

Connie Weaver

Conducted by Katey Watson on May 20, 2019



Archives and Special Collections

The following interview is being conducted with Dr. Connie Weaver [CW] for the Purdue University Oral History Program. It's taking place on May 20, 2019 at 2:00 pm, at Purdue University. The interviewer is Katey Watson [KW], France A. Córdova Archivist.

KW: So, Connie, can you tell me a bit about your early life? So, when and where were you born, a bit about your parents, if you have any siblings?

CW: So, I was born in 1950 in a very small town of about 1400 in northeastern Oregon. Actually, I was born 15 miles away in La Grande, Oregon where there was a hospital [KW: Oh, okay], but I grew up... My parents Bob and Avril Shelton lived in Union, Oregon.

KW: Oh, okay.

CW: And it didn't have a hospital, [laughs] it didn't have any kind of fast food, restaurant, or bowling alley, or anything to do.

KW: Wow.

CW: So, growing up enjoying nature and participating in outdoor activities was [a] very important part of our life. The town was mostly supported by the local small farmers and there was a lumber industry, but not commercial manufacturing or that sort of city kind of life. My dad was one of these small farmers in the beginning, but about that period is when it became not financially viable to run small farms.

KW: Okay.

CW: And my grandfather lived with us and he helped with irrigation, for example, but as he was getting older and it was more difficult for him to help on the farm and with the financial outlook of the small farms, my dad had started working in lumber, first in logging and then later in the sawmill. But when my grandfather couldn't keep up with irrigation and whatnot while he was at work, then he had to sell this farm, like so many did at that time.

KW: Oh, okay.

CW: So, I was about 8 when we moved from outside on the farm, outside of town, to inside town and then he just worked in lumber after that and my mother stopped working in the courthouse when I was born and she was a stay-at-home mom. But, she got some income by making people's clothes.

KW: Oh cool.

CW: And wedding cakes and things like that. So, she was [a] very active volunteer in the community and church. I learned work ethic from them and to respect property and the environment and to do... We grew our own food and I really hardly had anything until I went to college that wasn't caught, shot, grown, collected somehow [laugh].

KW: [laughs] Wow.

CW: So, we would grow really large gardens and my mom and I would process about 2000 units of fruits and vegetables and jellies and jams and pickles and things every summer.

KW: Wow.

CW: So, we... and our entertainment was camping on the weekends while we would fish or gather mushrooms or huckleberries or things like that.

KW: That sounds so wonderful. [laughs]

CW: Yeah, you know, it sounds real wonderful when you're away. At the time, like when you're growing up in puberty you're whining, you don't have any movie theater, you don't have any of these [both laugh] trappings that kids wanted to do.

KW: Mhm.

CW: But, now I just prize all my free time or vacations to go experience those outdoor kind of situations. But, why I say they taught me work ethic, well we participated as a family to do these things, to grow the food and process it and preserve it and that sort of thing. But also, my mother had this attitude that if you are busy doing constructive things, then I won't assign you housework. So, I spent many hours learning to play the piano or learning [KW laughs] how to sew and knit and crochet and preserve foods and everything to get out of housework. [laughs]

KW: [laughs] Housework. Smart plan.

CW: And no, later I think I wasn't so smart because I could have done 20 minutes of housework and played all the time instead of spending hours learning to do all these things. But, so I would get up early in the summers and spend some hours

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doing all these productive things, so that I could get out and be outside and play and I was the kid that was the adventuresome one, so they always made me do everything first to test it out.

KW: Your friends or your family?

CW: My brother and our friends.

KW: Okay.

CW: So, my brother was 2 years younger and one of our main summer activities was floating down in inner tubes, this little creek. And so, we would either bicycle up the creek to the park to get into the river or some combination of my parents retrieving us and taking us back up and we would spend miles a day floating down the creek. But, there's like a 5 foot fall in this one place with an eddy underneath and so every spring, I had to be the first one to go down and make sure it was okay [KW laughs] before anyone else would go down, that sort of thing. And that fit me just fine. [laughs]

KW: Did you have life jackets or anything?

CW: No, but you could...

KW: It was, oh, okay.

CW: ...stand up in the creek. The biggest danger[s] were hitting the sharp rocks on the low season or the bushes and thorns and things going by. Yeah, it was a wonderful childhood.

KW: Yeah, it sounds like it. And so, were you, so, you moved into the town of Union.

CW: Right.

KW: After your father sold the farm.

CW: Right.

KW: And so, is that where you went to school?

CW: Correct.

KW: Okay.

CW: Well, I had already started school. I had taken the bus in before, but when we moved in town, I was only three blocks from school. So, I could walk in. The grade school, the middle school, and the high school were all similar. I had 31 kids in my class in high school. The grade schools were split, so I was, like third and fourth might be together, and fifth and sixth or something.

KW: Okay.

CW: And so, half of the class was getting instruction from the teacher in the room while the other half was doing homework.

KW: Okay.

CW: Or something silent. I accredit that to my ability to focus and tune out everything. I never suffered from distractions from getting my work done.

KW: Oh, that's good. [laughs]

CW: And I think that was good training from that.

KW: Awesome. Okay, cool. So, you mentioned that you grew up in kind of a farming community.

CW: Correct.

KW: Is that kind of what inspired you to go into food and nutrition?

CW: I would say it's part of the story, but my mother was the 4-H teacher and in Oregon, unlike what my children experienced here in Indiana, the 4-H clubs were small and subject matter focused. So, in my case, we did Home Ec. [Economics] type projects and my mother was the teacher and it was a group of girls and so all of our meetings were the next learning process of whatever topic we're in. So, we would do sewing for so many weeks and canning for so many weeks and cooking for so many weeks and that sort of thing and we would work our way through the lessons all together. So, they all came, my friends, there were about eight of us, all came to my house and my mom taught them how to do their life skills basically. And we would enter the county fairs and state fairs and we were completely prepared because we spent all year [KW: Okay, yeah] learning the skills and making our products for display. So, we had lots of championships in the county and then in the state, we would compete and do well. And that was a big trip for us every year to Salem, the state capital [KW: okay] for the annual state fair and present our products or do style show or cook dinners. One year, my brother and I won the state fair championship.

KW: Oh wow.

CW: Because the president came out, the president of the country, came out with a fitness program and he was advocating for all the schools to adopt fitness principles in their classes.

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KW: Okay.

CW: So, we were demonstrating these fitness principles and that was a popular, timely thing [KW: Oh, okay.] to do at that time. But, so 4-H made me really comfortable in foods and nutrition [KW: Mhm] and the agricultural community. So, when I was to go to college, I loved math and science, all kinds of sciences, but I was very familiar and comfortable with food science and nutrition, so it was sort of a natural match.

KW: Ok, great. And then so, what made you ch—, so you went to Oregon State...

CW: Right.

KW: For your Bachelor's.

CW: We should back up just a minute because it's unusual that I knew I wanted to be a scientist from the third grade.

KW: Oh wow.

CW: And I knew I wanted to be a college professor from a freshman in high school. So, I had a very linear path to—

KW: So, you knew exactly what you wanted to do.

CW: Right, and most people wander around and find their way. I was very linear in my goals. And what turned me on to science in third grade is an important part of my molding I would say, because my teacher encouraged individuality and my community wasn't that college oriented. You can imagine most people...

KW: Well, yeah small.

CW: ...didn't have a degree and I was the first generation to go to college in my family.

KW: Oh okay.

CW: Anyway, so that was the context. And, she gave me the opportunity to sort of grow. This is very unusual and wouldn't happen too often. So, for about 20 minutes after lunch every day, she allowed me to perform a demonstration for the whole class.

KW: Oh okay.

CW: And so, I would go figure out in the library or practicing at home, experiments or some sort of science related topic to do.

KW: Okay.

CW: So, I learned because I wanted to present to the class.

KW: Yes. [laughs]

CW: That was a really wonderful motivation for me with no agenda...

KW: Mhm.

CW: You know, just whatever I wanted. So, I did everything from making rice paper to setting off rockets...

KW: Wow.

CW: ..to, you know, little electrical circuits to turn on a lightbulb and anything I could find in a library that I could make at home. [laughs]

KW: That's awesome.

CW: So that was fun.

KW: So, your teacher encouraged, so you had a really supportive teacher...

CW: Right.

KW: ...that encouraged you to do this.

CW: Right, well, who else would allow one kid to take 20 minutes a day.

KW: Yeah, and so, did she recognize that you were really adept at science, like in sciences and maths or did you approach her and tell her this is something you wanted to do?

CW: I doubt if I app—, it's a long time ago... [laughs]

KW: Yeah, just if you remember.

CW: I doubt if I approached her. She probably allowed me to do it once or something.

KW: Yeah.

CW: And then any time you want to do it, we'll make room or something.

KW: Okay.

CW: So, I had wanted to do it every single day. [laughs] Or most days anyway.

KW: [laughs] Oh that's awesome.

CW: That's my memory. I connected with her before she passed away in her later years when she was in an institutional living so we could reminisce...

KW: Okay.

CW: ...on how wonderful that was for my growth.

KW: She must have been really proud of you, as well.

CW: Well, that's what I learned through my mother, is why I made a point to go look her up and visit her in her later years.

KW: Ok, so she followed your career?

CW: Yeah.

KW: Oh wow.

CW: Probably through my mother and, newspaper maybe.

KW: That's amazing.

CW: Yeah, so that was pretty fun.

