

SWE GRASSROOTS ORAL HISTORY PROJECT

Allison Machtemes Lunde Interview

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TROY ELLER: Okay, today is October 12, 2011. This is an interview with Allison Machtemes Lunde. We are at the Society of Women Engineers National Conference in Chicago, Illinois. The interviewer is Troy Eller. Thank you for joining me today. Could you tell me a little bit about where you were born, and where you lived.

ALLISON MACHTEMES LUNDE: So I was born and lived—I just moved, like, ten miles when I was growing up. But I grew up just an hour west of the Minneapolis area in Minnesota—Hutchinson, Minnesota. And both my parents were in management positions that are not engineering. So when I was little, I just remember I was asking—my dad would build stuff, he was very hands-on—“Well, why does a two-by-four have to be twelve inches on the center?” You know, I didn’t understand it and I was just always asking questions.

So the community I grew up with then, kind of going off that, is mainly—there’s two major employers in the city. [01:00] 3M, so manufacturing of—at the time when I was little it was cassette tapes. (laughs) And then, the other one was HTI, Hutchinson Technology company, and they make parts for computers. I don’t really understand that stuff. But those are the two main employers and they had, obviously, lots of engineers within the community. And so throughout school I grew up and I kind of excelled in math and science. So the school kind of directs you in that direction through groups that excel—I can’t remember what exactly they’re called. And then from there, in middle school I did Science Olympiad—no, science fair. Yeah. And I really liked that, and I thought it was cool. Like, you make experiments, test them, and then think about what actually happened.

And then what was really cool in high school, we had Science Olympiad at my high school. And it was a pretty active group, and I ended up—besides, there were tests that you could take in physics and chemistry, and all that kind of stuff. [02:00] I did the hands-on—it’s called the boom lever, and tower building. So you build the lightest structure out of balsa wood, and then you test it and, you know, how much weight can this hold for how long? And whose lever was the lightest

that could hold the weight won. And I ended up doing really, really well in it. And by my junior and senior year I was taking AutoCAD classes and that kind of stuff. And drafting, because I thought it was interesting, because I thought I might want to be an architect. I didn't really know.

But then I was like, This stuff, with building it and figuring it out, and how you make it work—this is really cool, but there's no job career in making balsa wood towers. (laughs) So it was the teacher that was the advisor for the Science Olympiad group, he—because we had a science, and then someone to help build all the stuff. He was in charge of the AutoCAD classes, and that kind of stuff. He was just like, “Well, it's called civil engineering. That's what this is in real life, you know.” So then he kind of is the one that directed me towards it. Otherwise, I don't know if I ever would have really figured it out, because in high school you don't really get the big concept of life, I don't think. [03:00] And how does this apply—what I'm doing in a group—to an actual job? So he kind of pushed me towards engineering. So that's kind of how I ended up getting where I'm at right now. Yeah.

TE: Did your parents encourage you in engineering at all? Or did you know—

AML: So my parents just encouraged us to excel in what we like to do. So then I think when they saw—like, I always asked questions about how stuff was built, and then with Science Olympiad, but they definitely were like, “If that's what you want to do, we're going to fully support you in what you do.” I mean, “We want you to be happy,” and that kind of stuff. So yeah, they were super supportive, even though they didn't have a career path of what I have right now, so.

TE: Okay. Can you tell me how you chose a college?

AML: So I really was like, “I'm really done with high school. I want to go and be away from parents.” And then, so I looked at pretty much universities across the entire nation. And when I went and looked, I realized how far away they were. [04:00] And we're kind of family orientated, so I was like, “I'm only going to get to see my

family over break.” And then growing up in the Midwest, I think the East and West Coast cultures are much different in learning and expectations, and how you learn as much differently. In the Midwest, it’s kind of like everyone’s learning, and everyone helps each other. And at the universities [on the coasts], I felt like that was there, but it was just like a different concept of learning, I think. So I ended up going to a bunch of Midwest schools, looking at them. The reason I picked Iowa State was because it was still kind of close to home and they have a really good engineering program for the characteristics I was looking for, like small class size, faculty that interacted with you. But yet, it’s a bigger university. So I think I got the best of both worlds by maybe not going across the country, I guess, so.

TE: Okay. What was your experience in your engineering courses, and related courses at Iowa State? [05:00] You know, were you the only woman in the class? Did you have a lot of women?

