

**Interview Subject: Jean Healy Spence**  
**Interviewer: Laura Ettinger**  
**Date of interview: October 12, 2013**

**So, today is October 12, 2013, and I'm Laura Ettinger, here at Clarkson University, in my office in Bertrand H. Snell Hall, with Jean Spence, who was a chemical engineering major from the class of 1979. So, I'd like to start by asking how you would describe your childhood - wherever you want to go with that. Your family, your schooling, wherever you want to lead, and I'll ask follow up questions.**

Great. Sure. I was born in 1957 in Brooklyn, New York. My mother is from Brooklyn herself; my father was from the Bronx. So, I'm a native New Yorker. And I would say I lived a middle-class upbringing. They probably started lower middle class, and my father worked his way up to middle class. (laughter) My mom was a homemaker until the last child went to school. There are four kids in my family. Neither of them went to college, and nobody in the family went to college. All four of my grandparents were Irish immigrants but met here in the U.S. So really nobody before me—, I had some older cousins who went to college, but my parents hadn't and my brother, who was two years older than me, went to a community college. So I moved to Long Island when I was about ten years old, and I went to high school out there. I was thinking about studying math. I was good in math. Very good in math and pretty good in science, but not great. (laughter) I thought I'd be a math major, and that's what I was thinking about: going to college to be a math major. My high school guidance counselor, who happened to be a woman, encouraged me to consider other fields. She said, "Great. You're good in math but what are you going to do with it?" And, I said, "Gee, I don't really know." She said, "Do you want to be a statistician?" I said, "I don't think so." "An actuary?" "Mmm, I don't think so." "Math teacher?" "Well, I don't think so." "So, why do you want to study math?" "Because I'm good at it." (laughter) She said, "Well, why don't you consider engineering?" And, she gave me some brochures on engineering. And, so that's how I considered engineering. My dad had been in a union, and he worked his way up to management and he wasn't in the union anymore - for Consolidated Edison. It was the energy company there, but he wasn't an engineer; he knew what engineers did, but in the field he was in. So I didn't really think of that as an option, and other than this guidance counselor, it wasn't even a consideration for me.

I took AP calculus in high school. So, I had some, again, good math. As I started looking at colleges, because we didn't really have all that much spare money, (laughter) I thought about going to one of the SUNY schools. I got a Regents scholarship from New York State, and I thought, "Well, that's the cheapest option." There were only two at the time that had engineering programs. It was SUNY Buffalo and [SUNY] Stony Brook. So, I applied to both of them, and when you check off the box on the SATs - would you want to hear from schools? - I said yes and got letters from Clarkson. [I] had never heard of Clarkson. Didn't know anybody who came here. I didn't know where it was. We might give you financial aid if you considered coming here, kind of thing. And again, they saw my math scores, which were pretty high. Between the back and forth, they offered me a scholarship, a full scholarship [which] paid my tuition to come to Clarkson. I don't know exactly who donated the money, but full tuition was paid. So, when I laid out the financials, I did come to visit the school. I chose Clarkson because I thought, as a private school, it's probably as good as the state schools, as good or better, and financially, it was a

better economic decision to make. (laughter) And so, I came to Clarkson because they gave me a full scholarship. That's the reason. And, I literally had never heard about it before. My parents had never heard of it. Hardly anybody I knew [had ever heard of it], and interestingly, at the time, there weren't really many students from Long Island coming to Clarkson. It was still the Syracuse/Rochester/Buffalo area, down to Albany. Not even all that far down below Albany. Well, a couple of students, but [from] New York City and out to Long Island, there weren't all that many students.

Another guy in my high school class did come, and a guy, a transfer student from the community college, came. So, from my high school there were three of us coming up here when I first came up.

**And, which high school did you go to?**

It was called Alfred G. Berner High School. I lived in Massapequa, New York, and the claim to fame to that high school is a classmate of mine was Alec Baldwin,

**Oh, yes.**

the actor? Yes. (laughter)

**Yes. (laughter)**

Yes. I don't know if it's a good claim to fame or not. [Again,] I think I had a pretty middle class upbringing in high school.

**Were you number two?**

I was number two of four. Yes. So, I had an older brother; he went to two year community college and then transferred to a New York school. My sister, who was younger than me, ended up going to Potsdam State, and then my younger brother went to a two year school also. So, of the four, I was the only one that went to private school. And none of my siblings completed four-year degrees right out of high school.

**And, were you the only one who went into a technical field?**

[It's] interesting that my younger brother is a flavorist now. He got a two year degree and then training on the job, and he's a really good flavorist. He works for International Flavors and Fragrances as a flavorist. And the way he learned that is when I left school, my second job was for Maxwell House Coffee Company; I got him a job as a technician. He worked his way from technician to product developer, and he was so good at product development, working with flavor houses, that they hired him away and promoted him, and he's continued to get promoted. Once he was there and doing well, they don't really go back and look and see, "Oh, by the way, you didn't have that bachelor's degree that we thought you did. (laughter) You act like you have."

**Because he was so good?**

Yeah, exactly. So, he's in the technical field. My brother's in sales, and my sister's an office manager.

**Interesting. And, how did your parents react to your interest in math? I mean, again, you were obviously very capable, and then once you decided to explore engineering?**

They encouraged me, yes. Yeah. My mother was the type who encouraged me, "Girls can do anything." And "If you're smart and you work hard, you can do anything." And so, they [my parents] really did [encourage me]. They couldn't be of help to me. Like my mother always said, "I can't really help you with your homework, but you know, you don't really seem to need it." (laughter) So I think the encouragement was, "We have confidence that you can do it. And, we think girls can do anything. There shouldn't be limits." So, I didn't have parents who held me back. The fact that it was far away, didn't matter to them. You know, I look back and I say to myself, "Well, I wasn't so happy about my kids going away so far [to college]." (laughter)

**That's interesting.**

Exactly.

**What about once you got to Clarkson? So, you'd been here once before, because you said you came to visit it.**

I came to visit it. I think I came and I was already admitted, and it was a gorgeous day like it is today. And, it was just, I fell in love. I loved it. Of course, I didn't come visit it in the winter, (laughter) so that was a rude awakening!