KW: And did you have her through high school as well?

CW: No, I just had her the one year...

KW: Oh, okay.

CW: In third grade. That's when I knew [KW: Wow] that I wanted to be a scientist.

[laughs]

KW: Oh, that's awesome. And then did you have any other, like, mentors throughout grade school and high school that, like, really encouraged you to go through science? Or that recognized your talent in science?

CW: I would say my math teacher in high school, Bill Philips, was good at trying to stimulate you into working hard at your homework and being better at math. But, his style of motivation was not nurturing like that.

KW: [laughs]

CW: It was, well you know you're going to be a little... You're a big fish in a small pond here, but you're going to be a little fish in a big pond when you go to college.

00:15:00 Your GPA will drop at least a whole grade, and that sort of thing.

KW: Oh, sort of fear mongering type. [laughs]

CW: That sort of thing and so, I guess that challenged me to show him my grades didn't drop... [laughs]

KW: Yeah. [laughs]

CW: ...when I went to college. That I could be successful anywhere. Prob-, maybe he knew it all along [KW: Yeah] and that was just his motivational style, but I didn't think he thought [both laugh] that I could do it at the time, that's for sure. So, then in college, I went to a land grant university and then Purdue.

KW: Yeah.

CW: I worked in a land grant university. It's so fitting that it's land grant with my upbringing and my interests, I would say this integrating of science to an applied pathway. I was, I already mentioned that I loved the outdoors, and I was an adventurer. So, when we went around to look at what the clubs had to offer at Oregon State, the first week on campus and what we wanted to sign up for, I was told then the same thing we tell our students here with the many clubs here at Purdue, you should pick one activity at least in your professional domain...

KW: Okay.

CW: ...to build your leadership skills, but do one personally [KW: Okay.] as well. So, I signed up for sky diving. [laughs]

KW: Wow, really? They had that at the university? [laughs]

CW: [laughs] They did. I went skydiving all year and my parents came across the state to visit in the spring and I hadn't told them I was doing this. "Do you wanna come see me skydive?" My dad [both laugh] about freaked out and we went out and looked at the field, but he didn't want to watch me jump. [laughs]

KW: No, yeah. I could imagine he wouldn't want to see that. [laughs]

CW: So, that was pretty funny.

KW: Wow, that's great.

CW: So, I did get involved and became a leader in the college level and discipline level social activities.

KW: Okay.

CW: So, that was a good growing experience there. And my senior year, I married my husband, Lloyd Weaver, a little earlier than I imagined I would marry because he was a naval officer.

KW: Okay.

CW: He was 2 years ahead of me. We met, when I was a sophomore and he was a graduating senior, in an organic chemistry laboratory. And he was leaving for the Navy and it was the Vietnam War era.

KW: Oh, okay.

CW: So, when he found out he was going to Vietnam, he wanted to get married because he thought I would forget him.

KW: Oh. [laughs]

CW: And as it turned out, he had back to back tours and he's probably right, I probably would have not remembered or stuck with him. And I was pretty afraid to do that, but my parents really encouraged me to. I think they were a little

worried that I might become a spinster, an old maid spinster [both laugh], or something and thought, I, they wanted to be sure I had a personal life, too.

KW: Oh, okay.

CW: So, they thought he would fill that bill, I think. So, we got married at Christmas time my senior year [KW: Okay.] in college.

KW: What year was that?

CW: So, 1971.

KW: 1971, okay.

CW: In December. So, Lloyd then went off two weeks later after our honeymoon and the next time I saw him was when he had an R&R (rest and recuperation) in Hong Kong and I went for a little over a week and met up with him and that was wildly exciting [laughs], you know, to go to Hong Kong. I actually had travelled because when I was in high school, when I was 16, I signed up for this "People to People" high school ambassador tour.

KW: Okay.

CW: So, this group went around Europe to about 13 countries in the summer and four different places. We lived individually with families for about five days a piece.

KW: Oh, that's really cool.

CW: It was really cool, and for a girl from a really small town to reach out that far...

KW: Yeah.

CW: Early, that early was very unusual for my hometown.

KW: Wow.

CW: So, you know it prepared me for a career that was...

KW: International, yeah.

CW: ...international in lots of respects. So, I went over by myself to meet up with Lloyd in Hong Kong on this R&R, which didn't intimidate me probably because of that high school...

KW: Okay.

00:20:00 **CW:** ...“People to People” ambassadors tour in Europe. And so, of course that was a lot of fun, and on the Navy exchange rates and we had 7 months of his salary saved up, he couldn't spend anywhere...

KW: Yeah.

CW: ...on the ship. So, we bought everything to set up a new apartment, you know, stereos and a sewing machine, a television, and china. [laughs]

KW: Yeah. [laughs]

CW: All of those things and he built a little fake roof above his bunk and put it all up there on the ship so he could come home. [KW: laughs]. But he came home, we were together about a month and a half and he went out to Vietnam again.

KW: Oh wow.

CW: And so, we only ended up living together about one year out of the first 4 years we were married.

KW: Wow.

CW: So, I kept getting more degrees.

KW: Yeah.

CW: Which was something I wanted to do, anyway.

KW: Yeah.

CW: That was my goal. But it gave me the right opportunity and then I could just completely focus and do a fast track on degrees, which was healthier than other Navy wives [KW: Mhm] because, being left alone that long... And, it's an odd thing, you go from being sort of dependent, because the Navy doesn't consider the spousal wishes, you know, they just...

KW: Yeah.

CW: So, it's dominant on the spouse, so then you have to be completely independent 'cause then they're off, alone, and that's really hard for people...

KW: Yeah.

CW: ...to have that sort of insecure, unstable environment and to shift around. So, many other Navy wives did destructive behaviors. You know, they would abuse substances or just spend all this money.

KW: Mhm.

CW: Or, you know, some sort of mental health crisis, or...

KW: Yeah.

CW: All kinds of things. But getting college degrees was a fairly constructive...

KW: Opportunity.

CW: ...opportunity for me, so I did that. And then when he finally got through with those tours, we lived in San Diego for a year.

KW: In California?

CW: Mhm, where he was with the Navy still and I taught, I had my master's by then, and I taught in a junior college for a year, Grossmont Junior College.

KW: Oh, okay.

CW: And then he got relocated to Rhode Island and so, University of Rhode Island was pretty close and I could take a bus ride over, and so, I worked as a research scientist in a lab the nine months we were there.

KW: Okay.

CW: And then he was assigned to go to Mayport, Florida, and the closest university was Florida State University.

KW: Okay.

CW: So, I applied and enrolled there.

KW: For your PhD?

CW: For my PhD. And he was able to, his time was up while I was starting that degree and he could reup, which I think originally he thought he would do, but we'd been apart so much...

KW: Mhm.

CW: ...on all those years and it didn't look like that would change much, [laughs] so he decided to get out.

KW: Oh.

CW: So, he came and got his MBA while I was finishing off my PhD [KW: Oh okay.] at Florida State. And then after that, I was all signed up to do a post doc [post doctorate] at University of California at Davis [KW: Okay] when I was just for the heck of it applying for assistant professor positions [KW: Yeah.] thinking I would have to...

KW: Wait, yeah.

CW: ...get the post doc, right.

KW: Yeah.

CW: But I got this, I started getting interviews and I actually got a job offer at Purdue for [an] assistant professorship. And I thought, well why would I do a post doc to try to get the job I just got offered. [laughs]

KW: Yeah.

CW: You know, so I skipped the post doc and Lloyd followed me, then. He said it was my turn.

KW: Oh, that's awesome.

CW: So, I came to Purdue in 1978 straight from a PhD.

KW: Wow. Wow, so, you, you both bounced a lot, around, a lot before you lived...

CW: But all on the coast.

KW: Oh, okay.

CW: So, this was the first time...

KW: So, it was very different.

CW: ...in the Midwest yeah.

KW: Yeah, yeah, 'cause you were on the west and then...

CW: Right. Oregon and California.

KW: Yeah.

CW: Then, Rhode Island and Florida.

KW: Rhode Island on the east. How long did you live in Rhode Island for? Was that really short?

CW: Yeah, like 9 months.

KW: Oh, okay. And then you worked, where did you work when you were at Rhode Island?

CW: At University of Rhode Island.

KW: Okay. And then Florida and then to the Midwest.

CW: Right.

KW: So, how was, so, sounds like your husband was really supportive...

CW: Yes.

KW: In moving with you, which is great.

CW: Right. He's been supportive of me my whole career.

KW: That's amazing.

CW: Yeah, really good.

KW: Yeah. That's really refreshing. [laughs]

CW: Really, really...

KW: Yeah.

CW: ...good, yeah.

KW: That's awesome. But how...

CW: Yeah, he didn't want to know which I would give up. [laughs]

KW: [laughs]

CW: If I had to make a choice.

KW: Wow. I could see that.

CW: And I wanted to be a professor for a lot longer.

00:25:00 **KW:** Especially if you knew, yeah, if you knew from like grade three you wanted to go on to be a scientist.

CW: That's right. He didn't want to mess with that.

KW: Yeah. So, how, how was it moving to the Midwest from like basically being like on the coasts your whole life?

CW: So, well I was pretty excited about the job because it was exactly what I was aspiring to do.

KW: Yeah.

CW: Recreationally, it was really a step down [laughs].

KW: [laughs]

CW: There's not water, mountains, you know.

KW: Yeah. It's pretty flat.

CW: But fortunately, in my profession, I get to travel a lot.