AML: So, I think what’s unique is that at Iowa State you start engineering classes day one. So that’s just generic engineering principles, problem solving. So all the engineers are kind of lumped into groups together. And in my programming class, I was—there were only two females in my class. But, since I went into civil engineering, I think I have a much different experience than someone than someone that maybe went into aerospace engineering, because civil engineering also has the environmental engineering component to it, which a lot of females are in. So, my core civil engineering classes, it was very much, like almost, probably 30 to 70 percent, you know? Thirty percent women. So, I didn’t really—I didn’t have experiences like maybe an electrical or an aerospace engineer might have had. But then when I went to grad school for structural engineering, I was the only female in my class of ten. So I think it’s just because of the big major I was in, and then the subset of the discipline. [06:00] So I had both experiences, maybe. Yeah.

TE: Okay. Were there any differences in those—between those experiences? Like, how you learned? You know, whether or not you felt included? (laughs)

AML: Yeah, so I think there definitely was. When you're in the big group of females, you feel like, "Oh, I can speak up and people are going to listen to me," and all that kind of stuff. But I think also in grad school people valued my opinion. So I think our peers—we'd worked together so much on so many projects that everyone saw me as an equal, not like, "She's a female, so she doesn't know anything." But I think that sometimes it's hard, difficult to communicate, because you're like, "This is really important to me, but it's not very important to them, and I don't understand why they don't understand why it's important." So I think sometimes we're on different wavelengths on that. But I think that they—just the group dynamics was to be a team, and everyone's an equal on your team. So I don't think I had many problems in that aspect. [07:00]

TE: Okay. Did you have any mentors while at Iowa State?

AML: Yeah. So, I had lots of mentors. So through internships I had those mentors, and I've kept those mentors. At Iowa State I had mentors, especially through SWE. Like, faculty that you meet through the SWE events that I participated in. They kind of mentored me. I think they were all very informal mentoring, but it was definitely mentoring. And then within the department, there was probably three faculty members—I really valued their opinion and they valued mine. So it was more discussion of, like, "What should I do with my life? What direction should you give me?" Like, "I don't understand why the curriculum is set up like this. It doesn't make sense. You can't apply any of what we've learned in this class to outside, from my experiences, so I think it needs to be changed." So I think mentoring went both ways, and I had a big variety of mentors, you know, even outside of SWE. It was very informal, though.

TE: What do you think that you've gotten from those relationships? [08:00]

AML: I think confidence is one of them, because at times I can feel really not confident about myself, like I may not have the skills to do it. Because someone sometimes has to nudge me, you know, like, “This is okay, you can do it. If you mess up, it’s still okay.” And I think just direction for what I wanted to do. Like, it reaffirmed—because for a while there I thought I wanted to be a lawyer. And then kind of talking to faculty and other people in the position out in industry, I was like, “No, I don’t think that’s what I really want to do.” You know, they really told me what a structural engineer would do, and and what I wanted to do versus what a lawyer would do. So it kind of brought me back to the engineering path. So I think they—because you don’t really know when you’re looking at something, what the real story is behind some stuff. So I think mentors really helped me keep me on track, and helped me give confidence to—what I was doing was the correct path for me.

TE: Okay. Could you tell me about your decision to get your MBA while you were getting your bachelor’s?

AML: Yeah. [09:00] So Iowa State has a really cool program where they have a combined two-degree—and it’s a five-year program. So you spend three years doing very intensive engineering classes, so you’re taking a lot more classes than everyone else is. Then you apply for this program, and they take a very select number. It’s, like, five to seven people are selected in this program to do the concurrent MBA / bachelor’s. And I think it melds really well, and that’s the reason I did it—because civil engineering has so much project management, project development, finding your client, understanding their needs, where other majors might not be quite as heavy on that. And that’s really what I want to do, and none of that is in the bachelor’s program for civil engineering. It’s all, you know, designing this. How you build this? How do you get it done? What’s the stages in your construction cycle? All that kind of stuff, which isn’t how we got that project, you know? Like, understanding what went into getting the project.

So I think an MBA melds really well with what I wanted to do, and then it cut off a year, because it was a five-year program. [10:00] So I think that was kind of a big decision, because it's hard to say, get an MBA right away versus not getting an MBA right away. So I think that was a really hard decision. Like, do I do it, or don't I do it? But I'm really glad I did it, because I think it really broadens my mind when I'm thinking on my projects and, just in general, life I guess. So—.