**Like January.**

Even in November, but it was the kind of thing - I came, people were friendly, it was a nice environment the day I was here. So, it was the kind of thing that, to me, all things being equal, compared to other schools that I was looking at, I made the decision on I liked it, so - check. It's better financially - check. I'm going. (laughter) That's it.

**Right.**

It's not like the college students today who look at 12 schools, and apply to how many? I mean, the three I applied to, that was it. Got into all three, and then it became a financial decision. Now, my husband, whom I met here, came here, and he didn't even visit. He applied to Clarkson only, got in, and he drove up and the first time he saw it was when he came here [as a freshman]. I can't imagine that.

**And, where is he from?**

He's from Syracuse.

**Okay.**

Outside of Syracuse.

**So, didn't come up two and a half hours to visit?**

Didn't, believe it or not. Yes. Came sight unseen, and he grew up in a way that was, "You're going to go, and you're going to like it." And, "If you don't like it...."

**Tough it out.**

Exactly. That's what you did! (laughter)

**(laughter) And, what about when you first got here; you started in fall of 1975.**

Fall of '75, I started.

**What do you remember, and I realize this is a long time ago.**

Oh, I remember. I remember vividly. So I got the tuition paid for, [but] I didn't get room and board paid for. So, I took out loans for that. And my parents paid for the books. They bought the computer I needed - not computer, calculator I needed, (laughter) because it was a calculator, not a computer.

**Yes, 1975.**

Exactly. It wasn't a slide rule at least. (laughter) I had to pay the room and board, so I took out loans, but you had the option of tripling up, and it was cheaper if you were in a triple than double. So, I took the cheapest option I could get. (laughter) And so they gave me the names of the two girls I was going to have as roommates. And we wrote letters to each other (laughter) because that's how you communicated.

**Yes.**

I hadn't thought about that. We wrote letters, so we got to know each other. One was from the Hudson Valley, and one was from outside of Schenectady, New York. And, so they were both studying engineering - one was mechanical and, to be honest with you, the second one - I can't remember because she ended up dropping out after the first semester. But the thing that I really remember is I was on Ross III. Fall of '75 was the first time there were enough girls in an incoming class here at Clarkson to fill a whole floor in a dorm. Before that, they had lived in Holcroft House.

**Right.**

They'd either lived in Holcroft, and then I think they moved up into suites in the new dorms of Moore House.

### **In Moore.**

Yes. So, Ross III was the first year of all 50 girls that could fill up the whole floor. (laughter) And so, I was in that incoming class. So, what I remember about it was moving in, I met the two roommates whom I had been writing back and forth to. We decided that the dorm was pretty old and drab - outside the window of our dorm, the students who had been in there the year before, the guys had leaned out the window [and] put a G before the Ross to call it Gross House. (laughter) So, I moved into Gross House and that's what my mother and father saw moving in. They're like, "You're living in Gross House?" "Yeah, that's where I'm going to be living." (laughter) So, I do remember pretty vividly. It was interesting because I would say that there was a split of the girls on the floor, in that there were the girls who were serious, stereotypical engineers. The really serious, if they were guys, they'd have had slide rules on their belt. Those kinds. And then, there were the more social girls. (laughter) And, I was one of the more social girls. And, the social girls, we were going back and forth to each other's rooms. We painted our room. And, we met a lot of the other girls. And, because it was so unusual for there to be girls in the dorms, the guys were coming up to the floor all the time. It was like unlimited, "Do you want to come out? There's a floor party here, there, and everywhere." It was interesting because it's your first time away from home and you're just overwhelmed with, "What am I going to do next?"

### **You get a lot of attention.**

A lot of attention. More attention than I was used to at all because in high school, you're one of the 50 percent and that's it. So, it was an interesting adjustment, I think....because at the time, and we joked about this, my roommates and I, the odds were, there were 13 ½ guys to each girl. So, whatever the amount of the 750 in my class was that would make those odds work out, that's how many....so, there weren't all that many girls in the class.

### **Right.**

And so you did get more attention from your classmates, but you didn't get so much attention from your professors. (laughter) That I do remember also. I think looking back in retrospect, they probably just didn't really know what to do with the girls. I don't know if you're seeing a similar theme from any of the other female engineering students, but I just didn't feel as though I had any connection with any professors at all.

### **And, it's hard to know because, of course, you only know your own experience,**

Exactly, yeah.

**did you feel like that was because you were female or was that what Clarkson was like back then? Do you know what I mean? Were professors distant?**

It could be that because I don't know of any guys who were close to professors either. So, that's why I can't make a good comparison. All I know is none of the girls I was friends with had any connection with professors. I guess I hadn't really thought about it, but I don't really know of guys who did either. It's interesting because I'm here for the open house, and obviously, it's the top students who are interacting. They have mentors in professors like crazy, and I don't recall that. And so, it could have just been the time that the students didn't interact. At least it was not my experience that you had a close connection with the professors.

**What about as you became a junior and senior in your major? Do you remember particular connections? Let's say to chemical engineering.**

Interestingly, one of my favorite classes was Physical Chemistry. I think that was a sophomore level class that actually we all joked and said it was the "weed out class." Because it's like half of you who went in were not going to come out as chemical engineers. That was probably one of my favorite classes, and it was because of the professor - it was a guy named Doc Jones. And, he was a chemistry professor but he taught the chemical engineering Physical Chemistry. And, I just loved the way he taught. And, it came to life for me in a way that I took Organic Chemistry the next year and I just hated it.

**(laughter)**

It was like, "How come it's not as fun and interesting as Physical Chemistry?" (laughter) And then, that same year, I took a Materials Science class. And, you got to select other engineering electives, and I took it just as an elective because it seemed interesting to me. I did well in the class, and the professor, Bill Bradley - I don't know if you've heard of him.