KW: Yeah.

CW: And we would spend our vacations going, a lot of the times, skiing or somewhere outdoors.

KW: Yeah.

CW: Or seeing the family in Oregon or something. So, it's not, I don't feel completely stuck here.

KW: Yeah.

CW: But I do need my fixes to go to the mountains [both laugh] and to the water pretty often. And it was a wonderful community to raise a family in.

KW: Mhm.

CW: You know, the quality of life here is really good because I'm not spending time commuting and things are easy. I could bounce back and forth between my personal and professional life in minutes, you know.

KW: Yeah.

CW: In big cities you can't do that, so that was really great. Our first impressions, though, I have to tell you. It was really obvious that there was a lot of people overweight here compared to anywhere else we'd ever lived.

KW: Oh, okay.

CW: And lots of sedentary behaviors here.

KW: Okay.

CW: And that was a little depressing, but that became opportunity to do my career work in...

KW: Oh, okay.

CW: ...nutrition and fitness.

KW: Okay. Yeah, I found it, I moved from the west coast as well to here so, but I'm originally from Ontario. [laughs] So, not too different.

CW: Ok, ok, right, right.

KW: Ok... oh! When you first came to Purdue, you were pregnant with your first child, right?

CW: Right, Doug.

KW: Yeah, so, right when you started, how long after you started did you actually have Doug? How long after? When was he born?

CW: So, I started in August and he was born in March.

KW: Oh, wow, okay. And so how was that? I guess having an infant right as you're, you know, you're in a, you were in a tenure track position, right?

CW: I was, right.

KW: Yeah, so, how... that must have been really challenging.

CW: Well, actually having one wasn't so challenging. [both laugh]

CW: But twenty months later came along twins.

KW: Yeah.

CW: [both laugh]. Mark and Rick. So having three kids within 20 months, that was exponentially more work...

KW: Yeah.

CW: ...and challenging and I felt, some days I was so tired I hoped no student asked me my name. [laughs]

KW: [laughs]

CW: I might not be able to remember. It was exhausting. But, I think it was easier juggling a career with three close together than singly.

KW: Okay.

CW: Because, now I have eight grandchildren and, you know, when they're separated there's more tendency, "play with me" or "let's do something, I'm bored."

KW: Mhm.

CW: And with my three altogether who were a unit and played together all the time, if I would say “Can we do something together?” Well, “Could it wait mom, we’re kind of in the middle of something.” [laughs]

KW: [laughs] That’s really nice, they just entertain themselves.

CW: They could entertain themselves, not that I didn’t do things with them, but I didn’t feel like I was forced to entertain them.

KW: Yeah. Ok, that’s great. And then your, did your husband stay at home with them at all?

CW: So, he was teaching faculty only and not research.

KW: Mhm.

CW: So in the summers, he started staying home with them. The whole solution to how this worked was I had a nanny come to my house for the first about five-and-a-half years.

KW: Okay.

CW: And she was awesome.

KW: Yeah.

CW: She had a lot of energy and I’d turn over about two-thirds of my salary to her.
[laughs]

KW: [laughs]

CW: And it was worth it, because she would come there and I didn't have to get them ready to take somewhere before work and then she would start the laundry or dinner or something, often when I would come home and that was huge.

KW: That's great. [laughs]

CW: That was huge. But the first summer that Lloyd then stayed home with them after she wasn't doing that any longer was nearly a disaster. [laughs]

KW: Oh, okay.

00:30:00 **CW:** I, he was trying to do some writing, but, and so, instead of watching them every minute like they needed to be at that age, I would get called or alerted to something that was horrendous going on at home.

KW: [laughs]

CW: Like, he thought he would get them all watching a swashbuckler movie, an Errol Flynn kind of movie, when it was all raining and they had swords and things. Well, it became nice and he sent them out in the backyard to play and I'm going to write a little bit. Well, when he went to look for them, he looked in the backyard and they weren't there. He ran around the front yard, they weren't there, but he could hear them. Finally, he looks up, they were on the roof...

KW: [gasps] Oh no.

CW: ...with sticks pretending they were swashbuckling, you know, pirates.

KW: [laughs]

CW: And “How did you get on the roof?” Well, they had climbed the TV antenna and then pulled each other up from one level of this roof to the other, you know, climbed up the chimney and they were clear on top of the house.

KW: Wow.

CW: And, you know, they were like three and five. [laughs]

KW: [laughs]

CW: Something like that. It was crazy. It was crazy. So, that was an interesting time.

KW: Really exciting time of your life.

CW: I was pretty afraid to leave them every day.

KW: But they made it, so they’re good.

CW: But they made it, right. That’s right.

KW: Yeah. So, did a lot of other, were there many other women in your department and did they also like have children, as well? Or were you pretty much one of the only ones who, like, was working and had a family at this time as well?

CW: I was probably the only woman who was trying to do research...

KW: Okay.

CW: And have a family. So, one of my really good friends had children but she was a ten-month teacher.

KW: Mhm.

CW: So, it's not the same...

KW: Okay.

CW: Demand or expectation. You don't travel, for one thing, and she would have grading at night, but she had summers off and she could grade after they would go to bed.

KW: Yeah.

CW: I'm not belittling how much she had to do.

KW: Yeah.

CW: But it was a different expectation. And then the research female faculty were single.

KW: Okay.

CW: Right.

KW: So, it was pretty unique then for you...

CW: At that time, it was fairly unique, yeah, even though there were plenty of women in our college.

KW: Mhm, but it was the research component.

CW: It was the research component.

KW: Okay. And then, I loved, you donated those cartoons, I just can't remember the cartoonists name, depicting you, like, working.

CW: Yeah.

KW: And I love those. Those are probably my favorite. [laughs]

CW: [laughs] Thank you. So, I, at that time I was invited to give a talk to this social club to advise how to combine work and family. And it was a different time because you didn't readily say that you were leaving work during the day for taking your kid to a doctor's appointment [KW: Okay.] or anything that was personal. It was just not done yet, at that time. And so, to admit before I had tenure of how to combine work and family when you really were sort of expected to keep it hidden and separate.

KW: Yeah.

CW: How do you do that? So, that's when I got the idea of humor.

KW: Mhm.

CW: And had the cartoons drawn...

KW: Yeah. [laughs]

CW: ...of how it really was to do. So they could be laughing more than judging me, I guess. [laughs]

KW: Yeah, ok. To kind of soften it.

CW: For how I kept mine in. Yeah, kind of soften it and make it light hearted and also not to appear like I was complaining because, I mean, the kinds of things you have today with dedicated spaces for breastfeeding or... [laughs]

KW: Yeah.

CW: You know.

KW: And childcare, like childcare facilities right on campuses.

CW: Correct, correct. All of the things that are part of expectations today that weren't there then. It's a different era, and it took people... some people did need to complain.

KW: Mhm.

CW: And struggle to make those changes. But I coped in different ways, I suppose.

KW: Yeah.

CW: But, you know, and when I got tenure, my dean said, "I wasn't betting you could get tenure..."

KW: Wow.

00:35:00 **CW:** ...and have 3 children."

KW: Yeah.

CW: So, that was the expectation, it just wouldn't work.

KW: Yeah.

CW: That combination. Instead of congratulations. [laughs]

KW: Yeah. [inaudible] [overlapping talking]

CW: So, you managed it. Yeah, maybe it was, maybe it was. It stuck with me.

KW: Yeah.

CW: It was quite the thing to say. [laughs]

KW: Yeah, so, there weren't many supports for working moms...

CW: No.

KW: In like, kind of faculty or research positions.

CW: Not yet. Not yet. Even now, some of the things that you think are supportive, backlash that aren't. For example, you can ask for a year off for maternity leave in terms of a tenure track clock extension...

KW: Okay.

CW: But what that does is put you at a lower salary for another year longer.

KW: Oh, okay.

CW: And so, it widens the salary gap...

KW: Oh, okay.

CW: Between males and females.

KW: Yeah.

CW: And people aren't thinking of these bigger picture consequences.

KW: Yeah.

CW: And a lot of women can take some maternity leave and still make the tenure track clock...

KW: Yeah.

CW: And they are better off financially if they don't delay.

KW: Yeah.

CW: But it's the conservative nature, it seems like, of many administrators to say, "Oh just to be sure, why don't you take that extra time."

KW: Oh, okay.

CW: And they're not, either side, neither side are thinking, "oh, that would put my salary back substantially."

KW: Yeah. Okay.

CW: For another year, which compounds it.

KW: Yeah.

CW: Throughout your entire career, every time you do that.

KW: Yeah. Yeah, no I wouldn't have thought of that either.

CW: It's better to go early as you can. [laughs]

KW: Did you have mat leave when you started? Like...

CW: So, maternity leave when my oldest child was born was five weeks.

KW: Okay.

CW: And then, by the time the twins were born in 1980, it was seven weeks.

KW: Okay.

CW: So, pretty short.

KW: Yeah, okay. Cause I think it's like 3 months now or something.

CW: And that's still way behind Scandinavia.

KW: Yeah, I'm from Canada and it's a year, I think.

CW: Yeah, see, a lot different.

KW: A lot different but still a little bit longer. [laughs]

CW: Yeah, right, right.

KW: Yeah, that's a really short... that must have been hard to come back after.

[inaudible]

CW: It was the only way I got some rest after I had the twins. [laughs]

KW: [laughs] Wow. So, on the topic of the wage gap, when you became head of the department for foods and nutrition...

