

LAWRENCE: Well this is when I was married to my second husband when I had my baby, my youngest who is going to be 43 in a month. This was the Rucker. He was big in math.

CHOI: Where did you meet him?

LAWRENCE: At Dickson Electronics. I didn't fall for anybody who was stupid (laughs). All three of my husbands ended up with doctorates at one point either before or after me. So they were not stupid.

CHOI: That makes sense because you're very smart.

LAWRENCE: Yes, I needed someone intellectually stimulating. I met him at Dickson. But he had somebody that he really wanted to be with, who was not available when we first married, so I got a divorce from him. He is still with her and they still live in Phoenix, so I see them periodically, too. So I moved back to Ohio to be with my parents with my youngest. My older two stayed with their dad because my youngest was still fairly dependent on me. So then I got a job as a data entry person because that was the only thing I could find at the county seat. It was about 15 miles from where I was staying. I did that, and I did a program for them in EASYCODER, but they didn't have programming jobs available.

CHOI: But you did the programming job for them?

LAWRENCE: Yes. Then my current husband, Lawrence, showed up at my door. He grew up in Lodi where I did. He was the salutatorian on our class.

CHOI: So you knew each other?

LAWRENCE: Well in a class of 50 who's not to know? In the fifth grade we used to play Tic-Tac-Toe against each other. He was my first love. We dated for several years in junior high and high school.

CHOI: Then you beat him out as the valedictorian!

LAWRENCE: He and I split up in high school. I was devastated. He married somebody else, I married somebody else. He showed up at my door while I was in Ohio with my youngest.

CHOI: How romantic!

LAWRENCE: He was moving down to Panama.

CHOI: Why? For work?

LAWRENCE: Because he had a job. He was a veterinarian.

CHOI: He was going to Panama?

LAWRENCE: To work in the Canal Zone. It was the Canal Zone then. So we got together, and I ended up moving down there with my daughter and married him. [We had each kept the sterling silver friendship rings we had exchanged in high school, and we used them when we got married.]

CHOI: What was Panama like?

LAWRENCE: Well, we lived in the Canal Zone, which was more like a posh suburb.

CHOI: It was different? It was more industrial?

LAWRENCE: Well, no. It's hard to say. [The impression I always had was that everything was always neat and clean, with nothing out of place.] The veterinarians were in charge of a small animal hospital. So people who had pets would bring them there. There were two vets I think. The other one was also in charge of a small zoo that was located between Balboa and Gamboa. My husband would also go up to a city called David, to do the meat inspections and the milk inspections for the food that was bought for the commissaries for the civilian employees. They hired him to come down and so I came down as a spouse.

CHOI: Did you know how to speak Spanish?

LAWRENCE: I don't. They didn't offer it at my high school until I was like in tenth or eleventh grade. I wanted to at that point, but I continued to take the Latin I had already taken for a year or so, because I felt it was probably the better thing to take and I couldn't fit them both in. But he learned a lot of Spanish, and my daughter whom he adopted learned some Spanish in her schools. She

started going to school in pre-kindergarten. There was a Jewish Welfare Board (J.W.B.) that had a pre-school program focused on education. She was in that program. I couldn't find a job when I first got there, in fact I didn't find a job from 1973 until about 1981. I found a job in 1981 as a local hire.

CHOI: In Panama?

LAWRENCE: Actually, in the military, the U.S. military base.

CHOI: But in Panama?

LAWRENCE: In the Canal Zone.

CHOI: So you were there for awhile.

LAWRENCE: Twelve years, 1973 to 1985. And that's humid. You talk about humidity [in Florida], that was humid. Oh yes.

CHOI: Coming to Florida I guess was a breeze.

LAWRENCE: It was easier to come to Florida through Panama than to come to Florida from any place else in the United States.

CHOI: I actually interviewed a woman who graduated in 1970. Her grandparents were of West Indian descent, but they worked in the Canal Zone as well.

LAWRENCE: A lot of people did.

CHOI: Your daughter, she must be fluent in Spanish.

LAWRENCE: She's not as much, because she went through the U.S. school system which they had there. Because they had at least a couple of elementary schools and a junior high and a senior high on the Atlantic side and the Pacific side. We were on the Pacific side. She went through school. She learned more words in Spanish than I probably did.

CHOI: Did you like living there? Did you see yourself living there permanently or as an intermediate step to something else?

LAWRENCE: Well I thought I'd be living there permanently, but then the Panama Canal Treaty came along and it was giving over where I lived to Panama at a certain point, which is why I eventually ended up here (in Florida). I couldn't afford to live on the

economy because I had separated from my husband. Being a local hire, they didn't pay me what they would pay me if I had been brought down from the States (I was an equivalent to a GS 9 or a GS 11 in my job). I wasn't being paid that equivalent, and I didn't receive a housing allowance, so I couldn't afford to live in Panama, on the Panamanian economy. So I had to repatriate.

CHOI: You wouldn't have wanted to leave?

LAWRENCE: Well, my daughter was in ninth grade. She had been through the whole school system up to that point. She wanted to graduate with her class. I hated not to have her do that. So when we moved here [Florida], she went into tenth grade.

CHOI: So you did move after her ninth grade.

LAWRENCE: We had to. There weren't a lot of choices.

CHOI: What was that transition like?