**I've heard his name, yes.**

He gave my name to a company for a summer internship that summer. So, I worked, after my sophomore year, as an intern for Carrier Air Conditioner in Syracuse, New York. And, it was based on his college roommate here at Clarkson, worked at Carrier and asked, "Do you have any engineering students who could do an internship?" And, they normally hired juniors and they had a girl whose mom just passed away, that they had given an offer to, and she couldn't; she wasn't going to work in Syracuse for the summer. I don't think she was from Syracuse. And so, he called Professor Bradley and said, "Gee, I know it's last minute, but do you have any students who could do this?" He said, "Well, I've got this girl in my Materials Science class. I can give you her name and number. Call her." I got a call finals week. I had planned on working here at Clarkson for the summer, because they had a lot of outdoor camps, and I was going to be an RA in the camps. So, I get a phone call finals week, "Would you like a summer internship? You don't even need to interview because based on Professor Bradley's recommendation, if you want it, you've got the job." (laughter) I was like, "Are you kidding me? Of course I want it!" I said, "I'd better go check with Clarkson because I did tell them I would work for them." And, they said, "What are you, crazy? You could have an internship or work here for the summer? You're going to take the internship." So, I went and I did that for summer, and I happened to have a friend who went to Upstate Medical Center [in Syracuse]; she got me [a place] living in the

dorms, and it was a wonderful experience for me. So, it was a summer job, figuring out why the coils on air conditioners were corroding very, very rapidly in Saudi Arabia.

**Wow.**

So, it was an interesting project; they were sending samples back. I had to analyze it and figure it out. And, they just actually weren't using a good enough material. And, I couldn't have done that problem without great help from all the people that I was working with as an intern. It helped to bring to life what I was learning in the classroom too.

**And, was that your first real**

That was my first internship.

**experience (inaudible).**

The summer before I was working at McDonalds. (laughter)

**Okay. (laughter)**

That was my first food experience, but [that internship was] my first engineering experience.

**Got it. So, you said so many things that I want to [go back to.] Let's go back to social life for a moment. Because you were saying that maybe half of you....**

Oh, yeah, were more social.

**were more social, and you were one of them.**

Right.

**And that women here got a lot of attention. Say more about what the social life was like here. You were talking about your first impressions freshman year**

Yes, but even afterwards.

**and sort of the immediate attention.**

Uh huh.

**But, what the social life was like?**

It was the kind of thing, again, if you were female, you were invited to parties all the time. So, you could go to floor parties, you could go to fraternity parties, you could go, it was generally on campus - all these parties. And then people go to downtown; you lived up here [on the hill campus], downtown was downtown, and the drinking age was 18.

**Right.**

So, it was a very different environment than it is right now. And, it tended to revolve fairly significantly around alcohol, I would say. But what I found was I had a lot of girlfriends at home, and while, I met enough good friends on the floor I lived on, I wanted to have more female friends; I joined a sorority, and Clarkson didn't have any sororities. So, the Clarkson girls joined Potsdam State's sororities.

**Interesting.**

So, I pledged; Zeta Gamma Sigma was the sorority. And, I pledged my sophomore year. I didn't do it my freshman year because I was still trying to figure out what life was like. I pledged with half Clarkson girls, and half were Potsdam State girls. And so, I ended up being in that. I ended up being the president of the sorority (laughter) my senior year.

**Was there a house?**

There was a house. I lived in it my senior year. I volunteered to be the president. You had to run, but my reason for volunteering was if you were the president, you got to live in the house free. So, again, kind of back to I'm paying for room and board, I got tuition covered, but I've got to cover room and board. Actually, I worked in the cafeteria because my meals were free.

**So SAGA.**

SAGA. I worked in SAGA and it was because I got my meals [for] free. (laughter)

**You were figuring it all out there. (laughter) And so you lived on Ross III your first year?**

I lived in Ross III. I went to the new dorms, which back then, they were still called the new dorms. So, in the seventies they were called the new dorms, and they're still called the new dorms now. And, so I lived in Graham. So, I lived there; we again did a triple, so there were five of us in a suite, that now would have four in it. But, it was cheaper so we did it. And of those, so my roommates - one left after that year and married the captain of the hockey team, who went on to become a very successful professional hockey player, Dave Taylor.

**Yeah, okay.**

Yes. His wife was my roommate. Another roommate in the suite left after her junior year and married a hockey player who was here. It was Chris Valentine. (laughter) And, the two others of us stayed and graduated. (laughter) So, of the five who were in the suite together, three graduated and two married hockey players.

**And then your junior year?**



My junior year, I lived in a house downtown on Bay Street. And, then my senior year, I moved into the sorority house. So, I lived somewhere different every year. (laughter)

**Say more about being a part of a sorority. A Potsdam State sorority, and what that meant to you. And, when you said you wanted to expand your circle of girlfriends.**

I wanted to expand my circle of friends, yes.

**Yeah.**

Still to this day, I try to separate a lot, my work and my outside of work. And, this had nothing to do with engineering. I wasn't talking about engineering to them down there. It was all social. And I look back - I had a lot of fun. It was a no mind type of fun, if you know what I mean?

**Uh huh. Yes. (laughter)**

(laughter) I wasn't using any brain cells. I was wasting brain cells. (laughter)

**As were your peers.**

Exactly.

**And, again, [I'd like to follow up on] so many different things you said. I know you were a chemical engineering major. Did you come to Clarkson knowing you wanted to major in chemical engineering?**

I started in chemical engineering. The high school counselor had given me books or pamphlets to read on engineering. As I read [and thought] about them, I was pretty good in science; I had done pretty well in chemistry and biology. I, still to this day, don't like things mechanical or electrical. (laughter). So, I read those and said, "Never." And, I looked at civil and thought that was kind of interesting. So, civil and environmental were, to me, possibilities, but I liked chemical. And, at the time, biomedical [engineering] was just starting, and it really wasn't an option; it was an elective you could take, but it wasn't a field. But, I found those much more interesting. So, I started as a declared chemical engineer with the thought that if I don't like that, maybe I could consider civil. But, I never did change. Freshman year, you take all the same classes, so it didn't really matter at all. And, when I started in my sophomore year, [and] had Physical Chemistry, which I loved, I said, "This, I'm staying with."

**You were hooked.**

I was hooked, yeah.

**What about outside activities here? I mean, you've already talked about the internship after your sophomore year with Carrier. And, becoming president of your sorority your senior year.**

I was in SWE [Society of Women Engineers] here. I was in AIChE [American Institute of Chemical Engineers], also. So, then I worked; I worked not only in the cafeteria, [but also] I worked as a tour guide.