CW: Right.

KW: There was someone else. So, at that time another head position came out and that was given to...

CW: Douglas Powell.

KW: Yeah, and there was this controversy about the very significant salary gap between the two of you, even though you had fairly comparative experience and you were actually at Purdue for longer.

CW: Right, but our promotion from assistant to associate professor was the same year.

KW: Mhm.

CW: And then our promotion from associate to full professor was the same year. And he was coming in from the outside to take this department head position and I was internal.

KW: Yeah.

CW: And, it came out in the newspaper with our pictures, that both of us were appointed and it showed the salary. Oh my gosh, that started a fire storm.

KW: Yeah.

CW: Because, everywhere I went that weekend, to church or the post office, the grocery store, anywhere, people were saying, "Wow, I saw your salary. It was so much lower than the male. Why was that? Shame on Purdue," kind of thing.

KW: Yeah.

CW: It was so awkward and embarrassing. I felt betrayed, you know.

KW: Yeah.

CW: And so, the next morning, on Monday morning, rather, I came into the dean's office with a copy of the newspaper and put it on his desk and I said, "How do you explain this?"

KW: Yeah.

CW: And he said, "I've already received enough copies of that newspaper article to wallpaper my office with."

KW: [laughs]

CW: He said, "But what do you expect me to do about it?" And, you know, his excuse or whatever was just that that's what the man negotiated, that's what I negotiated and that's where it was. Oh, you know how to make me feel even worse.

KW: Yeah, but that's a, like it was, like you could, could you have even negotiated it enough to like to bring it back up to that? Yeah... [inaudible]

CW: Yeah, it was \$11,000 difference.

KW: Yeah.

00:40:00 **CW:** So, I was going to make \$69,000 and Doug Pal was going to make \$11,000 more than me. And he said, "Well, what would you have me do about it? Take money

away from your faculty?" I go, "No, I wouldn't want you to do that. But you better do something about it because I have appointments with the right offices on campus, equal opportunity and so forth, that I will keep later this week if nothing's done about it." Because, I was worried the faculty would think I couldn't negotiate well with him on their behalf if I couldn't even negotiate my own salary.

KW: Yeah.

CW: It put me in a really awkward leadership disadvantage.

KW: Yeah.

CW: So, he said well I'll call the provost equivalent now...

KW: Okay.

CW: The executive Vice President then, Robert Ringel, and I'll get back to you. Well, he got back to me right away for an appointment early that afternoon.

KW: Mhm.

CW: And I came into his office and he said, "Here's a blank piece of paper, write down what you want." Ringel said, "I'm to give you whatever you say."

KW: Oh, wow. Yeah.

CW: Right? So, that was his interpretation of how to handle that.

KW: [laughs]

CW: And so, wow, what do I do? And I thought I could ask for the whole gap.

KW: Mhm.

CW: Or I could make a more long-term strategic choice for the relationship, the way I saw it. So, I wrote down a number halfway between.

KW: Mhm.

CW: And I said, "I wanted you to know that I appreciate what you're doing for me and I'll be able to tell the faculty that I renegotiated so we can talk, but I also want you to know that I can compromise. I'm a reasonable person." So, I felt that was the right thing to do. But I'm reading this book now that is called, it's a fairly new book that was published last year, and it's called "Invisible Women."

KW: Okay.

CW: It's, let me see... I wrote it down for this, [laughs] but now I'm not finding where I wrote it down. It's called "Invisible Women: Exposure to Gender Bias."

KW: Okay.

CW: You know, a world of data based on men basically.

KW: Okay.

CW: And so, this book talks about how men negotiate salaries better...

KW: Yeah.

CW: And that's what my husband was telling me too, that you did something about it, but you didn't go up the full way, so you're still not negotiating the way a man

does. And he negotiated that and you didn't. But this book's premise is, you learn throughout your life, here's the male role, the female role, and women are trained to be more nurturing and compromising.

KW: Yeah.

CW: And so, ok, maybe, you know like why aren't women more like men? [laughs]

KW: [laughs]

CW: Is that how we handle the situation or do we make an environment that's more fair?

KW: Yeah.

CW: I don't know.

KW: Yeah, I've heard that argument as well, that women just aren't as good at negotiating. But there is, you are taught from a young age to, like, compromise and to create this like, like to create good relationships.

CW: Yeah.

CW: And not to, kind of, you know, push too hard, so...

CW: I read an article in Chemical and Engineering News once about the difference between male and female faculty mentors for their students and more often than not a woman mentors by nurturing and empowering and motivating...

KW: Okay.

CW: And a man motivates by competition.

KW: Yeah.

CW: You know, he'll give like two people the same project to see who gets there first...

KW: Okay.

CW: Or whatever.

KW: Yeah.

CW: Completely different styles...

KW: Yeah.

CW: Of motivating. It's all part of that.

KW: Yeah, and it's interesting to think about, like, how much of that is taught.

CW: Here, I found the name of that book. It's a 2019 book by Caroline—let's see if I
00:45:00 can read that—Criado Perez, I have to look it up. And anyway, "Invisible Women:
Data Bias in a World Designed for Men."

KW: Okay.

CW: That was the name of the book.

KW: I haven't read that. I'm going to look that up. That sounds interesting.

CW: Mhm.

KW: So, a lot of the, a lot of your research while you've been here at Purdue has been focused on women's health, specifically in relation to calcium. What, what got you into specifically women's health and focusing in on calcium? What interested you about that?

CW: I started work with minerals in my PhD and created a lot of methods using isotopic tracers.

KW: Okay.

CW: At the time, my major professor at Florida State University had a friend and colleague who was head of physics at another university and there had been a radioactive spill...

KW: Okay.

CW: Like a nuclear power plant spill or something and he was asking her, "Do you really have to cordon off the fields for 30 years or whatever and not grow anything or could you do something to the vegetables or whatever and process them so they'd be safe?" So, she asked if I'd like a project based on that concept. So I took the radioisotopes that were common to nuclear spill, cesium and strontium, that have really long half-lives, and started labeling plants with them, vegetables crops, and found out where the tracer went and if you could process them out and make certain foods and what not. I think just for the political optics, you would cordon off the field and not grow anything for 30 years, but I learned you could, like if you grew cucumbers, you could pickle them and lose 95% of the radioactivity...

KW: Okay.

CW: In that process. So, there are steps you could take if you were really stuck. But, to learn how to label the plants, I learned to grow plants hydroponically...

KW: Okay.

CW: Because otherwise you put in the tracers and they just stick to the clay matter in the soil and don't go up into the crop. So, I learned how to make hydroponic solutions and how to build a hydroponic system and do all the parts with plants, but that was not unfamiliar to me because of all the 4-H end-processing that I had done growing up. But the radioisotope tracer techniques... So, I took all the classes in isotopic tracers and what not and I ultimately became a teaching assistant in chemistry at Florida State teaching radio-chemical techniques and that set me up well to look at essential minerals for mineral nutrition when I came to Purdue and then I had all these techniques I could use to study tracers and how they're taken up by crops, and the edible portion, and how processing affects them, and then how bioavailable are the minerals to animal models or to humans., and then from there, how do they link up to disease. So I did... studied a lot of different minerals initially, selenium, iron, molybdenum, zinc...

KW: Mhm.

CW: Quite a few different minerals, but where funding was the best was with calcium.

KW: Oh okay.

CW: Because about that period of time, they were starting to connect that diet had a role in whether or not a person developed osteoporosis later in life.

KW: Okay.

CW: So it... the term was coined, osteoporosis is a pediatric disease. You start young, deciding if your bones... making life's choices that either make strong bones, build strong bones or weak bones, and make you vulnerable to fracture later in life.

KW: Okay.

CW: So, this long latency disease process was starting to catch on and people were starting to link up that maybe what you ate or how you exercised or whatever, early in life, influenced your risk of hip fracture later in life. So, that was just coming out in the magazines and things around, in the 1980s. So, because it was becoming popular and visible, this link, I was thinking of writing grants to relate calcium, even though at that point I hadn't studied calcium, but I thought that would be a really good thing that would catch more notice than these other trace elements that I had been studying.

00:50:00

KW: Yeah.

CW: And sure enough... so funding became a lot easier...

KW: Yeah.

CW: With calcium than anything else so I grew my career mostly around calcium then, for a long time. And so, how do you study how much calcium do you need in youth...

KW: Yeah.

CW: To build the strongest bones to prevent fracture? That's when we thought of how to design a camp, a research camp study where we could bring kids into campus and live with them, house them, where we can control their diet...

KW: Mhm.

CW: And have different levels of calcium or whatever we wanted to study and follow them long enough to see, are they retaining the calcium, or how much are they retaining the calcium at different levels? So that we could determine how much calcium would optimize developing peak bone mass.

KW: Okay. And then so Camp Calcium went for two, two decades, right? It was...

CW: The first one was in 1990.

KW: Mhm.

CW: And the eleventh one was in 2010.

KW: Oh ok, yeah. And then did you have participants, like, come back to test? Like how long? Or was it you just tested different participants for each camp?

CW: Mostly, mostly it was different. We wanted to study them during their rapid growth period at puberty.

KW: Okay.

CW: So, for girls that was 12 to 14 mostly, maybe 11 to 14, and boys its mostly 13 to 15.

KW: Okay.

CW: Because their accelerated bone growth is delayed a bit...

KW: Okay.