TE: Okay. Could you tell me about some of your internships?

AML: So I've had a wide variety of internships. For a while I thought I wanted to work for the government and do water resources kind of stuff, so my first internship was kind of focused on that. And I was like, "I don't want to do this." Like, it reaffirmed—I was just like, maybe I need to go back to the structural thing. So that, you know, was a lot of POG emission rates, a lot of environmental engineering. Then my next one was also for the government, and I didn't want to do—I got pushed towards transportation because that's where they needed me, even though I was hired for structural. [11:00] So, you know, just it kind of reminded me that you can't always do what you want to do, and sometimes you just have to make the best of what you have. Like, you can work with really great people and not work on stuff you like, but it can still be just as rewarding, the group dynamic. That made me realize that the group that you work with is really important when you pick an employer.

And then when I was at Boeing, that's a completely different career avenue that was solely structural engineering and structural analysis. I really enjoyed my time there, but I felt like I couldn't—I really don't get a PE [professional engineer's license] there, and that was kind of—you know, my goal is I want to do that. And I think from a civil engineering / structural engineering aspect, it's a really limited career. Like, great company, but limiting. You can only work on airplanes. You can't do buildings, bridges, dams. You're going to miss all this, which is what I really wanted to do. [12:00]

So that's why the next internship I went to a smaller consulting firm, because I kind of wanted that big company / little company feel, because I didn't know what I wanted to do. And I was like, "I think this is more home for me." You're a lot more hands-on through the whole project development stages. You can kind of dictate what you want to do by the clients that you go pursue. So I think that's—I did the government, I did big company, and I did little company. And, I think that having a wide variety really helped me hone in. I was like, "Oh, this is what I want to do," instead of being like, "Oh, I don't know," and then have the first job try it out. So I don't know if that really answered the question, but—.

TE: Oh, absolutely. In your internships, were there many other women?

AML: No.

TE: No?

AML: (laughs) Yeah. So I think in the government, definitely no. It was mainly male-orientated. I mean, I don't think a secretary—like, there's secretaries and stuff, but I don't think—I can't look at them as a role model or someone to direct me in my career. It was all male. [13:00] At Boeing there is in leadership, but in my group there was one and she was retiring. But the rest of the twenty-five people were male. And then in the consulting firm, no. They only had one female engineer within the group that I really worked with. So, I think in school I had lots of female influence, and then in industry I was kind of like, "Oh, where'd they all go?" (laughs) So I think it's shown me that you have to—if you want the female influence and direction in life, you definitely have to go sometimes outside the engineering world, in marketing—you know, if you want the interaction. But they really didn't have much. Yeah.

TE: Well, do you think that that interaction is important to your career? Is it a negative not to have, you know, other women engineers around you?

AML: I think it is, because it's hard to—I think it's two-folded. So yes, you know, I feel like it's really valuable, because they can kind of help you—work-life balance.

[14:00] I know it's different for everyone, but I think it's much more different for a female than a male, especially depending on what role you take in your life. And I think, just—civil engineering, structural engineering, there's a lot of onsite stuff, jobsites. And to be honest, you're not well respected sometimes by some contractors, that you're female. And just being able to talk to someone else that's had that same experience as you, and like, "How did you deal with it? How did you make them listen to you? How did you show them that, yes, I know what I'm talking about. Listen to me, you're doing it wrong," you know? Where a male is just like, "Well, I've never had that experience," so they can't really mentor you on that. But then also, the "no" part of it is there's not a ton of females in upper management doing what I want to do. So if I want to get to where I want to be, I have to have a mentor in that field, and they're all male, or majority male. You know what I mean? I think it's two-folded, and depending on where you want to go and what you need from your mentor. So I think I've had mentors in both roles, female -focused, and then male-focused, and the direction that my career wanted to go. [15:00]

TE: Okay. I think we're going to take a break.

AML: Okay.

[BREAK IN RECORDING]

TE: Okay. We are going to resume our conversation. Allison, can you tell me about how you came to find your job?