**Ah!**

Yes, and again, that was paid, so that (laughter) it wasn't volunteer work, for my spending money.

**Right.**

So, the food was covered by the cafeteria,

**You checked all your boxes?**

yeah, I did. (laughter)

**And, what do you remember about SWE? I realize maybe you're thinking about that today, anyway, on its 40<sup>th</sup> anniversary.**

Uh huh.

**What do you remember about that? Why did you get involved in that then?**

I got involved in it to really learn more about engineering. I mean, certainly AIChE for sure, you learned more about what chemical engineers do.

**Yes.**

But, to me, for SWE, I think five percent of my class, my chem [chemical engineering] class, was women. So, it was pretty low. And, it was the kind of thing that, really, [was] for networking reasons and quite often, when you're struggling, misery loves company. (laughter) And for those of us that just needed a little help, and someone to talk to. So I remember a cohort of about ten of us that would go to the SWE meetings, and it was a good opportunity. I wasn't an officer of SWE, but you always got involved in planning the meetings. And, it was good to learn those kinds of skills. Just to be able to gain some leadership. (laughter)

**And, what do you remember about classes here? I mean, you've talked a little bit about Physical Chemistry, this wonderful class, and Organic Chemistry - less wonderful. Again, I know this was all a long time ago, but what do you remember them being like?**

Of my ChemE classes, the most memorable to me was the senior lab. So, we were actually doing the experiments, and running the equipment. And, what I didn't mention - that's your senior year - I did have an internship in between my junior and senior with Procter and Gamble.

**Ah!**

So, I worked for them, and they used to have a factory down in Staten Island, New York, and I worked for them there, and I had a project that was a really neat project. That factory was one of eight factories that made Coast soap. And, it was the one that had the highest level of consumer complaints, that the soap was shrinking too quickly. Now, back in that day, for them to get a consumer complaint, a consumer had to write a letter and mail it in. (laughter) It was not the email or the 800 number phone calls; it was writing a letter and took effort. So, you knew that it was, for those consumers, a problem. So, it was the kind of problem that they knew they were getting the most complaints and were kind of told by headquarters, "Fix it." Well, they hired an intern to fix it. (laughter) And, I was the intern! In retrospect, what I should have known and didn't know was that to solve a problem like that is really an R and D [research and development] problem. And, I should have figured it out that when the first person they sent me to talk to was in Cincinnati, in R and D, that I was supposed to learn about the crystalline phase, going through the mills and what not; it did not cross my mind that that was R and D work. I was doing it at a manufacturing site. I thought that's what you did there. I solved the problem. Loved it. You know, they had the wrong temperatures, and to me, it was so much fun to be able to see the product, and see it on the shelf - "I worked on that. I made that better." Then they gave me another project to design their warehouse to pass an OSHA [Occupational Safety and Health Administration] audit. And, I didn't even know what OSHA was. So, that helped me, my senior year, take an elective. I took an elective on safety that taught you all about OSHA regulations, which is where I met my husband, mind you. (laughter)

**Oh, I wanted to ask you about that at some point.**

Yeah, we'll get to that. But the interesting thing is that I really did an R and D project for the summer. But, I like working there. I really liked it, and I liked the people. I thought what I was doing was interesting work, and they gave me an offer before I even left, to come back full-time to work there.

**You mean at the end of?**

At the end of my junior year.

**Your junior year. You had?**

I had an offer

**When you graduated.**

when I graduated. And so, I didn't have to come back and interview at all. I did, but I didn't have to. So, I knew I had an offer in hand. And, they were smart because that did make me go back to them. But I interviewed with others just to make sure it was what I wanted to do. The plant manager even flew up here on a company plane to take me out to lunch, to try to convince me to come work there. All those kinds of things. And, in retrospect [I thought], "Wow, they really want me. I think I should go there."

**And, you're only 20 years old or something. Twenty-one years old.**

Twenty-one, I was 21. So, I accepted their offer. I interviewed with a bunch - I think I had like ten job offers. At the time, every chemical engineer in my class, everyone literally had a job offer. You needed a 1.85 [GPA] to graduate, and my lab partner had a 1.86 and he had a job offer. So, it was the year chemical engineers were in high demand in '79. It dropped off after that when Shell Oil went bust back then. But, every one of us had multiple job offers, and so I at least got to consider, and I decided. It was in New York City. I really liked it there. They wanted me. The salary was one of the highest that I was offered, which I look back now and it was \$20,400 a year. (laughter) And, I remember the 400, right? It wasn't just 20,000; it was 20,400. I accepted the job. I ended up saying to them, I wanted to work in the chemical engineer, the processing side. So, I became a first line supervisor in their soap process. But, I was first line supervisor for 28 union men. And, I was me, at 21 years old, five-foot-two, 120 pounds, and (laughter) a little pipsqueak. And, I had 28 union men working for me. And, it's very different than the summer internship project that I had, which was an R and D project. About six months in I said, "You know what?" - when we had a problem to solve, so we weren't able to get the concentrations up in the distillation, "Let's call R and D. Let's call R and D." "Oh, I can solve that problem." "No-no-no. You have to schedule the overtime. You have to schedule the quality checks. You have to schedule this." It was just a very different type of job, and they called in R and D to solve problems as opposed to doing it as part of the job. And, I realized then, I really should have gone into R and D. And, I decided to stick it out a little longer because I was kind of stubborn, didn't want to be a quitter. And, I probably should have quit earlier than I did, but the day I decided to leave was the day I had a union grievance sitting on my desk. Two o'clock in the morning, I got a phone call from the operator saying, "The pump is down," and I said, "So, what's wrong with the pump?" "Oh, the belt is off." Now, [I turned to] my husband, who's a mechanical engineer; I put it on hold, and I said [to my husband], "Could you teach me how to put a belt on a pump?" He said, "It's pretty easy, yeah." I said, "Okay, I'm going to come in." And, he said, "Well, you know, you've really got to call the mechanics first." So, I called ten mechanics and we had an order we had to call mechanics based on who had the least amount of overtime. It was all these union rules. [With] all ten of these mechanics their wife answered the phone and said, "He's not home. He's not home. He's not home." Ten in a row because they had decided, "Oh, we're going to show management that..."; there was a union and management issue at the time. They had recently taken away a bonus. So, I had my husband tell me what to do. I went in, and I put the belt on the pump, and I told the operator to push the button. He looked at me like, "You've got to be kidding? You," he said, "I'm willing to do it." This guy was like 60 years [old]. He said, "Jean, you're going to get creamed. You can't do this." I said, "You push that button." I'm from Brooklyn. I'm taking this on. And, I decided when I had the union grievance on my desk, when I got back, I said, "I'm not staying here anymore. I did not study chemical engineering, and want to work on solving neat problems, to do this." And, so I went into the plant manager, and I started looking first, for a job, before I quit. (laughter) And he said, "Jean, I wish you'd come to us sooner. We could get you into R and D." I had had a job offer out of R and D, actually, from here [at Clarkson], but it was in Cincinnati, and I was getting married. And so, I decided to stay in New York. And, I left and I went to, at the time, Maxwell House Coffee Company in R and D. And, the draw for me was the R and D was done at a plant site. So, I thought, "Oh, it's the nice balance of I worked in a factory for the last year and a half but I can do R and D at a factory site." And, that's kind of what I'd done in the summer internship, and so I left and I went there.