CW: ...from girls and then they get taller... [laughs]

KW: Yeah. [laughs]

CW: ...when it's delayed. So, the grant cycle... sometimes I would run a camp back-to-back from one year to the other. But sometimes there would be a gap while we were analyzing all the samples and getting ready for future grants, kind of thing, and there would be a little gap. So, it depends if they were in the same age range that was eligible for the next camp.

KW: Oh okay.

CW: So, some did...

KW: Okay.

CW: Come back. One camp was designed to bring kids back, girls back. So, we studied them when they were initially 12 to 14 and then we brought them back three years later...

KW: Oh okay.

CW: When they were 15, 16-year-olds...

KW: Okay.

CW: To see how... they weren't really growing much more bone by that time.

KW: Okay.

CW: They were already much more like adult, stable adult...

KW: Adult bone structure, sure.

CW: Growth at that. But what we did have happen was a lot of siblings would come or relatives.

KW: Oh okay.

CW: And sometimes the next generation of family.

KW: Okay. Yeah.

CW: 'Cause it was over such a long period of time. Or they would come and work. I mean, some of the kids as adolescence would be participants in camp and then they would be college students and come be camp counsellors.

KW: Oh cool. Oh wow.

CW: For the next camps.

KW: So, were most of the participants from the Lafayette? Like the Tippecanoe County area?

CW: Well, there were always some from there, but we reached out around five states mostly.

KW: Okay.

CW: So, Indiana and the surrounding states when we were growing into larger numbers of camps, yeah.

KW: How did you select participants? Like, did they just have to be between the age range?

CW: It depended on the particular study. Generally, healthy kids.

KW: Okay.

CW: You know, we weren't prepared to handle diabetics, say, or...

KW: Mhm.

CW: Certain types of kids. But... and they couldn't be on any kind of medication that would interfere with calcium metabolism.

KW: Okay.

CW: But most kids aren't.

KW: Yeah.

CW: You know, most kids fit in that. So, how we recruited them depended on the era. So, in the beginning it was almost exclusively through schools.

KW: Okay.

CW: We would send a letter out to the superintendents of schools and say, "Could we contact your principals," and either offer flyers to distribute, and then they call us, or we would do little presentations on nutrition and bone health and then we could give out flyers on [the] camp. So, we had a combination of that. And often, by the time I would get back to the office from giving a presentation, I would have an inbox full of phone messages...

KW: Oh wow.

CW: Of kids that wanted an application to apply for camp.

KW: Oh cool.

CW: So that was very popular. But then when schools got more into worrying about standardized exams, they didn't want very much time given to outsiders for presentations...

00:55:00

KW: Oh, okay.

CW: Because they had so... all their minutes devoted to preparing the kids for standardized exams.

KW: Oh, okay.

CW: So, it was lots more difficult to get into schools. Sometimes they would pass around flyers, but it was the personal presentations that did more good. And

then, we did many camps that were trying to compare different races. So, it wouldn't have been fruitful to go to a class that had 60-90 percent white kids when we were looking only for Hispanics or Chinese Americans or something like that.

KW: Okay.

CW: So, we used different strategies. For the Hispanics, we paid for consensus data addresses and we would ask, in this five state area, is there a family with a middle school child between these grades? And so then we would buy that mailing list and send them post cards.

KW: Okay.

CW: And if they were interested, they would ask for an application. For the Chinese Americans, we did some recruiting in these other ways but mostly we went to Chinatown in Chicago and they recruited for us.

KW: Oh, okay.

CW: Yeah.

KW: Okay. And so, you, so you studied the differences between calcium absorption between different races?

CW: All aspects of calcium metabolism.

KW: Okay.

CW: Calcium absorption, bone formation rates,

KW: Okay.

CW: Bone resorption rates, excretion rates.

KW: Okay.

CW: Lots of things about them.

KW: Yeah. Did you find big differences?

CW: We found some differences. Like, boys are more efficient than girls at any given calcium intake.

KW: Oh okay.

CW: So, our question was, "Do they get bigger skeletons because they are more efficient or do they need more calcium and their requirement should be higher?"

KW: Okay.

CW: And they were just more efficient at absorbing and retaining the calcium than the girls.

KW: Okay.

CW: Constantly across the intake levels. So, their requirements are the same.

KW: Okay.

CW: And that's comparing white boys and girls. Then blacks are just more efficient. They're more efficient than whites just like boys are more efficient than girls.

KW: Okay.

CW: So, they are genetically programmed to have a bigger bone mass.

KW: Okay.

CW: And adult black women have on average 10% more bone mass than adult white women.

KW: Okay.

CW: And it's because of the way they handle calcium in adolescence...

KW: Oh okay.

CW: And grow the bone then. And then it comes together and they are the same by adults.

KW: Oh okay.

CW: But in puberty, they're programmed differently. The group that requires the least are Chinese girls.

KW: Okay.

CW: So, they were much more efficient at absorbing calcium at low calcium intakes than any other race and they plateaued earlier.

KW: Interesting. Okay.

CW: So, their intake requirement is a lot less.

KW: Mhm.

CW: But it's still more than many Asian cultures get.

KW: Okay.

CW: So, we still need to encourage it.

KW: Okay.

CW: But the requirements don't have to be...

KW: As high.

CW: As high.

KW: Okay. And then these findings influenced, or yeah, influenced the recommendation, recommendation guidelines for the FDA?

CW: They established the nutrient intakes for adolescents for North America since 1997.

KW: Oh okay.

CW: And they still...

KW: And they still do.

CW: And they still do, right.

KW: Wow. And then, so, with those recommendations, does like, so there are these differences between gender and race, do those, are those incorporated into the guidelines or is it kind of like an average of what you found?

CW: So, remember the boys utilize calcium more efficiently than the girls and the blacks than the whites but the intake requirements are the same.

KW: Oh.

CW: Because they plateau the same. The Chinese Americans were lower and there's just a comment in that section, but they didn't actually specify a lower intake in the law.

KW: Okay.

CW: A lower intake in the law, in the policy they didn't come up lower.

KW: Ok, so it's just in the guidelines, the recommendations, it just says what the intake level should be, not the absorption rate.

CW: Correct.

KW: Ok, okay.

CW: Well, the whole report describes all this.

KW: Yeah, yeah. I bet it probably does. [laughs]

CW: But the recommendations just came out, here's what you need, right.

KW: Ok, wow, so that was, at this camp, people were kind of attracted to it because you had like activities, like it was like a summer camp right? I mean, so it was fun. [laughs]

01:00:00 **CW:** So, we, yes. We rented, initially fraternities, sororities, for the summer to live in. And when the administration heard boys were coming they decided that they didn't have enough control over the housing...

KW: Okay.

CW: Of fraternities, so they made us move to residence halls...

KW: Okay.

CW: Which was a blessing and a curse. It cost 4 times as much...

KW: Oh no.

CW: To live in the residence halls as the fraternities.

KW: Okay.

CW: So, it cost the grant, the federal government, a whole lot more to run the camps. But you had these individual rooms for sleeping instead of sleeping porches.

KW: Okay.

CW: And the most difficult thing, the challenging thing, if you have 50 kids in one sleeping porch, if anyone's awake and noisy, they're keeping them all awake.

KW: Yeah.

CW: And so there was so much sleep deprivation...

KW: Yeah when they were in the frats and sororities.

CW: To deal with in those sleeping porches, it was really a nightmare. And, no cellphones at that time, so there might be three telephones in a sorority, say, and they would line up and fight over...

KW: [laughs]

CW: Who gets to get on the phone and call somebody they wanted and that was always an egregious problem.

KW: Yeah.

CW: In the residence halls, they had their own sleeping rooms so if one kid is awake and noisy, at least he's not bothering all the rest of them. And they all had a phone in their own rooms...

KW: Okay.

CW: So, we didn't have that fight. So, it solved a couple of the problems.

KW: Okay. Yeah. What kind of activities did the kids do, like at the camp?

CW: So, a typical day would be, in the morning we would do something educational and all of the colleges at Purdue were involved. So, some days we would take them to an engineering lab.

KW: Okay.

CW: Or a physics or chemistry show, or we'd go to the vet school and watch them run thoroughbred horses on a treadmill to look for fractures.

KW: Okay. Yeah.

CW: Or stress fractures or something. We just did every single thing, pretty much, that Purdue had to offer...

KW: Okay.

CW: That they would receive these kids in and that really influenced their college plans in lots of cases...

KW: Okay.

CW: Or their major plans. Some of them had not thought about even going to college in middle school and then this exposed them to a wide variety of topics. And, we got a lot of Purdue recruits, too, out of this.

KW: Yeah? [laughs]

CW: So, then the afternoons, we'd divide them into groups and so before snack, some of them would go to the CoRec (Córdova Recreational Sports Center) for some recreation and some would be in crafts and then they'd come back for a snack and then they'd trade.

KW: Okay.

CW: So, it was typically a craft or some physical recreation. And then at night, it could be anything from movie night to talent show to all kinds of things that we would create. And then, we would do some outings throughout the camp like canoe trips.

KW: Oh cool.

CW: Or go to a baseball game or go to Chicago to a museum.

KW: Oh, awesome.

CW: Things like that. So, we did try to make it where they really enjoyed being there.

KW: Awesome. And had you had, like, how did you plan this? Had you had experience at planning a camp? And how many participants did you have? Like that must have been a lot of work. [laughs]

CW: Yeah, it's a lot of work. It's as much work planning all the activities and the camp as it is the research.