LAWRENCE: She was not happy. I was okay because my parents were here, and I knew that when I got a job she'd have somebody for after school, if she needed some attention or something. She had somebody who could take care of her. She was relatively independent at that point being in tenth grade, but sometimes you need a ride home from school because she had to stay after to do stuff. Of course if I'm working I can't necessarily come to help her, because the first job I got was in Lakeland, which is an hour drive from here essentially.

CHOI: So you commuted an hour every day?

LAWRENCE: Each way. I was doing data entry at that point, because, again, that was the only job I could find. I had applied to the county here [in Bartow]. They had just filled their slate of programmers. When I lived in Panama, I did get a job, I learned COBOL at the junior college there. So I got jobs programming in COBOL. I actually worked at the Tropic Test Center. Then I worked at the Automation Management Organization. So I worked two different places there. I did a good job, had no complaints about my work. I enjoyed it. I wouldn't have left because it was paying money. But I knew when I got here (to Florida) I'd have to find a job, and my dad, who was working part-time for the county at that point, said that the county had had jobs available in COBOL programming, but, of course, by the time I got here, they didn't. So I looked for any kind of job. I actually drove to Orlando to the

Naval Training Center (which is no longer there) to put in an application. I could have repatriated by reapplying for the job that I had in Panama, but they had told me this is a mission-critical job, so if you come and we have to send family home, you stay, they go. I didn't really want to do that. So I did data entry for about six months until some jobs came open at the county. I went in as an entry-level programmer because they said "we can't prove your ability", so I mean (laughs) I've started at the ground up again. I've always had my data entry skills, which was good. Now they're getting away from key punches and stuff.

CHOI: But you had to always...

LAWRENCE: Build back up.

CHOI: It was necessary, but was it very difficult?

LAWRENCE: I don't think so.

CHOI: You're very resilient.

LAWRENCE: I've had a lot of interesting times.

CHOI: You ended up here and then your daughter I assume she graduated from high school.

LAWRENCE: She was valedictorian.

CHOI: She came for tenth grade, good for her!

LAWRENCE: A lot of kids resented her. She came from somewhere else, and most of these kids had grown up together. She was smart, and she was valedictorian.

CHOI: Did she go on to college?

LAWRENCE: She actually even applied to MIT. But they turned her down because her brother had applied and stayed there for one semester and left. I think that was two strikes against her. She could have gotten an appointment to the Air Force Academy. There was someone down here who would have recommended her for that. She wanted to go to Swarthmore. She was accepted to Swarthmore, but they would have counted my husband's income against her. I couldn't afford to send her there. She couldn't get enough scholarships because they would expect him to pay part of it, and I had no support when I came back to the

States. I said, "Can't do it girl." So she ended up at New College, which is the honors college for the state of Florida in Sarasota. So she lived on the beach (laughs). Her graduating class was like 50. There were a total of 200 students in the college I think. All four grades. It was very laid back, she got exposed to more things there than she would have in a lot of places because it was a free-wheeling kind of thing. She lived in the dorm for part of the time and then she lived in an apartment part of the time (at different times). But it was a place where you designed your own degree plan.

CHOI: What degree did she come out with?

LAWRENCE: B.A. in psychology. One summer she went to a brain-injury facility, several miles away from the college, and said she would like to apprentice through the summer. They said, "Well we've never had anybody, but we'll put a program together." They took her in and by the end of the summer they said if anybody else would like to apply, they would let them.

CHOI: So she created a new program.

LAWRENCE: For her, yes. Well they kind of do their own thing. What they do is submit a contract every semester. This is what she planned to do, and when they fulfill the contract, they get credit for it. It's not pass-fail, it's did you do your contract? She did a lot of things and she'd had a lot of AP classes in high school. She seemed to enjoy the psychology, and they had to do a paper or thesis to get out of there. She did that. She graduated from there.

CHOI: So you must be proud of her.

LAWRENCE: Oh I am.

CHOI: Is she still in the area?

LAWRENCE: She lives in Ann Arbor, Michigan.

CHOI: Oh wow, how did she end up there? It's so far.

LAWRENCE: Well, she got engaged to one of the people she met at the school. He was going to go up there for Law school. She wanted to go up to the Business school, but they wouldn't take her because she didn't have any business experience. Granted, she had done things in the summer between college semesters. She worked at Disney World, in the Living Seas, one summer as part of her

psychology program. She got psychology credit and got paid because her instructor in psychology at New College wanted to work with the dolphins. So she ended up in the Living Seas doing some of the programs there. So my parents and I were there to watch her do her thing, when a manatee knocked her into the pool! She was feeding one of the manatees at the time.

CHOI: Was she injured?

LAWRENCE: No. She swims. That was the first thing we taught her in Panama because she was not quite three years old. So she and he went up to Ann Arbor, and he went into the program. She had to go to work. She worked for Warner Lambert, doing—I'm not sure exactly what she was doing back then, but she worked in new drug development processing (to get FDA approval). Eventually she reapplied to the Business school, and they took her, so she worked full-time and got her MBA part-time. She fell out with the guy she was engaged to, and she started going out with another Law student she had met through activities with other law students. They've been married for a while now. He became a lawyer. She got her MBA. She continued to work for Warner Lambert, now Pfizer. But she heard that Pfizer was planning to close the Ann Arbor facility, so she looked for another job, and ended up back at the University of Michigan, working for a breast cancer doctor, reducing his data. Later, she went to the University of Detroit Mercy to become a Physician Assistant.

CHOI: She's a PA.

LAWRENCE: She's a PA, so she has two Master's degrees now.