**I, again, have so many different things that I want to [ask you about.] (laughter)**

(laughter) Uh huh.

**I want to come back to Procter and Gamble and then move on to Maxwell House. But, if we could just go back to Clarkson for a little bit. Obviously, you're a trustee. I mean, you're incredibly involved as an alum, but when you look back at your time at Clarkson, what would you say were the biggest challenges you faced? What were the things that you liked the most here?**

For me, I guess the biggest challenges were the class load was tough. I mean, it just was. In retrospect, I would say my high school preparation was pretty good but maybe not great. But I don't think at the time it was considered bad or anything. I just did not know engineering was as hard as it was. And, so to me, I guess, the challenging work load was probably the hardest thing for me. Other than that, nothing. I mean, socially, I found it good. There was a lot to do. I was learning new things. It was never a dull moment kind of thing. And I loved it. So for me, other than the rigor of the course load, I don't think there was anything about Clarkson that was all that tough for me. (laughter)

**Let me just glance a little bit at some of my questions.**

Oh, so back to my husband. How I met him.

**Yeah.**

Okay. So, remember I told you about that project at P and G [Procter and Gamble]? I had to figure out how to meet OSHA [guidelines]. There was a class on safety; it was an elective. And again, my second semester senior year, I was looking to find the easiest class I could - please. (laughter) I already had jobs. I just have to graduate at this point. The GPA doesn't matter anymore, but I want an easy class. And, I took this safety class, and my husband, who was a mechanical engineering student, was taking the safety class, and that's where I met him. So, I met him the second semester of my senior year, which...

**And, when did the two of you get married?**

We got married only a year and a half later. It just so happened I got the job in New York City, he got a job in New York City, and we got married a year after that.

**And, was that typical in your era? Were there a lot—well, you talked about the several women who married -**

The two hockey players.

**hockey players and left.**

They married, they left and they married guys here. So, of the other two, two that had been in that suite, one of them married a guy she met here at Clarkson. So, of the five that were roommates my sophomore year, four of us married (laughter) guys we met here at Clarkson. And then of women I still keep in touch with now, none of them did. (laughter) Another trustee, who I was just with, married her ChemE [chemical engineering lab] partner, and they're still married now. So....(laughter)

**That's wonderful. (laughter)**

Yeah.

**So, going back, you were at P and G, and then you went to....**

Maxwell House.

**Maxwell House. And, you thought Maxwell House would be the perfect combination of at a plant....**

But doing R and D.

**but doing R and D. And, where was this?**

This was in Hoboken, New Jersey.

**Okay.**

Okay. So, at the time, when my husband and I did get married, he worked in the Bronx, I worked at Staten Island, and knowing the geography there, you could have lived in either Brooklyn or New Jersey. We picked New Jersey because it was cheaper. (laughter) So....back to that. There's a theme there, yeah? And it was in Hoboken, New Jersey. So I went there and I worked in process development. So, I worked on developing a decaffeination process, to decaffeinate coffee. I worked on developing three different processes for how you decaffeinate coffee. I got patents on all three of those processes. So, it was the kind of engineering, I loved it. I absolutely loved it. It was interesting; when I went there, I liked the fact that it was at a plant site because, to me, I thought - and I think this might be a female gender thing - I thought R and D, you had to be really smart to be in R and D. It must be those Ph.D.s that are in R and D. And, I'm a mere bachelor student. So, I liked the fact that it was at a plant site because I felt a little more confident that, "Well, I've worked in a plant. So, you know, I may be able to do R and D at a plant site." Then, about two years in, I was deciding to get a master's degree. I was debating between an MBA and a master's in engineering. And, I applied at the same time to schools; my company was going to pay for me to get the master's. So, I was going to be doing this while I was working because somebody else was paying for it. (laughter) And, I decided to get a master's in engineering because, again, I felt like, "Well, maybe it'll help me be smarter." I look back now, with many years of wisdom; I probably didn't have the confidence in myself that I felt like the master's was going to give me. And so, it was interesting because when I got the master's degree, I got there. I got promoted very quickly in a series of promotions, that [by] the

time I finished my master's, I had already been promoted above a level that they would have moved me to by having the master's. (laughter) So I look back and I say, "That master's was for my own confidence." It was for no other reason. I didn't get promoted because of it, I didn't get anything; it was for my own confidence.

**Just so that I'm getting the years correctly - you graduated in '79.**

'79.

**It was '81 that you started at Maxwell House?**

I started at Maxwell in '81 and I started my master's in '82; then I finished in '85.

**And, this is from Manhattan College.**

Manhattan College. I did it at night.

**And, this was a master's in chemical engineering.**

In chemical engineering.

**Okay. At night while you were working full-time at Maxwell House.**

Yes.

**So since 1981, right, you have been moving up.**

In that same company.

**I know the name of the company has changed.**

The name has changed. But, from, from January of '81 to right now, I've worked for the same company.