AML: So my job search was probably different than a lot of other people's, a lot of entry level people. So I looked all over the country because the market's been kind of down lately. And since I was engaged, I also had someone else to worry about in my equation. A lot of people don't have that. And he already had a job, and he really liked his job. At first I started and I was just applying to any open position that was structural engineering that was mid- to larger-size consulting firm. And I was just blanketly applying, which I knew was wrong to do but I was just, "I want

a job! [16:00] I worked really, really hard!” And after a bunch of interviews I’m like, “There are jobs out there, so I’m wasting my time by doing it that way.” Instead, I focused towards the end just on about six different companies. I was like, “I just really want to work for you.” And I think that actually came off a lot better, because you can actually show true enthusiasm and they can kind of see it then. So that’s kind of the process I went through, and it was kind of a long process just because of the economy. It wasn’t really an the entry level position focus. They were looking more mid- and senior management at the time.

And then the organization I picked to work with, I think it was just the pure flexibility that they offered over all their competition, and just pretty much the work that you would do is different every single day. Most of the people who have worked there for five, ten years are like, “I’ve never worked on the same thing twice.” Which, I was like, “Sign me up.” (laughs) [17:00]

TE: How long did it take you to find your job?

AML: So I started looking probably about six, eight months out, because I knew I didn’t want to work at any of my internships. You know, I turned down those offers. But I think the process—the time I applied, did all the interviews, and then the second round interviews and third round interviews—it took about six months from start to finish. Yeah.

TE: Okay. Okay. Did you have any—you said that you turned down some job offers from your internships. Did you have any anxiety because of the economy?

AML: Yes. (laughs) Yeah. Initially I was like, “What did I do? That was a huge mistake.” But I think I wouldn’t have been happy then in the long run, so it’s not really worth my time almost. Not worth my time—that’s not the right words. But it just would not be a good fit, and I knew that I’d be looking again. [18:00] So I wanted to find somewhere that I was committed to from the very beginning, I wouldn’t have to start looking for a job in two years. So I was just like, “It’ll all work out.” And a couple of my SWE mentors were just, “You know it will work out. It will always

work out. Just take a deep breath, keep applying, show that you're enthusiastic and that you really want to work there." So I think with that reassuring that there's something that'll come along, you just have to wait, kind of feeling. So yeah, but it was really hard at the time. I was like, "What did I do?" (laughs)

TE: And you were searching for a job while you were completing your master's?

AML: Yeah. My master's in structural engineering. Yeah. So, it was at the same time.

TE: Okay. Okay. So which company were you accepted at?

AML: Barr Engineering Company in Minneapolis, Minnesota.

TE: And you just started that job recently?

AML: Two months ago. A little over two months ago. So yeah.

TE: Okay. Could you tell me what your experience has been as a new employee, you know, right—you know, with a fresh degree? [19:00]

AML: So, I think it's like in school, they try to pump you up and be like, "You know this, you can do this." And then went there, and I was just like, "I have the basic skills. Now teach me how to use them," is what—. So pretty much where I work, I don't have a boss or anything. I have project managers I work for, so I have five bosses, is pretty much what it amounts to. And they come to you with work, and if you do a good job they'll keep asking you to work for them. And if you don't, it's kind of a sign, like, "Hey, what did I do wrong?" And then you probably have to go find more work from someone else. So I think it's kind of a different company culture than most places. But I really like it because they pretty much flat out admit all the projects I've worked on to date have been for learning experiences, not to actually output a good product. I mean, they want good quality, but it's not like, "You need to get this done in three hours, because a client's yelling at me, and it's late," and stuff. It's more like, "We'll take care of that, now let's teach concepts and theory application, show you how to use all the design equipment we have." [20:00] Which I think was one of the aspects why I picked there to go

there, is because not most consulting firms are that way. They're all like, "We need work out of you now." So—.

TE: Okay. Where do you see yourself going in this company? And perhaps with other companies in the future? What are your goals?

AML: I guess kind of my long-term goal—at first, I need a strong technical background, is what I feel like to be successful, so that you actually understand what's going on. And then from there, I kind of want to move into some sort of management role, like finding your client, helping your client develop the project. You know, estimating the cost, finding the right people to work for it, and kind of working in that realm of the business after a while. After you understand how the business actually works, help bring in clients, make them happy, provide the services, maybe not be doing the hard work, but being able to find people that can do that work. So more of a management role, I believe is where I'm heading. [21:00]
Yeah.

TE: Okay. What is it about that role that you enjoy?

AML: The interaction with people and solving someone else's problems. So as a technical expertise person in the company, you can solve people's problems, but you don't always get to meet with your client. And the client might think that this is the actual problem, and then after you talk to them you're like, "No, your problem is this." But if you're just being a technical person, you never get to do that. You're just solving that problem. So I think it's kind of cool interacting with your client, and then maybe understanding their business and being like, "You might think that's what you need, but really, for a little bit more money you could actually get a much better product from us, and we can help you do that." So, I think that's really cool.