CHOI: That is fantastic.

LAWRENCE: She came back to the University of Michigan hospital, worked two and a half years in the hematologic-oncology area on the ward. Just last week she started a new job, still in the University of Michigan health program, but now she's working for a bariatric surgery practice. She may get a chance to help with some of the surgeries, so she's really excited about that.

CHOI: That's very interesting.

LAWRENCE: She'll mostly do practices, consultations, pre-surgical, post-surg.

CHOI: But that's so important.

LAWRENCE: She's always, it was weird whenever she would call, talk about her practicum, every time she had a surgical rotation she was just so excited about its (laughs), this little five foot tall thing! "Gee mom, I held a heart in my hand today!" or "I got to drive the laparoscopic camera when we were doing a hernia operation or gall bladder operation."

CHOI: She's definitely not squeamish. That's very nice!

LAWRENCE: Of course, where she was before, the last two and a half years, she'd done like bone marrow and spinal taps and stuff like this, but mostly it was deal with the health conditions of people who were on the ward getting chemo or whatever. If they crashed she had to deal with them. It wasn't where she could do surgery. So this one at least it looked like she might have a chance; she's only been there a week so it's going to be awhile. She's excited about that.

CHOI: What were you doing this whole time then?

LAWRENCE: Okay, after I worked in Lakeland doing the data entry, and I reapplied and worked my way up at the County, I stayed the County for 21 years. I got laid off; they had to ruff people. It was about 2007 or so. I was almost to the point where I was planning to retire, but I was trying to make it because I was like three months shy of 22 years, which would have affected my health benefits. So I was going, "No!" But, they had lots of younger people and there's no point in keeping somebody who is intending to retire. I understood that. I did a lot of COBOL programming basically, and they were starting to bring in the fourth-generation languages and things on desktops. That would have been a whole lot of re-training. I did some programming in ACCESS, but that was the extent of what I had done.

CHOI: Did you like your job?

LAWRENCE: Oh yes.

CHOI: Wow, you stayed there for 21 years.

LAWRENCE: Yes, I got up in the morning, and I went to work and I wasn't upset about it. But I knew I had to stay someplace until I retired, to have benefits because I had been working—there were times like the seven years or longer than that, where I wasn't working in Panama. I had to be able to work to get money because, like I said, I had no support when I got back here. I had to think about

my retirement. So first my retirement plan was buy a house, buy a car. My dad had to co-sign for my car even though I had been working in Panama. I was 44 years old. It was ridiculous, but I needed a car to go to work.

CHOI: For you was it important that you were independent and that you could work, that you could stay interested in your job?

LAWRENCE: Yes. But, my job has never been my entire life. That's why, when I got laid off, I wasn't really too upset about it.

CHOI: What are the other sections of your life that have been very important to you?

LAWRENCE: Music and books. When I first came here, they had what they called the Lake Wales Chorale. I joined that to sing. My daughter joined it to sing when she was still in high school. I sing tenor. I used to sing alto, but my voice dropped. It's raspy now, so I don't sing anymore.

CHOI: So you can read music and sing?

LAWRENCE: Yes, well all the music lessons that I took as a kid. My grandmother taught me some of the basics, but I took music lessons for six years or so at least independent of that. So I can read music. Tenor is probably, is the hardest part to read because you have to read it sometimes in the bass clef and sometimes in the treble clef, sometimes on the same music selection. You have to get your head back around various things. It was fun, and the Lake Wales Chorale sang the Messiah several times. We'd have a spring program and a fall program. So we got to sing a heavy program generally in the fall (once we did a German requiem by Brahms). We've done some other requiems, then we'd do lighter stuff (like "Frostiana") in the spring.

CHOI: Do you enjoy classical music the most?

LAWRENCE: Yes. Every Easter morning we would do the sunrise services at the Bok Tower, which is a carillon in a nature preserve. It's the highest point in peninsular Florida. If you're at my street and looking north, you can see the Tower in the distance. Every Easter morning, we would sing around the base of the Tower and do the sunrise service. That was always fun. Getting up in the morning wasn't, because a lot of times the time would change to Daylight Savings Time on that Sunday (laughs). It was always beautiful.

CHOI: Music is very important for you. Do you sing every week? Often?

LAWRENCE: I used to sing in the church choir here, but again, my voice has gotten very, very raspy, and I don't feel comfortable singing because I don't want to detract from the music. I will sing in the congregation, but I don't sing as a participant in front of people anymore. I love listening to classical music. I hate the fact that the classical music stations both in Orlando and in Tampa are now public-radio talk shows. You have to have either an HD radio, which we're too far away from both of them to get, or the Tampa station put their classical music on another frequency, but there is a Latino station that overpowers it so I cannot get classical music anymore. So I get classical music on my on-demand cable provider, but it's not as good. It's okay.

CHOI: Can you get it on the internet?

LAWRENCE: I could, but I don't normally have everything on all the time on the internet. When I would get home, I didn't want to have to deal with computers because I worked 10-hour days all day with the computer. I would leave home at 6:30am and get home at 6:30pm, so it was a 12-hour day for me. I didn't really want to touch a computer other than to check my email. I used to have dial-up because it worked okay for email. My brother-in-law talked me into getting DSL two years ago, and it's wonderful. I love it. I have a laptop now, because my old computer was right by my bed and there was no comfortable place to sit. Now I can have the laptop on my lap and do things.