KW: Yeah.

CW: So, we would spend all year getting ready for it. Not only the research part, the sample labelling all the tubes, getting all the methods worked out and everything, and also setting up all the activities and the recreation, which was a lot of work. So, we had three different groups of people we hired. We would hire camp counselors because they had to be supervised 24/7.

KW: Mhm.

CW: You know, they're kids. So, we had to have people on night duty and people with them all the time, everywhere they went, and especially during mealtime because they have to eat everything that we prepared them.

KW: Yeah.

CW: So we had at each table, you have 2 adults watching that they ate everything.

KW: Okay.

CW: Which is weighed out to the nearest 10th of a gram, every single ingredient.

KW: Yeah. [laughs]

CW: You know, and they have to eat everything and rinse the glasses of milk with deionized water to make sure they got it all.

KW: Wow.

CW: That sort of thing.

KW: Okay.

01:05:00 **CW:** So, they had to eat everything. So, then you have the kitchen staff preparing all of this. So, if you make a pizza, you don't just get a slice of pizza, you have to weigh individually the amount of dough, the amount of tomato sauce, the amount of cheese, the amount of pepperoni, whatever is in that pizza for each individual, 'cause it has to be exactly.

KW: Okay.

CW: Right. And you have different calorie needs. So, maybe you have colored dots to mark this is blue so it's a 1200 calorie diet and this is red so it's a 2800 calorie diet, you know, we might have five different calorie levels that you have to keep track of, so different weight for everything.

KW: And is that's based, is that based on like the different weights of different children?

CW: Yeah, and their physical activity levels.

KW: Yeah. Okay.

CW: So, we didn't want them to gain or lose weight, we wanted weight stable.

KW: Okay.

CW: So, we planned menus for them...

KW: Okay.

CW: That would provide that for them. So, you had the kitchen staff that worked long hours, 'cause three meals and two snacks a day for all of these children is a lot of work.

KW: Yeah.

CW: And then you have the lab step. So, they're collecting all their urine and all their stools the entire time and most studies were six weeks.

KW: Okay.

CW: Two, three-week periods so all of those samples plus we'd collect blood a lot depending on the study and different other kinds of measurements. So, there was a lot of processing in the laboratory as well. So, I would hire over 100 people in the summer...

KW: Wow.

CW: To do all these different functions and so then there was training before the kids would come and then all year sample analysis and then statistical analysis after.

KW: And planning for the next one.

CW: So, the first camp was a lot smaller....

KW: Okay.

CW: While we learned everything. We had 14 kids and we compared their data with the counselors. So, we studied the counselors...

KW: Oh okay.

CW: That were supervising them at the same time. But we got it pretty right in terms of the research, because we used pretty much the same methods for the entire set of 11 camps after that.

KW: Okay.

CW: We really didn't have to make very many changes. It was well conceived. But by the last camp, we recruited 90 and retained about 70 to finish.

KW: Oh, ok so about 20 people.

CW: Drop out, sometimes.

KW: Okay.

CW: Now usually in the first four days is when you lose the most, because they get homesick or something or they really can't handle eating that controlled diet.

KW: Okay.

CW: Sometimes somebody will sneak in, they're a picky eater and their parents think we're going to fix that. That doesn't work.

KW: Oh. [laughs]

CW: You know, when you have to eat a whole diet set. Some people don't know they get homesick because they've never been away from home before...

KW: Mhm.

CW: And they just get clinically homesick in four days. Well, parents handle that really differently. So, some parents the first call they come and pick them up and take them away. Another parent will say, "You committed to this and I want you to learn to honor your commitments. So, I'm going to come over every mealtime, if the meal is the problem, or to visit if there's some social problem, and I'm going to stay with you until you feel comfortable." And sometimes, they would come from long distances and do that every day for a week or more until the kid had adjusted, but they got their kid to feel comfortable to stay.

KW: Okay.

CW: So, we kind of let the parents help monitor whether they should take them or leave them, but I really admired that, if they could work with their child to honor their commitment. 'Cause a lot of times they would say I really want to do this, it's

important to me to do this, I just feel homesick or whatever. But the parent could help.

KW: Yeah.

CW: Help them through that and so that was wonderful. But on average we would lose about 15% [KW: Okay.] of the kids. If they made it past the four days, then it's usually about some drama thing in their life that made them feel like they needed to be home or something.

KW: Okay.

CW: It wasn't homesickness anymore, typically after that.

KW: Okay.

CW: But one reason it was so successful is we had quite the research team that lasted almost the entire time. So, we had like George McCabe and his wife Linda McCabe in Statistics...

KW: Okay.

CW: That did statistics analysis. The physician, the study physician, Munro Peacock, who was an expert in his own right in kidney, like calcium and Vitamin D and kidney handling in osteoporosis, from IU School of Medicine. Berdine Martin was the project director. We had a pretty stable lab staff supervisor, Ania Kempa Steczko was with us for basically that whole time, but then Pam Lachik came on and they both helped manage the staff. And then the kitchen staff started out with Olivia Bennett Wood, who was on faculty in nutrition science, and then Lisa Jackman and Jan Buckles. There was some turnover there, but it was still quite a

01:10:00

continuity of years each, and NIH said they'd just never heard that where a clinical staff would stay intact working together for decades.

KW: Wow. And so, they were all at Purdue, so...

CW: Well, except for the...

KW: IU.

CW: IU.

KW: Yeah.

CW: And our kinetic modeler, Meryl Wastney, was at Georgetown University for a lot of that time and then lives in West Lafayette part time after she retired. She stayed connected and comes here often. She's an adjunct faculty member.

KW: Okay. So, how did you come up with, or how did you decide on that team? Like were a lot of the people just here and they were great so it worked out really well? Or did you have some selection process on like how you identified who you wanted to be in the research team?

CW: So, I had started working already with Munro Peacock, the study physician, and George McCabe in Statistics, so that was sort of a natural... I had hired Berdine Martin to be my lab manager in the middle '80s, so she started on some other studies we were doing, and so she was in place and my lab manager was in place and Olivia Wood was my faculty who could be a research dietitian and train dietetics students to help. So, it was sort of opportunistic of who was here. And then, it was just such a wonderful group.

KW: And you just worked well together.

CW: Yup.

KW: So, everyone wanted to stay on?

CW: Yup. Yup.

KW: Great.

CW: It was just really great.

KW: That's awesome.

CW: And we trained so many people. We... I've had 39 PhD students...

KW: Oh wow.

CW: And 20 master's students and hundreds of undergraduates and 12 visiting professors, I think, and 17 honors students and...

KW: Wow.

CW: It just trained so many people.

KW: And did they help with the camp, Camp Calcium as well?

CW: Most of them did help, not every one of them.

KW: Oh okay.

CW: But most of them did help. And even if they were doing another project when camp occurred, they would do some role or the other, it was such a big effort. And our lab helps each other a lot, anyway. So, if someone was doing an animal study and there was a really busy day, all the people would go help with that.

KW: Okay.

CW: And then they would help with the human study.

KW: Oh okay.

CW: You know. So, they would get some cross training.

KW: Okay. So, it was a really, like, helpful environment.

CW: Right.

KW: Awesome.

CW: Right.

KW: Did, so, this was a fairly new method to acquire data, right?

CW: There's been a few metabolic research studies in children, but nothing of this magnitude and certainly not sustained and not with, on top of it all, the stable calcium isotope to look at the kinetics. It's pretty unique in the whole world, really.

KW: Yeah.

CW: Yeah.

KW: Has anyone else taken up this method of studying diet?

CW: Well, like I said, there's been one-off metabolic study here or there with children that may be short.

KW: Yeah.

CW: Like a week or something.

KW: Okay.

CW: But nothing of this magnitude.

KW: Okay. And then, so from this, you actually played a role in setting policy and informing guidelines internationally in relation to like calcium intake, right? Or, calcium, yes.

CW: Well, a lot of different things.

KW: Yeah. [laughs]

CW: But most dominantly calcium because we set the calcium requirements for adolescents for North America and many countries don't have the ability to

conduct research or the investment or infrastructure to do research like this to collect the data. So often they would just adopt...

KW: Okay.

CW: The North American numbers, yeah. But a lot of times, when I would get invited to consult with government or industry or academics internationally, it was, ok so how do we implement this? You know like in Asia they'd say, "Our people don't consume dairy and that's the major source of calcium, so would you help advise us on whether we should fortify some staple food with calcium."

01:15:00

KW: Okay.

CW: Sometimes it was on Vitamin D or some other nutrient I had some experience with.

KW: Okay. And so, you would, would you help them come up with these methods on how to increase people's calcium intake?

CW: I would, yeah, help advise their plans...

KW: Oh okay.

CW: Or give them ideas. Yup.

KW: Oh okay. Wow. That's, so, this has been really significant for, at least, I know like North American health, right? Like so you, as a kid I grew up in the '80s and '90s, so focusing on like getting enough calcium was always big in my childhood.

CW: Right.

KW: And through school, like you have the milk program through school and everything like that. Did this help influence that?

CW: So, let me tell you how directly it did. The dietary guidelines for Americans dictate the nutritional requirements by law for any federal funding exposure. So, the dietary guidelines evaluates the literature every five years and they take the nutrient requirements. And so, any dollar spent on any federal food program has to follow dietary guidelines. So, that means all school lunches and school breakfasts and military...

KW: Oh okay.