TE: Okay. You had mentioned before that you liked your company because of the flexibility they offered. Can you talk more about that and what—what flexibility they offered and why it was important to you?

AML: Yeah. [22:00] So I have family, friends that are always like, “Oh, if your manager doesn’t like you, you’re not going to be promoted in the company. You’re not going to get raises and stuff.” So I thought that was really cool that I don’t have a boss, in a way. So it’s like, you have to be very focused and motivated to do well in the company, and you get rewarded based off that. So I just have to be in the office a good chunk of the time. Whenever you want to be there. You just have to bill out so many hours a week, you know. But, you can work on whatever projects you want. You can pursue a new business within the company if it’s the right thing for the company to do. I can work for five, six different people instead of just one person being like, “Allison, this is what you’re doing.” I go around and, “What are you working on? Oh, I’m not really interested in that, but keep me in mind for the future if you won’t have this kind of stuff.” So I get to really work on what I want to work on.

And then, so one really cool thing about them is they pay overtime. So we get an hour vacation for every hour after forty, which most consulting firms do not provide and they just expect you to keep working, working, working. [23:00] So they actually—it shows that they value my time, and they reward you for putting in extra time. So I think that provides a lot of flexibility in the job, like yeah, I might work really, really hard for six months, but I can take a three-week vacation after it and not be financially not okay. So I think that’s one really cool thing about the company, is that just pure flexibility in picking what you want to work on, and compensating you for the time that you’ve given the company in return.

TE: Okay. Okay. I’d like to talk about your experience in SWE. When did you first join SWE and why?

AML: So I joined it as a freshman at Iowa State University. They have a pretty strong collegiate section. And I think the only reason I joined is, when I was a senior in high school all females that were accepted to the College of Engineering at Iowa State were invited to the SWE sleepover weekend, where you come for a couple days, learn about SWE, learn about engineering, learn about Iowa State. [24:00]

And pretty much, it's a great recruiting tool for the university, because like 99.9% of the girls that come for the weekend end up coming to Iowa State. So after that, they sent us that summer, like, "Hey, we have a kickoff picnic. Come do this." And my freshman year, they were actually hosting the Region H conference. So you know what I mean? They were using it as a big recruiting tool to get people to just help volunteer with them. So that's the only reason I went off to the kickoff picnic. And then, at the kickoff picnic they sponsor one freshman. They pay for them to come to the annual conference, and I was selected.

And then there's a couple senior girls, grad students that were really involved, like the president and a couple of her friends. They kind of just pulled me in. To be perfectly honest, that's how it happened. They're like, "We think you'd be great, we really like you." You know, that whole interaction. And then they're like, "What do you like to do?" [25:00] And then they put me on the—what is it called? Sorry—the executive board for finding funding for all the events. They trusted me a lot, obviously, to be like, "You're a freshman. Do this." But they teamed me up with someone else. But, I mean, if it wouldn't have been for them, I don't think it would have progressed, and I wouldn't have probably joined—or, maybe I would have still joined, but not have been as involved. I think by someone kind of pulling you in, and like, "No, you can do it." So—

TE: Okay. What were some of the activities that you participated in as an undergraduate? Or even into your graduate career?

AML: In SWE?

TE: In SWE. Yeah.

AML: Okay. So, I think a lot of activities—I mean, they had general meetings where companies come in, and as a freshman, sophomore, it's really cool to see what all these companies have to offer for you. But I think as I grew through SWE, it was more like the interaction with friends. And they're literally your support system to get through school. [26:00] Like, "Oh, this group of men that I work

with, it's so, blah-blah-blah." And then they're like, "I have the same problem." You know? And just someone to kind of vent to sometimes. And then as I became a junior and senior, I went to a lot of professional and development events, and more networking with companies. You know, I feel like there's two different levels of events, kind of focused on where you are in college. So I think I kind of hit them all when I was in college. A lot of them were kickoff picnics and stuff. I liked that part, because you got to meet all these cool girls and convince them to stay. Yeah. (laughs)

TE: Right. (laughs) Why did you choose to spend so much time on SWE while you were in college? You know, considering how much other things you have to do?