**Yes.**

That has changed its name many times. But I spent ten years doing process development in coffee. So, I got very deep. And in my company, the career path is: when you hit a certain level, you are either going to be a technical expert, or you're going to go the management track. So, I hit a point where I could have decided that I wanted to be the decaffeination expert in the company, which might have been in the world, (laughter) because we were the biggest company that did decaffeination.

**And, you had three patents already. (Inaudible).**

I had three patents already, yes. Or I could have gone the management route. And, interestingly, as I got promoted quickly, I would have one engineer working for me, and then two, and then ten. I liked the interaction with people. And, even though I liked the science, I decided to go the management route. And, so I became a section manager at the point where I could have been a research principal or section manager. And, it was the kind of thing that you have conversations with your manager about; you're both interested in your aptitude. And my manager was trying to push me to the management route because he thought I would be good at it. And my managers were all men. All men. (laughter) My manager now is a female. (laughter) The CEO of the company is a woman. But I had men up until literally my current boss now. She was my boss back in...I'm trying to think, the early 2000s. And, that was the first time I had a woman boss. But, for my first 20 years, I had all men for bosses.

**So, did you experience it as a big decision to pursue the management track?**

To go the management route? Yeah. I did. And, you know, it's interesting, because I look now, and in my company, we like to look at diversity, and our technical expert route is almost all men. And, for whatever reason, in my company, women are much more likely to go the management route than they are to the technical route,

**Interesting.**

which is interesting. Yeah.

**And, what about your experience having all these male managers until very recently? And, I presume the people under you, for the most part, were men as well?**

Men, [for the] most part - yes. I was the second woman that they hired into Maxwell House R and D. Manufacturing had no women at all. So the two of us stuck together. We mentored each other, (laughter) and then the third woman who came, actually had worked at P and G with me. (laughter) So, the three of us got together, and then a fourth woman came. We had kind of peer mentoring because we really felt like the kinds of things we were going through tended to be things that happened in the factory, not within the R and D group we were in. But it was the kind of stuff you go into the maintenance shop and the pin-ups of women, naked women, were on the walls. In the ladies' room, men had used it at night and wrote vulgar things about you on the wall. Things like that, that we came to the conclusion, because we had friends who were working other places, that we felt as though it wasn't unique to where we were, but we had to make management aware of it so that they could set the tone that it wasn't acceptable. And so, I think by -

**How did that work?**

it actually worked well, and that's why I ended up staying because it was the kind of thing that I had friends in other places who said management could care less. And so, I don't know if I was lucky, but the men I worked for were just incredibly supportive, and mentored me, and helped me. And, interestingly, my job, when I left R and D, I got because of—, so I had a boss who said, "You've stayed here, and you seem to be passionate about making it a better place for women."



He had me start a diversity task force on what we can do for both women and people of color, to increase the retention rate. So, we put in place mentoring programs and diversity training and things like that that probably were pioneering at the time. Now, they're standard in companies. And, I did that in my spare time while I was start[ing] up a new commercial process. And, so I went on a maternity leave; when I came back, the company was hiring a director of diversity in the Human Resources Department, and he had put my name in as a candidate for it. (laughter) Unbeknownst to me, on maternity leave! When I came back, they said, "Jean, it's great. We, Human Resources, would love to interview you for this diversity job." "What?! I'm not going to Human Resources!" That was personnel at the time. And, I went and I interviewed for the job, and it was a real crossroads I had to take at the time. But, I'd just come back, I had my son, and I'd come back from maternity leave.

**So, what year is this?**

I had my son in '91. It was in '91. So, it was ten years, I had done my process development. I came back in six weeks from maternity leave because, you know, how I said I was the second woman there. By that time, there were probably ten women but none of them had had children yet. So I was the first woman to have a child. And, at the time, people didn't expect women might—, maybe they're not going to come back, and maybe they're not going to come back full-time. So, I came back in six weeks. And, I look back and there are a couple of regrets you have, and that's probably one that I look back and say, "I really could have taken longer time than that because it doesn't matter now, you know?" (laughter) But, at the time, it seemed really important that I show them I'm coming back. (laughter) So, I came back six weeks to the day. And (laughter) I interviewed for the Human Resources job, and they had other candidates; most of them were coming from HR or marketing. (laughter) I was the only one,

**The only engineer.**

I was the only engineer. And it was interesting because they had reasons. The reasons they had, I think, for wanting [me in] the job were it was a higher level, it got visibility in the company. For me, I had a passion for the topic and I had demonstrated that in R and D. And, that's why I ended up getting the job. They were higher level than me, these other folks, (laughter), and I got the job because I had demonstrated passion for it and had made good progress, and had some results that we were seeing, better retention for women. And so, I got the job. (laughter)

**And, so this was '91?**

This was '91.

**You came back from maternity leave**

I came back from maternity leave

**and started this job.**

and I started the job as the director of diversity. I was in human resources for a total of three years. And, I did that job, and I did it on a corporate wide basis for General Foods. So, General Foods, at the time, was a pretty big company. (laughter) And, I was the director of diversity. I had been a section manager; I bypassed associate director and went to director. So, my peers, at the time, thought I was committing career suicide. Little did they know I was coming back at a higher level than they even were thinking about. It was a risk I took, for sure. But, it's interesting because when I thought about: do I really want to do this? I thought about: what were the three things I needed if I wanted to be where I wanted to go in ten years? And, my three development needs were the kind of things that if I didn't learn how to do them better in this job, I would fail in the job.

**And, what were those?**

It was: I needed public speaking skills, influence, and risk taking. (laughter) I mean, those were kind of the three things identified as these were things I needed to do better.

**That you had identified or that—?**

Me and my manager, in a development plan.

**Yeah.**

You do 360 feedback; you always need to know what those things you've got to be working on. So, I said, "If I can't do those in this job, I'm going to be a complete failure." And, I don't know, maybe I was still being reflective, having just had a child and had time to think of that. So, I said, "What's the worst thing that can happen if you fail? You can get fired. They'll give you a severance. You'll get a year's pay. And, you'll get another job. Is there anything wrong with that?" (laughter) And, at the end of the day, it wasn't so bad. It was like, "Wow!" It was very freeing though, because from that point on in my career, I've always said to myself, "What's the worst that can happen?" And we paint the worst thing that can happen as way worse than what the true reality of it is. And, I use that even to this day. "What's the worst that can happen?" (laughter) I get fired and I'll get a huge severance. (laughter) So, what's wrong with that?"