CW: And nutrition for the elderly program. And so, if you have a meal, like a school lunch or school breakfast, you have to get 1/3 of what the dietary guidelines recommendations are...

KW: Oh, okay.

CW: Or you lose the funding that comes...

KW: Oh okay.

CW: ...from USDA for supporting that school lunch or school breakfast and there is an assessment program to make sure you did. So, every school intentionally looks at what are the requirements and follows that and proves they followed it, or they're at risk for losing much money. A loss, because it's a law. So that's how directly these data influence [KW: That's amazing.] what happens. Yeah, so...

KW: Yeah. [laughs]

CW: [laughs] One other, I mean smaller than that, but one other direct influence we had with school lunch is, before we did the study, they didn't allow any alternatives to milk for calcium sources in school lunches.

KW: Oh okay.

CW: They thought, from the literature but it was all test tube studies not anything with humans, that calcium from soy milk or soy beverage was not well absorbed.

KW: Okay.

CW: So, they wouldn't allow it. So, we did a study with the most commonly consumed form of soy milk that was on the market, put it in the isotope in the form and got it labeled and fed it and saw that it was equal to cow's milk...

KW: Oh okay.

CW: In the form in the processing procedure used in the common form. So, then they changed the legislation and allowed that as an alternative to cow's milk for a source of calcium in schools.

KW: Oh, great. Well, that would help with a lot of like lacto-, allergies, 'cause...

CW: Right, or whatever reason, you know that would help...

KW: Yeah.

CW: But none of the other plant-based beverages have been studied.

KW: Oh okay.

CW: So, I hope to do that in the future.

KW: Oh, okay. So that's up next, maybe.

CW: Yup.

KW: I'm going to jump... well I guess not jump back too far. So, you were appointed head of the department of, was it nutrition science at that time?

CW: It was foods and nutrition at that time.

KW: Foods and nutrition in 1991. What were some of the new, like did you implement any new programs? Yeah, or like any graduate or undergraduate programs at that time?

CW: So, let me tell you about the start. In lots of ways we were kind of a sleepy, not very well recognized department at that time, and I wanted to start some initiatives like you're asking about. So, I knew I was going to become head and organized a retreat in the summer for the faculty and put out in advance some of the ideas that we had been sort of talking about but never actually acted on, but possibilities, and assigned different people to lead discussions of the different areas and had groups formed into teams and said before the retreat why don't you do some benchmarking from, comparing what other campuses do, and have some meetings and start thinking about what you want to talk about with the faculty and so forth. So, we went to Turkey Run and had a retreat and at the end of the retreat we had a 5-year plan of what all we wanted to accomplish and proceeded to do it all in the next year and a half.

KW: Wow. [laughs]

CW: Because they were so excited and empowered to do these programs. So, some of the things we accomplished, we started an interdepartmental nutrition graduate program.

KW: Okay.

CW: That still is in existence today. That's a very strong program. And an undergraduate major in nutrition, fitness and health, which sort of combined dietetics and fitness...

01:20:00

KW: Okay.

CW: And exercise so you could be more holistic...

KW: Oh okay.

CW: In running programs. And that's still in existence today, too. We got a lot of collaboration and appointed adjunct faculty from health kinesiology faculty to do that.

KW: Oh okay.

CW: So, that's two of the main things that came out of that.

KW: Wow, and so that nutrition and fitness collaboration...

CW: Mhm.

KW: That program, that's pretty progressive for the time. Like that's something that I think we're starting to hear a bit more about now, but...

CW: So, we advertised it to high school counselors and grew it to 77 people, majors, in about a year.

KW: Wow.

CW: So, that was really popular. It's really good experiential training, too.

KW: That's awesome.

CW: It's really nice.

KW: And then, all during, so you were head of, so while you're still a professor, you were head of department of foods and nutrition, you're running Camp Calcium, but then you also started the Botanical Research Center. [laughs] One of the many centers you started.

CW: Yeah. [laughs]

KW: [laughs]

CW: Yeah, we'll talk about the centers in a minute. You know, I just had great people to work with.

KW: Yeah.

CW: I'm a delegator and like the leading part, I don't, I like to empower people and let them create...

KW: Yeah.

CW: A lot of what they do and not get in their way, so much. So, I had wonderful assistant to the head, and I had three different ones and the more recent one that retired was Marleen Troyer...

KW: Okay.

CW: Who's a real asset. They all were. And then, Berdine Martin was running my lab and Dawn Haan was my personal assistant and just great...

KW: Yeah.

CW: People that could help lead. But the faculty were all having a lot of fun working together, so we accomplished a lot. We grew. My predecessor department head, Paul Abernathy, had talked Avanelle Kirksey...

KW: Okay.

CW: Into writing the first externally funded grants...

KW: Oh okay.

CW: To our department, so we weren't a well-known research machine at all. Or we hadn't really integrated around campus very much. So, he asked Avanelle

Kirksey to write an external grant. She said, "Where to? NIH or USD?" And he said, "Well both." She wrote one to each, got them both...

KW: Wow. [laughs]

CW: And that like, started our external grants. She, so, the first two female distinguished professors at Purdue came out of our department.

KW: Oh wow.

CW: Helen Clark and then Avanelle Kirksey. But, she was about the only one, there was hardly any other external grant getters and at one point, I remember, we had 13 faculty that were PI's of R01 NIH grants.

KW: Oh wow.

CW: You know, we just really grew and expanded and that money that came in, the salary savings from those grants, and a corporate affiliates program...

KW: Oh yeah.

CW: That I started in the department, we could talk about too, were sources of revenue beyond what was actually budgeted for our department to have. So we could hire, we hired up to nine instructors to help with teaching, to help free faculty up to write grants.

01:25:00

KW: Okay.

CW: And that would grow the number of graduate students we could afford and technicians and what not, so, we needed a lot more space. So, one of the ways we got more space, initially, was when the library started decentralizing, we put in a proposal along with Anthropology and our dean at the time, Dennis Saviano,

helped us engineer this idea where we would combine with this other college interest to acquire that space. So, lots of... we got two-thirds of the library...

KW: Okay.

CW: And anthropology got one-third of the space to make a department head suite for them and our space was for all these, a lot of these new people...

KW: Oh okay.

CW: That we brought in, all these clinical and instructor teaching staff. And we started getting other kinds of space, research space all over Stone Hall and Matthews...

KW: Oh okay.

CW: And eventually Lyles Porter and different places.

KW: Oh, so you spread out.

CW: And Smith Hall...

KW: Wow, okay.

CW: And different spaces that we'd need 'cause we grew so rapidly in such a short time. And then eventually we got the clinical research space that we'll talk about a little bit later when we talk about the CTSI.

KW: Okay. [laughs]

CW: We can do that. But yeah, other programs that we built together, a big clinical research operation and center, the corporate affiliates which was a membership-based industry partnership program. So, all kinds of recognizable and unrecognizable names. So, if you go down the grocery store, you recognize Kraft and Kellogg's...

KW: Yeah.

CW: And that kind of... General Foods, that kind of name, but you might not recognize the ingredient companies that sell to those kind of companies.

KW: Oh, okay.

CW: Or the dietary supplement companies like Pharmavite, which makes Nature Made. You might recognize Nature Made but you might not recognize Pharmavite...

KW: Yeah.

CW: That produces these. So, all kinds of companies were attracted to become partners with us because we would expose them to research before it was actually published. And they could be...

KW: Oh okay.

CW: Ahead of the game, kind of, and so much important research was being done...

KW: Yeah.

CW: In our department at Purdue and we were becoming involved with these policy setting assignments and they would learn about that from us and enrich their jobs. And we just had a lot of fun, so we would invite them to campus for a symposia twice a year and they would enjoy being on campus, enjoy being together and with us and meet students and hire students and a lot of mutual things. But we, there were membership fees for belonging.

KW: Oh okay.

CW: So that was unrestricted funds that we could use to help us populate these expanding spaces with computers or...

KW: Or people.

CW: Or equipment. We didn't use it for salaries so much.

KW: Okay.

CW: But because the salaries mostly came either from the grants directly or from salary savings...

KW: Okay.

CW: To help with teaching and the activities the faculty needed to free up their time...

KW: Okay.

CW: To be more involved in research. So, we just really expanded our reach. We also developed the Hall of Fame where we would recognize distinguished alumni or friends.

KW: Okay.

CW: You know, maybe five or six a year and they would become closer ambassadors and ties, potential donors, but mostly the good relationships. And we had a May conference before, which was an accreditation outreach program, but we really built that up and coupled it with the Hall of Fame. So some of the famous people, alums who had become famous...

KW: Okay.

CW: We would invite to come be speakers in our day of continuing education...

KW: Okay.

CW: Our symposia for health professionals around the state.

KW: Okay.

CW: And then that evening we would honor them in the Hall of Fame, so...

KW: Okay. And then are these alums, were they specifically from the department of foods and nutrition.

CW: Yeah. Yeah.

KW: Ok, so...

01:30:00 **CW:** Yeah.

KW: It was people who...

CW: Right.

KW: Were famous or well known...

CW: Right.

KW: In that department.

CW: Or accomplished something special.

KW: Yeah. Okay.

CW: So, there's a plaque, a wall with a big plaque with all the years of the different awardees.

KW: Okay. And is that still going on?

CW: It is.

KW: Awesome. And it's something that you came up with?

CW: Yes.

KW: Wow.

CW: Yeah.

KW: And so...

CW: Well, I stole it from ABE [Agricultural and Biological Engineering] on campus...