AML: I think it was just because it's—after you come to your first conference, you're like, "Oh my goodness." So as a freshman I was like, "This is cool. So many females together." You know, we're completely underrepresented in our fields. We come together, we support each other. [27:00] You get all these leadership skills that you wouldn't get anywhere else. So I think that's the reason why it drew me to it. And then when you have friends in it, you're invested. If they don't see you, they're like, "Where are you? What's up? What's going on?," and that kind of stuff. So, I think it's kind of a big support system to convince you to keep going.

TE: Okay. Can you tell me how you rose through the ranks to get to your position now?

AML: Yeah. So I started as a freshman, the, co-director of corporate relations or whatever. And the other guy that I worked with—I had a male counterpart, and we worked on restructuring a bunch of stuff and got a lot of funding. And from there I was selected to be vice president of the collegiate section. And from there, the president. And there was a lot of restructuring throughout our years and stuff. With my MBA, I really like strategic planning, and ideas and concepts, figuring it out, and then how you implement it. [28:00] And then also the strategic financial outlook, prediction, and forecasting. So with that, I was like, "I don't

know what to do after being president.” You know? Like, what do you do next? And then someone’s like, “Well, you should do stuff at the region level.” And I was like, “Okay.” So I applied for region collegiate senator, which melds really well with my interests in the MBA work because it’s the exact same thing, just in a society. So from that—I got involved in that.

And then I was just like, “Oh, there’s committees.” And, someone just said it to me and I was just like, “Okay, I’ll look into it.” So then I joined the finance committee and the strategic contingency reserve taskforce. The name keeps changing. I was like, “Oh, that’s something that’s really going to impact the society. You know, maybe I can participate in it. I know I’m young and learning and all that.” And I learned so much from being on those committees from—there’s tons of past SWE presidents and people just know tons of SWE knowledge. [29:00] And I’m just like a sponge sucking it in like, “Tell me more, tell me more.” And then I wasn’t going to apply for the collegiate director role until someone was like, “I think you’d be a really good candidate.” And I was like, “Oh, really?” Because I didn’t really think about it. I was just like, “Oh, I’ll still be on these committees. It’ll be okay. It’ll be fun.” And then I applied, and I guess I’m here today. (laughs) So that’s kind of like the condensed—yeah.

TE: Right. So you are the collegiate director on SWE’s board. Can you tell me about what you do in that role?

AML: So, the main role or concept of the position is that the collegiate director makes sure that the collegiate voice is heard in all the board’s decisions. But it’s not the collegiate director’s role to make sure that every single collegiate is represented. It’s the entire board’s responsibility, but sometimes it gets so focused on professional sections and I’m like, “Hey, we have collegiate sections, too.” [30:00] You know? I just try to bring them back sometimes to make sure that everyone—when we’re making decisions, we think about all the parties that are involved. Because it was a long time ago since they were students, so they might forget that they kind of exist, even though they’re half the membership.

And then the collegiate director currently, since it's kind of a new role—before they were just an invited guest, now they're a voting member—kind of helping the future collegiate directors develop what's important in this position, what needs to be worked on. So in the past, when they were just a guest member on the board from the president, they picked one or two areas that they wanted to work on. And I think we'll continue to do that as a collegiate director, but now since they're a voting member there's a little more work that probably is going to go into it. And you need to make sure this is getting done, this is getting done, because other people might forget about it. So I think it's a moving target right now, exactly what the collegiate director is going to do. [31:00] But I think it's to bring the board always back, and be like, "Well, the collegiates—you know, we're forgetting about them." Or, "We need to work on collegiate-to-professional," because you're not always a collegiate. You're a collegiate for a very small portion of the time you're in SWE. So, you know, how to make it valuable to make them want to stay, too, is kind of one of the things I'm working on.

TE: Okay. Do you have some ideas of how to do that?

AML: So I think it goes beyond just having everyone get in a room and be like, "Okay, talk." So I think trying to create mentoring models for people to use. That first ten minutes is always awkward. Like, what are some questions you guys can ask each other? Is there some sort of icebreaker that we can use anywhere? Or what kind of events work better than other ones? So I think it's still a work in progress at the moment, but I think that's kind of the direction I'm going, making that engagement valuable, and that the collegiates get what they want and the professionals get what they want, so everyone's happy at the end of the day. Everyone got something out of it. [32:00] So it's trying to find a happy medium for everyone at the moment.

TE: Right. Are there areas where you think the collegiates get forgotten sometimes?