**(laughter) Paid vacation for a year.**

Right. Exactly. So I did the job, and for me, it gave me the opportunity to see a whole different side to the business than what I was doing in R and D. In R and D, I thought I was getting nice breadth (inaudible) by doing diversity things, but I was very narrowly focused in R and D. I worked in manufacturing for that short time at P and G, but I didn't know what sales did, I didn't know what marketing did, I didn't know what HR did, and here I was able to interact with all of those groups in a way that it broadened me dramatically.

**And, this was all across the world, I presume.**

It was. It was mostly focused in the U.S., though. At the time international companies were U.S. based; international companies were a little hobby overseas, and mostly U.S. based. And a year

and a half into doing the job, I put in place, kind of expanded what I had done on a small scale in R and D, to the company, and one of the general managers of one of the business units liked me, and liked what I was doing, and asked if I would come and be his HR Director for his business unit. So, I moved into becoming the HR Director for his business unit. And, so I sat on a business staff; that again, if I'd had stayed a section manager in R and D, I wasn't going to be sitting on a business unit staff for three or four promotions. (laughter) And, here I was on the Post Cereal business staff, reporting to the president of Post Cereal. And, I did that for a year and a half in HR, when I went on maternity leave again. (laughter) I had my daughter.

**This is '94.**

This is '94. I had my daughter. Thank God I only had two kids, right? (laughter)

**(laughter)**

So, I went on maternity leave and I came back, and again, it was, "Jean, do we have an opportunity for you."

**And, how many weeks later was this?**

This [time] I took longer. My daughter was born with a birth defect and [it] was pretty serious, and I took longer. At the time, I took unpaid leave, so I came back, I think, four months later. Which, you know, the company had allowed previously, I just had not taken it. And, at this point, she was pretty sick. She's fine now, healthy. So, everything worked out great. But, at the time, you don't know that. And so, it was four months later. So, when I came [back], I was asked if I would consider becoming the director of quality assurance for the company. And, gee, I mean, I've never tried that before, but again, you kind of go back to, "Well, what's the worst thing that can happen?" Interestingly, the guy I had worked for back in Maxwell's R and D, had gotten promoted and became the head of R and D for all of our international business, and he was still a mentor of mine. So, I called him up, and I said, "I've been given the opportunity to be head of quality assurance. What do you think?" He said, "What do I think?! What are you, kidding me?! Take it! Don't even—, put the phone down and call them and say yes. This is a great opportunity. You're going to learn." In retrospect, it was a great opportunity. So, I only did that for a year when another R and D job opened up; I ended up, eventually, getting promoted to more levels in the role, keep expanding it, to head all of R and D for General Foods. Now, the company, in the meantime, combined with Kraft. So, there was the Kraft group and there was the General Foods, but I ended up running all of R and D for the General Foods businesses.

**And, this is in the mid-nineties.**

Mid to late nineties. Yes.

**Okay.**

Yes. So, the job in quality assurance broadened me. I really didn't know quality assurance. I didn't understand food safety very much because I worked in coffee only, and coffee's pretty

safe from a food safety perspective. A lot of foods are not quite as safe (laughter) as coffee. So, to me, I thought of quality as good taste not food safety. And, I learned all about food safety. I had an interesting mix of people working for me. Some were very welcoming of someone who never did quality assurance, comes in as the director of quality assurance, and others were not so welcoming because, "What the hell is she in here as our manager for? She doesn't know anything about it. And, what's she going to do to help us?" You know? I only was in the role for about a year, when I moved back to the R and D job. And, it was a good building block for me because it led to another job later on. (laughter) So, I was leading all the General Foods businesses for R and D. I was the V.P. of R and D for the General Foods businesses when, for the company, we had a meat business - Oscar Mayer - a competitor had a very big food safety issue - 22 people died of listeria in hot dogs for Sara Lee. And, we had an Oscar Mayer business and the president said, "If that can happen to them, it could happen to us. You know, I thought they had a good safety program. I think I do. So, I need somebody here who's really going to elevate it and raise the bar." So, when the head of R and D was looking for someone to raise the bar on food safety, he looks at who he has for people and he says, "You had quality before. (laughter) How would you like to come out and run quality on a worldwide basis for the company and elevate food safety for us?" And, so that's when I moved to Chicago, and that was '99. And, I became the vice president of worldwide quality, and then I got added scientific and regulatory affairs two years later. So, I became the senior vice president; I became the chief compliance officer of the company too, at the same time. So, it was the kind of thing that, one thing I learned is that, the same mentor and manager had a big influence on a lot of these jobs; he had an uncanny way of knowing just when I hit my comfort zone, and he'd give me something more. And, I always learned and rose to the occasion, and just when I'd hit my comfort zone, I'd get something new. And so I ended up doing that job, that then combined job, so I had worldwide quality for, really, a total of about five years, but I kept getting some other things added on to it. And then, the company and co-CEOs decided to stop that and put one CEO in place. And, there were three senior vice presidents in R and D and quality - there was myself; I had actually, then, swapped jobs with that old boss of mine, the R and D guy became the quality guy, [and] I became the North American R and D person; and there was an international R and D person. And, the new CEO decided he was going to combine those three jobs into one. (laughter) And, he asked me if I would take that job, and that was me! So, I have now been in the role since '04 to now.

**And it has a different?**

Different CEO.

**And different company title?**

And different company title. So, that was Kraft Foods at the time, and one CEO for three years, and then a new CEO came in, who is the current CEO, and it's a woman. So, I worked for her, actually, when I had scientific affairs and regulatory. She left the company, went to Frito Lay as the CEO, and she came back, and I was the only one of his staff that stayed in place, and I'm still in the role. And, we've, since then, bought part of Danone, their biscuit company, we bought Cadbury, and then we separated the company and spun off Kraft and renamed the bigger part of the company as Mondelēz International, and that's the part of the job I have now. (laughter)

**And the mentor that you mentioned?**

Yes.