CHOI: You said your other love is books, right?

LAWRENCE: Especially science fiction. Some mystery or adventure kind of thing. I really have been enjoying Lee Child and David Baldacci recently. I tend to read each of theirs when they come out.

CHOI: Do you read every day?

LAWRENCE: I try to. I don't always succeed.

CHOI: Do you still go to the library often?

LAWRENCE: I go to the library once a week.

CHOI: Really?

LAWRENCE: I check out the books that they're selling in their little books-for-sale area. Then I usually check the new things. In fact, I picked up the newest Orson Scott Card two weeks ago about Earth on Fire. Then I picked up one on Orson School Card, the Dissection of Ender's Game, which was in their non-fiction section, which I'm in the process of reading right now.

CHOI: You have kept a close, consistent relationship with the library.

LAWRENCE: In Panama they had the Canal Zone library. It was pretty good for the size of the place. We got to know the kids' librarian pretty well. I used to talk to most of the staff there. I'd go in, my idea of fun at a library was to walk along the shelves and see what grabbed me. In fact, I found a book called Cataclysms of the Earth, by Hugh Auchincloss Brown. Big title, big mouthful. I'd pulled it off and looked at it and thought, "Gee that's interesting," but he wasn't a great writer. Then on one of the home leaves (every two years we could go back to the States for like a month or so), we would drive around and visit his family, my family, and see who was where. One of the little bookstores that I was in, there was something called The HAB Theory, by Allen W. Eckhart. I bought it. It was a paperback. I started reading it, and I said, "Boy, this sounds awfully familiar." I said, "H-A-B" it was for Herbert Allen Boardman or something. It was the "HAB" in this. An old guy that was supposing that the earth would shift on its axis when the polar ice caps get too heavy. I said, "Boy that sounds a lot like this book by Hugh Brown that I read at the library." So I wrote Allen W. Eckhart. He wrote me back and said, "Yes, I actually talked with him and this book is based on him. But he died before it was published."

CHOI: How interesting!

LAWRENCE: This was the serendipitous thing. I love browsing libraries. There are times you are interested in various things. Sometimes I'll go in the cookbook section or the medical section, if I'm looking for something in particular. Most of the time, for light reading I like science fiction or Baldacci, Child, whatever. I grew up reading Agatha Christie and Earl Stanley Gardner and Ellery Queen. I used to have fairly complete collections of all of their books that got wiped out by a leaking air conditioner.

CHOI: Oh no!

LAWRENCE: It leaked and dripped all over the bookshelves.

CHOI: That's terrible.

LAWRENCE: (Laughs) I hated to give them up, but my daughter wants me to move to Michigan. I still have to pare my way through a couple of thousand books. It's like ripping out teeth, trying to decide what books to give up.

CHOI: Do you think you will move?

LAWRENCE: If I ever have enough gumption to go through everything, yes. Because at this point my parents are both dead, one sister lives in Phoenix, one sister lives in Ohio, and one daughter lives in Michigan, the other daughter lives in France, my son lives in Phoenix, so, nobody in my direct line lives here. I partly decided to stay in Florida because my parents were getting older, and I hadn't spent a lot of time with them after I got out of high school, because I had lived far away from them. I stayed basically while both of them were alive. I was still trying to get at least enough time to get some retirement going for me, as I didn't really want to be a burden on any of my kids if I could avoid it. I never made the big bucks at the County because they don't pay that well. That was okay, they needed me, and I was happy to be there. They probably didn't realize they needed me as much as they did, but I loved computers. I loved computers from the moment I first met a computer in 1958.

CHOI: What was that computer like? Huge?

LAWRENCE: I don't remember it that much. I was attending a summer science program, at Northwestern University, between my Junior and Senior years in high school. One of the activities we did was to make the computer multiply two numbers by putting them into registers and adding them. We did that. We also went to see the Argonne National Laboratories, and I heard Van Cliburn play at the concert hall.

CHOI: That's amazing.

LAWRENCE: That was about the year that he won the Tchaikovsky prize. He was my hero. I got a record of his stuff.

CHOI: I have a CD of his somewhere.

LAWRENCE: Well I have a CD now. I had a record then.

CHOI: Records are cooler now I feel.

LAWRENCE: This is the thing, I'm kind of all over the board on things I'm interested in. My first husband and I lived on the Indian Reservation with the jet engine. We spent a week in a fallout shelter in 1961 before I was pregnant. Some people I knew said I got pregnant there. I said no, because she was born 10 months after I was in the shelter for a week.

CHOI: Why were you there for a week?

LAWRENCE: There was a radio station that wanted to do a program and knew somebody who knew we had a fallout shelter at that point in time. Ted and I both thought that it was a good thing to have. At that point in time of course with Cuba and stuff going on we thought, we ought to have one of these. So for whatever reason we ended up saying, "Okay we'll spend a week there." They called us on the phone and we'd be on the air.

CHOI: That's so cool!

LAWRENCE: Interesting time (laughs).

CHOI: You've had many interesting experiences.

LAWRENCE: This isn't all of them yet. We haven't gotten there. You're going to have problems time-wise here.

CHOI: Was it always interesting to have these different experiences?

LAWRENCE: Even coming to talk to you, I wasn't expecting it. It comes out of the blue, you just take it and run with it. We took the chance to live on the Indian Reservation. Our daughter was young, I learned how to shoot a rifle, because we had a hill where I could plink into it.