AML: I think before there used to be, but now I think everyone remembers them eventually. You know? Sometimes there'll be discussions, and we kind of won't

talk about them, and then all of the sudden we'll be, "Oh yeah, remember the collegiates." But I think that it helps now that within the bylaws, collegiates—when you're the last year that you're a collegiate, you can run to be an officer in a section or region if they don't have enough other people to fill their positions, which a year ago, year and a half ago you couldn't do. So I think more is given to the collegiates to be eligible to do. And that they're on the Senate, and one third of the voting population—I think it's the more visibility now, so people don't forget about them as easily.

TE: Okay. Okay. Can you tell me what have you gotten out of SWE? [33:00] Like, what have you learned from your experiences?

AML: So I have a really hard time speaking up, especially when there's all this great discussion going on and I'm like, "I have an idea, listen to me!" You know, little tiny hand [raised in the air]. So I think—especially being on the board and going to some meetings, sometimes I'm like, "Hey, I have something." So I think that's one thing. And maybe giving a little more, I'm the person that always needs to take in information, go sit somewhere and think about it, write it down, come back the next day, think about it, "Okay, I'll send that out." You know? Where now, I don't have time to always do that, so I have to have confidence in myself and the ideas that I have, in what I wrote to be able to send it right away. So, I mean, it makes you feel uneasy, but I think it's something you have to learn because you're not always going to have time to sit there, meld everything together, make sure it's right. Just, "Here's my best effort. What are your ideas back?" So I think I've kind of learned that. [34:00]

And then I think a lot of people think that mentoring—you always find a mentor. So through this process now I'm becoming other people's mentor, and that's kind of an interesting thing to learn. Like, "Oh yeah." I know it goes both ways, but when you're younger you don't think it does, and you don't really have the opportunity. So it's interesting to be able—people kind of look up to the collegiate directors and board representatives, and they're like, "Oh, how can I be like

you?” And it’s like, “No, you don’t want to be like me. You just want to be like you, but how can you excel at being you in SWE?” So it’s kind of interesting to help people figure out their SWE career.

TE: Okay. Okay. Where do you want to go in the future in SWE?

AML: (laughs) I just had this discussion last night, because I didn’t really think about it. Because I was just like—I didn’t think I’d be here, you know? So it’s just like, I don’t know what to do. But I think with—in the future, do I want to go back on the board? Do I want to try to go on the Board of Trustees? Do I just want to stay at the region level? [35:00] I think a lot of it’s just going to come down to—I like finances, financial decision-making, that kind of stuff. So maybe, eventually on the Board of Trustees, that might be a better fit. But then I kind of like the decision-making that happens at the board. But they’re two completely different things, so. But I think in the short term, just definitely the collegiate director role. You learn all this stuff about the whole Society, because you hear about everything. And I think now it’s like figuring out what committee I think I can maybe make the biggest impact on by being on it afterwards, or if I need to go back to the region to make a bigger impact. So I’m still kind of fleshing that out right now.

TE: Okay. Can you tell me—well, what kind of impact do you want to make?

AML: So I think—in SWE the cool thing is that you don’t have to make a big impact to make it valuable. [36:00] So I think it’s just like if you can encourage four people to stay in engineering and to pursue engineering, and then have them mentor other people and do the same thing, I think it’s just like this profound effect. But people are like, “The only way I’m going to be effective in what I do is if I talk to three hundred people.” But the value you give to those three hundred people is very, very small. So I think in SWE I want to be able to help maybe a smaller number of people, but help them a lot, or make a big impact on the activities that I’m working on or helping with, so that it’s just a profound effect. They go find four

people, and then they find four people, and—yeah, instead of just spreading yourself too thin.

TE: Okay. What value do you get out of SWE? Out of, you know, both personally and professionally?

AML: So I think it's one thing for both of them, and I think at this rate it's taking your leadership skills, practicing them, learning, tweaking how you work with people. Like, "Oh, I know this person reacts like this, so this is how I'm going to address them." [37:00] But you found that out because you had a bad—you know, and then it'll improve the interaction. So I think it's all taking leadership skills, developing them, then making them better, and then helping other people develop theirs. Like, "Oh, I made that mistake. I think this would be a much better way for you to go about that." So I think it's personal and SWE—they're very much the same, and you can use them in all aspects of your life.

TE: Okay. What do you think are the biggest challenges for women entering engineering right now?