**Is this person still a mentor to you?**

Somewhat. He's retired now. He's retired, and it ended up interestingly, he then worked for me; when I told you the three got combined, he was one of the three that then reported to me, (laughter) and he said, "You know, if it were anybody else but you, I would leave right now." He said, "But, the fact that it's you, I admire and respect, we work well together, I will stay and I will work for you. But, if it was anybody else, I'd be gone." (laughter) And, he stayed and worked for me.

**So I glanced at my watch, and we both have to go relatively soon [to the 40<sup>th</sup> anniversary celebration of Clarkson's chapter of the Society of Women Engineers].**

Oh, we do? Okay.

**Your life story is very interesting, and I have many other things I'd like to ask, but this is a big reflective kind of question. You've had this long career, mostly with this one company that's changed in a variety of ways, but at this point, when you look back, what do you see as some of your greatest satisfactions? What do you see as some of the greatest challenges you've faced? And, I know those are big questions. And, go wherever you want to go with that.**

Well, it's always interesting because you look at your own individual accomplishments, and getting patents, to me, was like wow, that's just an accomplishment. Developing products that you see on the shelf. It's a tangible result of the work. But, to me, I guess the most satisfying is the ability to develop people and organizations. And interestingly, the three years I spent in HR, I used those skills I learned then; the role I have right now, I have 3,000 people in the organization that I run, a lot of them are engineers, all technical. And I can't get into any of the details of what they do; all I do is develop the technology strategy and the organization to implement it. I get them the resources. So the people side of it, making sure that I have the right people and giving [them] the skills and tools they need to be able to do what they can do is, is pretty satisfying to me. So, I've mentored people all along. I make sure I require all the people that work for me to mentor people, and we still, to this day— I have 52 percent women in my organization. So, I'm pretty proud of that. But I only have one direct report that's a woman. I had six on my last job, but when we split out, the way the company split (laughter) all of the international folks tended to be the men, and the U.S. based ones were the women, and some of that's cultural, but some of it's not. So, I only have one woman direct report; my human resources person is a woman but she reports in through human resources, who actually happens to be a Clarkson grad from '85. She came here for engineering and management. And we didn't know that when we first started working together. And she's like, "I saw your resume; you're from Clarkson." (laughter) To me, now, when I reflect back, making sure that I've set in place the organization that can continue on beyond me is—, I'm more in a reflective of what would you want your legacy to be kind of

phase than I am in building myself. So, I look back early in my career, it was my own personal accomplishments, and getting patents was just the coolest thing. (laughter) I still have those plaques up on the wall. And now it's really building up organizations and helping people to achieve what they want to achieve.

**And, what about challenges? When you reflect back, what do you see as some of your greatest challenges?**

The only other regret that I have, like I said, I should have stayed longer on my maternity leave, which was a personal thing. I did start on my Ph.D. in food engineering at Rutgers. And, at the time, they were going to allow me to use my work, that I got the patent on, super critical CO2 decaffeination, as my thesis. (laughter) And, I think back to myself, "Why didn't you do that?" I'm not doing any engineering work now to actually apply to a thesis, right? I was like, "Why didn't you do that?" So, that's a regret that I have. The challenges I had early in my career tended to relate around being a woman in manufacturing facilities. I didn't feel it so much in my R and D role. I just felt like I had a group of men that were quite accepting and wanted me to be successful. So, I didn't have problems there. It was when you went in the plant for plant trials, and you're on the midnight shift; it was just not quite threatening but it was not welcoming either. So, those tended to be those challenges. Once I left HR—, I went in the HR roles, I haven't found all that many challenges. To me, the challenges have been how do I manage work and life.

**And, can you speak more to that?**

Yeah. When we moved out to Chicago, my husband stopped working for someone else. He had been working for government contractors like radar detection systems. One of the contractors that they worked for was Motorola. Motorola's headquartered in Chicago. So, when we moved out there he said, "Great. I'll go get a job at Motorola." Like you just knock on the door and they'll hire you after 20 years experience, right? At the time, my job required quite a bit of travel, and he said, "Let me not work this summer. I'll get the kids into school and THEN I'll go start looking for a job." But, we bought a house, so we kind of had a fixed location we were going to live in. So, there was only a certain radius he could find jobs in. And, he found jobs outside that radius. He found jobs that would require travel, and I require travel. But nothing that he really wanted to do. And in the meantime, he got the kids back in school; he started renovating our house. People, as we would meet them, said, "You did this? Would you do it at my house?" He formed a business on construction that [was] based on people saying, "Will you come work for me?" as opposed to him having to market himself. And, that's what he's been doing ever since. But from that point on, he was the one at home and able to do all the kind of things that if I didn't have him doing that, that would have been such a struggle for me to say, "Oh, I'm missing this. I'm missing that. I'm not at this. I'm not at that." What I will say is as my kids got into high school - my kids are both in college now - my daughter, when she was a senior in high school, played on a lacrosse team; I arranged my schedule, so she played lacrosse, she had 25 games - I made 24 of the 25 games. I arranged my schedule. I said, "She's going to be gone, I'll be an empty-nester next year, (laughter) she's going to be gone. This is the only chance I have." Interestingly, a lot of the other mothers were stay-at-home moms. My daughter said to me, "You know, girls on the team said, 'We noticed your mom makes more games than my mom

does. How is that? We thought she had a job!” (laughter) “She did, but you know what, she makes it a priority.” And to me, it just becomes how do you decide what your priorities are, and how do you manage them. For me, the kinds of things that I’ve given up - I don’t hang out with friends much. I just don’t, because when you look, there’s your family, there’s your job, there are only so many things you can do, and there are only so many hours in the day. And, I tend to be very able to manage priorities, and then say no to the things that I can get to later. (laughter) That’s all. Later in life. When I’m retired. (laughter)

**(laughter) I’m going to glance at my watch. So, it’s 4:15. And, we’re supposed to be somewhere at 4:30.**

At 4:30.

**I would be delighted to continue talking but I’m also thinking maybe we should stop?**

We should stop, yes.

**So, I’m going to say thank you and turn this off right now.**

Great.