CHOI: Did you like it?

LAWRENCE: Well, it's not my favorite thing to do, but it was nice to know how to do it, to know the recoil and this kind of thing. She learned to sleep with the jet engine going off in the backyard every day. Because that was about her naptime.

CHOI: That's hilarious, and she became the baby for the class.

LAWRENCE: That was before the Indian Reservation. The thing is, where we were is now essentially part of Chandler or Gilbert. As my son

lives in Chandler, and one year I was visiting them, we went to see the various places that I'd lived over time. He said he knew where this was, and it's not that far from where he lives now.

CHOI: No way!

LAWRENCE: This is part of greater Phoenix now. Back when we were there, Chandler was a long way from Phoenix. You did that on a Sunday drive if you wanted to go for dinner at the hotel (in Chandler) or something. Now from my son's house to my brother-in-law's house is 45 miles. They're all part of greater Phoenix. That's on the freeways.

CHOI: It's that big?

LAWRENCE: It has increased immeasurably. I went to ComicCon, and I went partly because my son and my brother-in-law live there, and they'd invited me to stay. But my son said he'd been going to the ComicCon for years, and like last year before this year the attendance was 32,000. The year before it was 16,000.

CHOI: It doubled.

LAWRENCE: It doubled through several of the years, and had moved several venues. Now it was at the Phoenix Convention Center. This year it was 55,000 people. Part of that was due to the Babylon 5 20th anniversary; I had always been a fan of Babylon 5. The ComicCon was celebrating this, so I paid my money to go to Arizona, going to fly.

CHOI: You hate to fly?

LAWRENCE: It's just such a hassle now because I can't walk easily through an airport, and then going through all the security. It was two years ago the last time I went out there. This was the last time I had flown.

CHOI: Have you been to Paris to see your daughter also?

LAWRENCE: Not since she's been living there this time. I went to Paris in 1992. When she was working—she worked for Ross Perot's company, Perot systems, in Dallas. The company sent her all over the world. She worked in Korea and Japan and England and Brazil and New Zealand. [She has her Master's in Computer Science from UTD.]

CHOI: She's a world traveler.

LAWRENCE: Yes, but she always wanted to live in France. So she was finishing up her nine months or a year whatever she'd been there in France, and my mother had always wanted to go to France. My father always wanted not to go to France. He broke his leg just before this. Anyway, she said, "If you go with me, I'll bring you." I said, "I'm on my way!" We went to Paris and saw a lot of Paris with my daughter because, like I said, she was leaving a week later and that was when we were leaving, but from a different airport or at a different time. We got to see Versailles, and we went to the Louvre, and we went to the Musee D'Orsay, Notre Dame, Sainte-Chapelle, and the Eiffel Tower.

CHOI: Did you like it?

LAWRENCE: Oh yes, it was beautiful! I had a wonderful time. We went to the opening day of Euro Disney, because it opened on my birthday that year.

CHOI: How perfect for your birthday.

LAWRENCE: Like they say, you take what life throws at you and do the best with it. I don't think that I could go back [to Paris] now, because I know how many stairs I climbed and how irregular the stones and stuff in the roads were. I had a hip replacement. It was a couple years ago and it's not that bad, but I also have some back problems. So I try very hard not to fall. I can walk without this cane, but I prefer to have the stability of the third leg. It's hard to get around. I went to ComicCon, and I took my walker. It's been in a storage room for several years. I took it out, and I took it with me because it gives me some stability, and it gives me a place to store something, and it gives me a place to sit. I've gone to MegaCon in Orlando, which has much less programming than the ComicCons do. The last couple of years I went there, I took the walker, because there's no place to sit except when they're doing a presentation, and then there's chairs. But if you're on the vendor floor, it's all just booths and you walk around. There's no place to sit. If you're waiting in line to get in to a presentation, which you spend a lot of time doing, there's no place to sit. So I said, "It's going with me. I don't care what it takes. I'm going to bring that." It's wonderful (laughs)!

CHOI: It's a portable seat.

LAWRENCE: I used it. I actually used it to support my little baby tripod. I brought my own video recorder. I recorded several of the panels—all except the very first panel on Babylon 5. There were all kinds of tracks going on. Their program listing was huge. It was an 8.5 x 11 thing with page after page, about that thick (gesticulating). You had to decide what track you were going to go on, because they had people from all kinds of shows there. Of course there were some people from Star Trek, like Nichelle Nichols. They had the star from Torchwood, John Barrowman. I wanted to see him, but there was a conflict with something from Babylon 5. I had to stay on the Babylon 5 track. I recorded on my little recorder all except one panel. But I got the panel with the 13 stars and Joe Straczynski. Some of my stuff is going to make it into the history of this particular reunion.

CHOI: Really?

LAWRENCE: Because sometimes I was the only person recording. I was in one of the panels where someone else was recording it officially, but her smart phone battery failed.

CHOI: Wow, so your footage will be in there? That is really cool!

LAWRENCE: I said, "Just put my name in there." So I had a lot of fun. That let me set my tripod down and was pretty stable.

CHOI: That's another random thing that happened to you! Do you have advice for people for younger women who are interested in the sciences or have certain passions in terms of balancing life, children, and work in different scenarios adapting?