AML: It's a tough question. So I think a lot of it—and maybe it's just because of where I'm at in my life—is that I'm seen as an equal in my office. I have the same—I mean, that's not everyone, but that's just the office that I work in. I'm seen as an equal and everything, but I think when you start to have a family and stuff, there's a struggle of, "I'm a mom." A lot of the people I work with are going through this right now. [38:00] "I'm a mom. How do I flex my time between work and my children without dropping the ball on my clients?" Where a lot of the men don't have to deal with that, because their wives stay at home, or their wives only work part time, so they don't have to worry about that part in their daily life. Like, "Oh, my kid's sick today, what do I do because there's no one at work that can cover for me?" So I think that's kind of struggling with it, and I think that's going to—. You know, we're not like Europe and we get paid for two years to stay at home with our children, and you get a month off here and a month off there. You know? So I think that's very different, and trying to figure that all out and making

everyone happy, but still accomplishing goals and everything. So I think that's one big area.

TE: Okay. Can you tell me about some of the other organizations that you've been involved with for any of your outside activities?

AML: Yeah. [39:00] So I've been involved—when I was getting my MBA, I was in the MBA association, because that's what everyone does, and that kind of stuff. But I've also been a little bit involved in the Society of Civil Engineers. Just a little bit, because a lot of it's not—what the collegiate or student chapter at my university did wasn't exactly what I wanted to do. So I was just like, "SWE lets me do what I want to do. This doesn't." So that's why I didn't get involved, super involved in that.

So kind of going off SWE, our department was seeing a decline in female enrollment and female retention. And I was just like, "Why? We have environmental engineering." I don't understand why we'd see a decline. So me and a couple other people started a Civil Ladies group, where everyone can join, because it's not like—it's like a club, is pretty much what it is, that the department helps fund. And we just do fun activities, get all the females together. Males are invited. You know, get to know each other, that kind of stuff. [40:00] And, it was to help with the SWE section at Iowa State, because they would always try to do an event for civil engineers and an event for aerospace and an event for mechanical. But there wasn't enough people that were active to make those events worthwhile, and so it was much more worthwhile to do it all as a big group. So I think this was a way to be like, "Hey, we can provide fun activities for you to do so that you can interact, but if you want professional development and that kind of stuff, then you'd go to SWE." So that was one of the last things I did, this last year and a half, was kind of get that rolling, make sure that after I left they could still be successful. So that was kind of a big thing that took a lot of time. (laughs)

TE: Okay. So, you started Civil Ladies to help the women in your department—

AML: Retention, pretty much. Yeah, and make them feel like a community because a lot of us didn't feel like we knew each other. Like, "Oh, she sits three rows down from me, but I don't know who she is." [41:00] Because a lot of faculty, when you work in groups, they assign one female to every group so you never got to work with them, and you never got—you know what I mean? So we were never given the opportunity to create a community within ourselves. So I think Civil Ladies—they've really started to do that, and are doing a great job at it. And it's supposedly helping. I mean, it's too early to tell if it's really helping with retention, but I think it will because there's a reason for you to keep going to class, because your friends are, so.

TE: Right. Okay. Did you ever experience any pushback from male students?

AML: Not really, because I would say it's pretty open compared to some, probably other colleges. But I think they were like, "Well why don't we have a men's—a Civil Men?" And we're like, "Because that's called class." (laughs) You know, like, "Come on, guys. And it's called ASCE [American Society of Civil Engineers] and AGC [Associated General Contractors], you know what I mean? You already have your things." (laughs) [42:00] But, I mean, we actually had a lot of males that were coming to our events because they're like, "You guys do fun events, and you guys are fun to hang out with." But we want to make sure that the group, the main group planning everything only stayed female, so it wouldn't become—like it started out as a female thing but then was dominated by males, because then it defeats the whole purpose. So yeah, we make sure that we're inclusive so it doesn't feel like, "Well, the department gave you money but not us money," that kind of feeling. But I don't think so. As long as we flat-out told everyone they're invited, I think that helped make it not a problem.

TE: Okay. Okay. Is there anything else that you would like to talk about before we end? Anything you want to add?

AML: I don't really have anything. You hit everything. (laughs)

TE: Perfect. (laughs)

AML: Okay. Awesome.

TE: Well, thank you very much for doing this.

AML: Yeah. Thank you for being flexible, and great, and fantastic. It's awesome.

TE: No problem.

AML: Okay.

TE: Alright. This is the end of the interview.

[END OF RECORDING]