KW: Oh okay.

CW: 'Cause their department had done that. Or, I don't know that their style was like ours, I mean we have flautists and piano players... [laughs]

KW: Yeah. [laughs]

CW: And things you know. Quite the elaborate festival...

KW: Yeah.

CW: Festivities, but the idea of recognizing...

KW: Yeah.

CW: I stole from ABE.

KW: That's awesome... [inaudible]

CW: Yeah, right.

KW: Awesome. And then for the corporate affiliates program...

CW: Yup?

KW: Was that just, so you held symposiums one each term, right?

CW: Yeah.

KW: So, like a fall and a spring?

CW: Right.

KW: And it was, so people or companies paid membership and they'd come in and it was just like a presenting your research kind of day? So, you would like tell them about upcoming nutrition research that [inaudible] had done?

CW: It was some of that but some of it was around themes like little mini symposia and we would bring in people from the government who ran...

KW: Okay.

CW: These programs or nationally renowned speakers or people who were influencers. So, we could use some of the membership fees then to support the entire program...

KW: Okay.

CW: As well as have extra to invest into...

KW: Okay.

CW: Our infrastructure...

KW: Okay.

CW: And the department.

KW: Ok, so it was in one respect like revenue.

CW: Right.

KW: Like a revenue stream, but then it was also like educating.

CW: Partnerships.

KW: Okay.

CW: Well, educating and it was partnerships...

KW: Yeah.

CW: Because the problems that we face with health are complex, you know, and multifactorial, and if we don't work together, you can't solve the problem. Like, in academia alone, we can get as far as a research publication...

KW: Yeah.

CW: That could go on the shelf, you know.

KW: Yeah.

CW: Or, we could maybe sit on a policy committee, like the dietary guidelines I was telling you about, influences all the school lunches and school programs, that's really effective. But who really influences the food supply are these manufacturers...

KW: Yeah.

CW: That put all the foods in the grocery store or that you could get online or whatnot. So, if we don't influence them, we have a lot smaller reach...

KW: Mhm.

CW: Than if we can influence products that they produce.

KW: How did you come up with this idea? It's really, like I think it's really a great way to kind of, not like, yeah, to like influence and educate manufacturers on foods.

CW: So, chemistry has a program that's kind of like that, that's older than ours. And food science has an industrial associates' program that's sort of in that model so, we're not completely original at Purdue. But probably how we do it is a little bit different and we had many more companies...

KW: Yeah.

CW: That were interested in nutrition.

KW: Ok, okay. And was this affiliated with the other centers or was this separate? The corporate affiliates program, was it separate from the centers or did it align with them?

CW: So, yes and no. [laughs]

KW: Okay. [laughs]

CW: So, it was really [a] separate entity...

KW: Okay.

CW: But often, I would combine purposes. So, there's a lot of energy in synergizing. So, for, I guess one of the things that our department was really known best for during my era was events that would bring lots of people on campus together but also across the nation with industry, government, academia. And so, if I had an event that was associated with the Botanicals Research Center or the Women's Global Health Institute, I would often combine that with one of the visits for the corporate affiliates.

KW: Oh okay.

CW: So, they might have some period of time where it was only corporate affiliates or only one of these centers, but the symposium, the public part...

KW: Okay.

01:35:00 **CW:** Was hosted together. And that generated a lot of audience together, a lot of activity which is really great for students. If they have a poster session and you have all these industry and government people and scientists from all these disciplines coming by your poster...

KW: Yeah.

CW: It's very exciting and lots of job opportunities, too, and sometimes funding. And, like, I would combine perspective graduate student visitation day with a corporate affiliates program. And so, a perspective graduate student would go to a poster session and see industry folks looking at the poster and asking if they could help fund the next round of ideas...

KW: Oh wow.

CW: While they're sitting there. And they're sitting there, "Oh, if I go into this research lab, I'm already hearing that Kraft or, you know, some company is so interested in this that they might want to fund it and adopt it commercially." I mean that's very enticing...

KW: Mhm.

CW: To a perspective grad student. It looked like we had lots going on.

KW: Okay.

CW: Lots of action.

KW: Yeah, you did have lots going on.

CW: We did.

KW: Yeah, okay. And then you had tons of grad students and undergrads. [brief break]. Ok so, we're back. So, Connie, I just had a few other questions about your time as head of the Department of Foods and Nutrition. So, what other fund-raising opportunities, if any, did you develop when you were head of that department?

CW: So, the main one was towards the end. Now, the department was called Nutrition Science by that time, and the Department of Food Science had been created on campus, so it seemed appropriate to narrow ours down to nutrition science, and I wanted a longer-term legacy financially. We had these revenues coming in from lots of success with external funding and the corporate affiliates, but they weren't going to last indefinitely and it was, it would be so nice as a department head to have some cash reserves to spend. For example, our expenditures exceeded our budget by \$250,000-\$300,000 a year.

KW: Wow.

CW: So that's how much money every year I was raising through corporate affiliates and we were collectively raising through salary savings. That's a lot of money to expect it to keep on going...

KW: Yeah.

CW: Just indefinitely. So, one of the things I started doing was taking about a third of the revenue of corporate affiliates and putting it into an account...

KW: Okay.

CW: That would start growing. But that was still going to... would only produce a fairly small annual income if any of these sources dried up. So, I wanted to do a big fundraising effort and at the time the university wasn't involved in fundraising, for that period of time. So, the college had no distractions, the development officers had nothing else to do. So, not very much, I mean they were still cultivating relationships but there was no campus-wide fundraising effort going on. So, they could really spend a lot of time helping our department with ours and we raised \$12 million.

KW: Wow.

CW: I know. So, the return on investment for that, the interest is, should end up to be a fair amount of money over time. Now some of it's in estate gifts and so it's not... [Libraries announcement interrupts]

KW: Sorry, that probably... [laughs]

CW: Yeah, yeah.

KW: Got you off track. So, you had raised \$12 million.

CW: Right.

KW: And then it was...

CW: Some of it to be realized later because it's in estate gifts. But we wanted to celebrate what we had accomplished and to recognize even more alums than the Hall of Fame and to have a big party, we really had never had... where we invited just all of our alumni to come for an event. So, we advertised to have a gala and we worked very hard on producing a formal, very nice gala, and it coincided with the 110-year anniversary of our department...

KW: Oh okay.

01:40:00

CW: So that's how we billed it. And we selected 110 diamonds from alumni and friends and people who had been important to the department to recognize in the program. And we had a lot of fun. We had a silent auction and all sorts of photography experiences and a formal dinner in the Union and everybody dressed up and that day, we had all kinds of activities. We emulated the Maypole, you know.

KW: Oh okay.

CW: From a really long time ago...

KW: Yeah.

CW: And showed off a lot of different things that people who hadn't been back to campus for a while wouldn't know about in our department. And we inaugurated, we dedicated, the Clinical Research Center which was quite the undertaking. We have a world class Clinical Research Center now that took us being selected as

one of six repair and remodeling projects funded by the state each year for three years in a row.

KW: Okay.

CW: Because it was that expensive. So, Keith Moore told us we were going to accomplish this because of all we had accomplished and contributed to research and how we had really made a splash with clinical nutrition research. And so, they were going to do this for us. So, it's a space I'm very proud of.

KW: The Clinical Research Center.

CW: Correct.

KW: Amazing. And then so, this \$12 million that you raised, was it from the gala? Or was this... how did you raise it?

CW: No, it was a two-year process going into the gala but...

KW: Okay. Okay. And then so how did you raise funds? Like did you...?

CW: We had some planned newsletters that went to the alumni, building up and featuring certain accomplishments, and we... just all the ways that development and we could think of...

KW: Okay.

CW: To advertise. And of course, there were opportunities at the gala...

KW: Oh okay.

CW: To follow up with. We started a Purdue Alumni Network...

KW: Okay.

CW: Program there so people could sign up and now they can be on social media...

KW: Yeah.

CW: And learn from what each other are doing, that sort of thing.

KW: Oh, cool. And then so, was this gala like a onetime event?

CW: Yes.

KW: Okay. Awesome.

CW: Yeah.

KW: And then how did it turn out?

CW: About 400 people came.

KW: Wow.

CW: Yeah, which was really...

KW: That's awesome.

CW: Really a good turnout. Our department's not all that big, but so that was...

KW: Yeah.

CW: What we had hoped, something like that.

KW: Awesome. That's great. Is there anything else from your time as department head that you want to mention?

CW: I think we covered the things I had noted.

KW: Okay, great. And then I guess just one more--

CW: I had one more thing that I wrote down.

KW: Sure.

CW: It is the kind of strategic planning I liked to do the best were more action items or dreaming statements.

KW: Okay.

CW: You know, rather than the more formal, we did some of that too. But more like, “If you had a dream and unlimited resources, what would you want to happen in our department?”

KW: Okay.

CW: And one of the most precious comments I got in this activity from the faculty was “If in five years, we would have the same staff then as we have now.”

KW: [laughs]

CW: [laughs] Isn't that lovely?

KW: Yeah, and I guess, well it sounds like you accomplished that 'cause you had, over 20 years you had almost a lot of the same staff who working were together on Camp Calcium, right?

CW: Well faculty but also support staff...

KW: Yeah.

CW: In the department and they overlap...

KW: Yeah.

CW: But not the same as camp calcium so for the department too it was like a big family.

KW: Yeah.

End of Interview. [Interview 1]

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