LAWRENCE: It's hard to balance everything. It really is. It helps if you have a partner who is helpful. That's what I really have been thankful for. My youngest is married to a man like that. He cooks. First time I ever met him he did a stir-fry and a strawberry pie for me. He made them. He was trying to impress me, and he did. This was when he was still in law school. He cooks the stir-fry. She does desserts. He does the main dishes. They both do salads and stuff (laughs). They have a good partnership. He helped her a lot when she was going through the PA school because she had practicums—she was gone all day. I was just so thrilled that she married him. He's from a military family, so he'd lived in a lot of different places. So they had a lot of commonalities going on. It helps to have commonalities, it helps to have support and encouragement. I've been on my own for a lot of years now. I don't know if I'd ever go back into a relationship.

My spouse, from whom I am only legally separated, had a stroke last year in Panama, and they're still trying to get access to his money to pay for his treatment. He didn't make arrangements in case something happened to him. You need to think about the future, too. Some years back, before I was going to have the hip operation, I re-did my will after my youngest got married, and after my other kids were well into their lives. I thought they don't need any immediate support, and they don't need anyone to be responsible for them. I hadn't re-done my will since I had lived in Panama, so I thought I needed to do it. When I was there the lawyer said I ought to consider a medical power of attorney and this sort of thing, in case something happened to me. I thought, "That's a great idea". So I did what he recommended, because, if something happens to you out of the blue, you want somebody to be able to get to your finances to support you.

That's one thing. Considering the future, I had to make some hard choices. My daughter, the youngest one, got a prom dress from Goodwill or Salvation Army because I was paying for the house and the car at that point. That was what I had to budget. I told her she had to go to a state school, but she got a full ride because she was a Merit Scholarship finalist. If she stayed in the state, the tuition, board and room, the books were covered—so she only had to worry about money during the summer. Then she could live with me. But she had a grandmother in Tampa. She spent one summer with her while she worked for IBM. She spent one summer living at home and working at Disney World. She spent one summer living in an apartment and working at the brain place. You have to be open to options. "We are too soon old and too late smart," as the old adage goes. I tend to come off as very studious and stodgy and straight-laced because that's the face I normally present. But inside I'm open to a lot of things.

CHOI: Your life story is very much about being flexible and open.

LAWRENCE: We've uncovered everything (laughs)!

CHOI: You really should put in everything that you want to when I send it to you. From what I've heard, you've lived in Panama, you lived on a reservation with a giant engine; a lot of people don't have those interesting experiences, but it seems you can only do that if you're open trying it.

LAWRENCE: You have to be open to it. There are very few things that I've said "no" to on the first go. I'll think about it and maybe sometimes I'll

say no afterwards, but when you called, I said, "Sure, why not!" It's going to increase the knowledge of somebody somewhere.

CHOI: Of course!

LAWRENCE: It might be fun also, and it gets me out of my routine.

CHOI: It's something that got you out of your routine. It's something different.

LAWRENCE: Normally, Monday, Wednesday, and Friday, I do this, okay? Well, today is different; I'm going to do that!

CHOI: It will be something different so that when you recount everything that you want to put in.

LAWRENCE: I don't think we want to put everything in there.

CHOI: No necessarily everything, but any interesting stories that you want to remember.

LAWRENCE: We haven't gotten to the freezing of the first man?

CHOI: What is this?

LAWRENCE: Cryogenics.

CHOI: I would like to hear about cryogenics. What is this?

LAWRENCE: This was with husband #1. He has a lot of varied interests too, which is why he and I got along well. He got involved—it was in the blue-sky group at AiResearch. One of his co-workers and he were trying to figure out some entrepreneurial things to do. They met up with someone who had some finances, and they decided they'd been reading about cryogenic preservation, possible re-animation and this sort of thing. The first thing you need to do is to preserve. They built a chamber called a CryoCapsule, and started a company called CryoCare in Phoenix. The first person we—because I was just on the fringes I didn't do any of this stuff. I filmed some of it. I ran a 16mm camera (laughs). They built this and contacted Ettinger who wrote a book on that, "Life Extension" something. We were contacted by someone who wanted his mother frozen even though she had already been embalmed. We said basically this is not something you really need because it's not going to work. But he wanted it anyway for his own peace of mind. So the first person who was

ever frozen was her. I can't remember the name. None of us can because we were trying. There is somebody doing a history of this right now. Someone from England is in touch with my first husband.

CHOI: So this guy wanted to freeze his mother. Do you remember what they froze people with?

LAWRENCE: Liquid nitrogen. I can remember the big dewar, with many layers of mylar surrounding the inner tube, which was then filled with liquid nitrogen, with a lot of bolts keeping the lid on tightly.

CHOI: Was this something where you could view the person? It's just for peace of mind?

LAWRENCE: The person is frozen, you can't view them. It's like a thermos bottle. You put the lid on and you screw it down. You don't want to watch somebody at that point. But if you let the liquid nitrogen sublime off, as long as you don't disturb them when they're deeply frozen, you could thaw them.

CHOI: Wow.

LAWRENCE: But, of course, that was kind of their practice person. They did it because they wanted to see how well their equipment worked. They had previously tested the capsule empty, but they wanted to see how it would work full, so this did that for awhile.

CHOI: So they froze her? Then where did she go?

LAWRENCE: In the lab they had. They were monitoring the capsule.

CHOI: Is she still there?

LAWRENCE: No, the son decided at some point that he really was going to bury her. I filmed the first unfreezing which, if you run it backwards, looks like the first freezing. But then, sometime later, we did the first real freezing of Dr. Nathan Bedford.

CHOI: He was alive?

LAWRENCE: Well no, he was very recently dead. He was fairly close to just barely dead. Then he wanted to be frozen to be reanimated. This was his wish. "Life" magazine covered that.

CHOI: Did you watch this?

LAWRENCE: Some of it. With two kids you don't do as much stuff on your own. The article was actually in "Life" magazine the same week as the astronaut tragedy [in 1967], where the fire of the capsule was. If you find that edition, you can find my husband's picture in there.

CHOI: What was it like, how did you feel watching this?

LAWRENCE: Well I kind of felt like this would be a great step if they can ever figure out how to make the brain function again. Because they have to make the brain function, then cure whatever that was that killed you. There are two things going, which is why some of the later people [there should be something here, but I lost the train of thought since it was recorded.] They sold this out to somebody else, Alcor, I think it was, some years later.

CHOI: I misunderstood this. This cryogenics movement was to reanimate someone who was basically passing away.

LAWRENCE: Right.

CHOI: It wasn't to just keep the person.

LAWRENCE: No, it's not an alternative to burial. It's ridiculously expensive. Because you've got to buy liquid nitrogen and there is the cost to replenish it.

CHOI: It wasn't like someone who wanted to wake up at a different time.

LAWRENCE: No, because, at this point, if you freeze someone before they're dead, you've got a murder charge against you.

CHOI: They were trying to figure out how to cure the disease, isn't that just very difficult?

LAWRENCE: They weren't doing this. They were just providing a service of storage.

CHOI: I see.

LAWRENCE: Somebody has to provide the thermos for other people to maybe figure out how to do it, which is not going to happen probably in our lifetime. It was just the big rage back in the 1960s.

CHOI: What a thing to witness!

LAWRENCE: Like I say, life has thrown all kinds of interesting things into my lap.

CHOI: You've enjoyed seeing such different things then.

LAWRENCE: Well, what's not to like?

CHOI: Do you have anything else you'd like to share at this time?

LAWRENCE: Trying to think. My life back then was a little bit more exciting than it's been recently (laughs). I've really had fun at ComicCon.

CHOI: And your footage is going to be used.

LAWRENCE: My brother-in-law who had never been to a Con, he enjoyed it. He's going to volunteer next year at the Con. He enjoyed it that much.

CHOI: Can you volunteer at it?

LAWRENCE: It's in Phoenix, and I'm not mobile enough, because it's a huge place. There were four buildings involved, and like 200 and some rooms. I forget what the square footage was, but we went the first day we went to something called, "How to go to Phoenix ComicCon" which was a good thing to go to first. They say, "Drink water." Every other sentence was to drink water because a lot of the health issues that came up were about dehydration. [The Cons depend upon volunteers in many ways, from crowd control to registration to aiding the celebrities. My brother-in-law has since volunteered and worked at three additional Cons in Phoenix and plans to continue to do so.]

CHOI: All day you're walking around.

LAWRENCE: I know how to pace myself, because I've done it before. You're sitting in the meetings, but when you're standing in a line—that's why you bring the thing to sit on!

CHOI: Can I ask, when you first started MIT, did you have a dream or an idea of what you wanted to be one day? You've always been flexible to anything?

LAWRENCE: Well, I always wanted to go into space. Who didn't back then, but I knew I wasn't a pilot kind of thing. I didn't want to go into

medicine. I tried. I wanted to help, and I wanted my dad to be proud of me for going into medicine. But it wasn't for me. I thought science was what I enjoyed. When I found computers, I said this is where I want to be. I didn't want to design them, I just wanted to make them do what I asked them to do.

CHOI: You succeeded in doing that.

LAWRENCE: I can't complain too hard. I'm relatively happy. A little too hot in Florida, but then I know if I go up to Michigan, I'm going to be a little too cold in the winter. I go back at Christmas time.

CHOI: That's the hardest time to go!

LAWRENCE: I know, but my son in-law's family lives in Dayton, Ohio. So he and my daughter come down to Dayton. I drive up to Dayton. This year, because she's just starting a new thing, we don't know if she will have time. We might have Christmas up in Ann Arbor. He's an only child, and they don't have children of their own. The family gets together. So that's what I've been doing for the last eight or ten years, driving up.

CHOI: That must be a long drive.

LAWRENCE: It is; it takes two days. I stop in North Georgia generally. If I can get past Atlanta before the end of the first day, I'm doing well.

CHOI: You're a trooper.

LAWRENCE: Florida is huge. It takes me a fair number of hours just to get out of Florida and into Georgia. Atlanta is on the north side of Georgia. It's about halfway to Dayton. I do more of the driving in the mountains the rest of the way. It's going in a direction that I like to go, and we always have a great big fun time at Christmas. I get tea bags and cereal, and we give socks and books.

CHOI: That's cute.

LAWRENCE: We just like to wrap and unwrap a lot of presents.

CHOI: That's the point of wrapping gifts. Because afterwards you have all the paper you brought, but still it's the idea of opening something and getting excited.

LAWRENCE: We ask what people want, and I always like cereal because I eat this particular brand.

CHOI: What brand do you eat?

LAWRENCE: I eat Kashi Go Lean. I don't like the Go Lean Crunch. It tends to cut my mouth. I get it for the fiber and the protein. Start the day right (laughs). I'm just weird about things!

CHOI: I am too.

LAWRENCE: This is the thing. I know I'm going to eat it. It's something I want. It's consumable. I love books, but I'm trying not to get too many more. I'm starting to do eBooks, but I just hate to replace my collection yet again. I've got lots of books. That's the hardest thing, trying to part with the books.

CHOI: If you part with the books you actually might end up north.

LAWRENCE: Because I know I'm getting feebler. If something was necessary, it's a long distance for any of my kids to come and deal with.

CHOI: Your daughter is also a PA which is great.

LAWRENCE: She's got her life, and if I move up there, I'm not going to move in with them or anything. I'm going to go from a house to an apartment because I can't maintain anything anymore. It's just too much.

CHOI: Sometimes apartment-living is just easier.

LAWRENCE: When I first moved here and she was in high school, I needed something that was basically my retirement plan. I figured that with a house, at least I could get something out of it, even if I have to just let it go. The house has problems. It needs a lot of work. Especially because that air conditioner leaked on my wall and onto my books. Fortunately it wiped out only one bookcase.

CHOI: That means it did one job for you, wiping out some books.

LAWRENCE: Yes (laughs)!

CHOI: It's painful but someone had to do it. The air conditioner did it for you!

LAWRENCE: I have all my sci fi—I hate giving it up, but I've got to give it up.

CHOI: That's going to be your next adventure.

LAWRENCE: It's been my adventure for awhile now. It's taking a lot longer than I thought it would. But I have time still.

CHOI: Now you'll be editing your interview. That will be really fun. Do you have anything else you'd like to add?

LAWRENCE: If you talk to any of the other members of my class, please pass along my "hellos!"

LAWRENCE ADDITIONAL COMMENTS (as of August, 2015):

While we were living in the Canal Zone, I found activities to keep me involved until I found a job:

I obtained my Novice, General, and Advanced Class amateur radio licenses (I didn't get Extra Class because I couldn't get my Morse code speed up to 20 wpm). Before the Treaties, my call sign was KZ5IE (which I was able to keep in the States because of a change in the rules). After the Treaties, I had a Panamanian call sign (HP1XIE). I was motivated to do this because it was extremely expensive to telephone back to the States, and I wanted to stay in touch with my other children. Other amateurs would call them and patch me in so we could speak with each other. [Communication is so much easier and cheaper now that the internet is available.]

I was involved with amateur theater, mostly because my youngest was in several plays. We performed in the 70th Anniversary of the Panama Canal celebration.

I took a COBOL class at the Junior College, which helped me obtain my jobs in the Canal Zone.

We made several visits to Barro Colorado Island, which was affiliated with the Smithsonian Institution. We were able to go there because my husband treated the jaguarundi being cared for by a scientist who worked there. We became friends with the wife of the scientist who was in charge of the facility. Because of this friendship, my parents were able to spend one New Year's Eve on the island on their return from their trip to Antarctica.

We had various creatures living with us during the years: 3 cats, a screech owl, a tarantula, meal worms, an occasional snake, etc.

We went on a short survival trip (which was supposed to be filmed by the BBC, but they were late) with several other mothers and children. We stayed with an Indian tribe near Gamboa and went out into the jungle with an instructor. I had to kill the chicken we ate for our dinner, so I was given the chicken foot as a bonus.

Since the original interview, my husband died in Panama. This past April, two of his children from his previous marriage, my daughter (whom he adopted) and her husband, and I went to Panama to scatter his ashes. We spent two days accompanied by the Pastor who had been responsible for his care. We visited several locations which were important to my husband when he continued to live in Panama. We scattered some of his ashes at a little church where he had carved a cross out of very dense coco bolo wood. We scattered the rest in the pet cemetery at the veterinary clinic where he used to work when we lived there, because we felt it was the most meaningful location.

We stayed at a Bed and Breakfast in the former Canal Zone. It was only about a mile or so from the two houses, on Ancon Hill, where we used to live, so we were able to drive to see both of them and remember our activities in each. We drove past the elementary school, the Administration Building where we used to watch fireworks on the Fourth of July, the sites of the train station, Gorgas Hospital, and the shopping commissary (which have all been re-purposed).

The second full day we were there, we were able to do something few people will do: the Pastor had a member of his congregation (a Spanish-Chinese church) who is involved with the Third Locks construction, and we were able to tour the Pacific site of the construction. We rode in his car into the construction cut and watched workers who were working with one of the lock gates. We saw where the rock for the retaining walls were quarried, where the rocks were broken into gravel, where the gravel was made into sand for the cement of the walls, where the machines were repaired, etc. It was a wonderful tour.

In 2004, I lived through the 3 hurricanes which passed through Polk County within 6 weeks, starting on Friday, August 13. The worst one was Charlie, which was at least a Category 3 when it reached Lake Wales. I was without power for about a week, so I was happy to go to work, where there was air conditioning.

One of my Bucket List entries was to be selected for the NPR Weekend Edition Sunday Puzzle. I sent in post cards, then, later, I entered via the internet. I was still working when I was selected to participate. That was an exciting and terrifying activity. The amazing thing is that I was selected a second time about four years later, so I have two Weekend Edition lapel pins!

Some of my adventures were not fun at the time they happened, but each one has added to who I am. For several years after I married, I did not have enough driving experience to feel confident behind the wheel, but after I had children, I had to consider their needs, so I did what I needed to do, and I eventually gained the confidence I didn't have before. As I told my youngest when she was in Junior High and was thinking about entering an essay contest for a trip to the Galapagos Islands, "If you don't enter, you can't win."