[Episode 28 - An Interview with Dr. Becky Morgan]

Hi everyone! My name is Tori Roberts, and today I am here with Dr. Becky Morgan who is a faculty member here at Cabrillo College. So hi!

(Morgan) Hi, how are you? Great to be here.

(Roberts) Are you excited? I've been talking to you about this for two whole semesters now, huh?

(Morgan) I know! We've been talking about this for so long that we're finally doing it, so the buildup… It's been a long buildup.

(Roberts) Yeah. The buildup is over; we're here; we're in the recording room that she agrees is scary, a little bit.

(Morgan) It's different than teaching a class. It's different to be talking out into the ether rather than to have people sitting there that I'm talking to.

(Roberts) Definitely less response.

(Morgan) Yeah, it's a lot quieter too.

(Roberts) Yeah, it is a lot quieter. Well, it could be nice not having all the eyes on you.

(Morgan) It is! And the quiet is nice. Like, I don't get much quiet.

(Roberts) Enjoy the quiet.

(Morgan, whispering) Enjoy the quiet.

(Roberts) All right. So, the reason I have Becky here, so you are a psychology instructor at our school, so it might seem a little funny that I brought you on our Women in Math podcast.

(Morgan) Yeah.

(Roberts) But at the beginning of the first class I took with you, you mentioned that you used to be a math major.

(Morgan) Yeah, I have my PhD in psychology, but my undergraduate degree is in math. So I am legitimately… or was once a woman in math.

(Roberts) Well, I mean you have a math degree. That'll stick with you for life, right?

(Morgan) Yep. Yep. Absolutely.

(Roberts) So, you got your math degree at Boston College, right?

(Morgan) Yes.

(Roberts) And for that whole time, I assume you loved math and enjoyed it.

(Morgan) I did, but it actually didn't occur to me to be a math major right away.

(Roberts) Really? How did you fall into it?

(Morgan) So I kind of think it's this... It's kind of a funny... not funny haha, but interesting story where... first of all, when I went to college, I went right out of high school, and Boston College had a big orientation weekend for incoming students, and incoming students and parents would come for the weekend, and we would do some activities together, and some activities separately, and it was really interesting when they had us register for classes the very first semester. During orientation, they...

(Roberts) They had you register during orientation?

(Morgan) They had us register during orientation. Yeah. And they made a point of doing it when the incoming students and the parents were separate.

(Roberts) That seems smart.

(Morgan) Yeah, I think it depends on the relationship that you had with your parents. So their feeling was they wanted students to register for classes they wanted to take. They didn't want students to be taking the classes that their parents wanted them to take. And I had always felt very supported and understood by my parents who are psychiatrists and social workers, so they're very much getting into people's heads. So I always felt very well-understood by them. I didn't feel like they were going to push me in the wrong direction, and I actually asked in the middle of registering "I don't know if I should take this class or this class. Can I call my mom and ask? Not because I want her to tell me what to take, but she knows me better than all of you people that I just met at orientation." She knows what I like; she knows what I don't like; I wanted her feedback. And they said "No, just pick something, and it'll be fine." Or "Go over and talk to somebody in the

Spanish department about which Spanish you should register for." So, I'm on my own. I'm 18. This is the first time I get to pick my first classes, so I have to take calculus as part of the requirements, so I think to myself, "Well great! I get to pick whatever I want. I'm going to take the easy calculus. I'm going to take the calculus that's for non-math and science majors. This'll be great!" Now, if my parents had been there, they would've said "What if you decide to major in math or science?" Because I was undecided when I started, and I'm sure my parents would've said "Just take the harder one just in case." And since my parents weren't there, I was like "I'm going to take the easy way out." So I registered for the easy class.

(Roberts) You said you were undecided. Were you undecided and leaning towards anything?

(Morgan) I mean I had a stint as a psych major. I actually just declared as that, because so many people wanted to take psychology that they only let psych majors take general psychology. I just declared it so I could take the class, and I always planned to switch.

(Roberts) That's tricky.

(Morgan) That is tricky.

(Roberts) It's smart though.

(Morgan) Yeah. It's a smart way around it.

(Roberts) So you signed up for the easy calculus class…

(Morgan) So I signed up for the easy calculus class, took that, got through the first semester, and I think it was at the end of the fall of my sophomore year, so it was my third semester in. And I don't remember what else I took, but when I was signing up for classes that fall, this should have been my first tipoff. You take five classes, you'll be a full undergraduate. I hadn't declared my major… or I was a psych major, and just for fun, I signed up for… I mean I guess counting as an elective, I don't know what else it counted for. I decided I'll take multivariable calculus, and linear algebra.

(Roberts) Oh sure. For fun.

(Morgan) Just for fun. That's what everybody takes, right? And I took both; I almost dropped linear algebra, because I added it after the first day and was totally lost, but I figure it out and so I stayed in it. And I still wasn't sure what my major was going to be, and at the end of the semester, after

getting through multivariable calculus and linear algebra, I was walking home to my dorm room from my linear algebra exam, and I was like "That was a fun semester.... Wait! Wait a second. Math is a department.... I could actually major in math?"

(Roberts) I could keep taking these classes?

(Morgan) I could keep doing this? I didn't realize that. It had never crossed my mind that math was a major.

(Roberts) That's so interesting, because I feel like math major is that looming horrible major to so many people. Like, oh I know it's there, but I would never do it. And you were kind of like, I really like math. Oh! I could major in that.

(Morgan) I get to major in math?! Yeah. So it really hadn't dawned on me and I specifically remember walking home across campus and having it dawn on me. That it was like, duh, it's a no-brainer. I'm a math major! So I declared my major in math. Now of course, I took the calculus for the non-math and science majors.

(Roberts) But I mean at that point you had already taken higher level math classes, right?

(Morgan) I had. So I think I had to get special permission when I took multivariable calculus to go right into it. But there is one piece of the math curriculum that I missed not doing that. I managed to get through my life fine without it, but I never fully learned about sequences and series in calculus.

(Roberts) Yes, the sequences and series.

(Morgan) Yeah... I know that there's stuff in there that I've kind of had to struggle with in other classes when it came up...

(Roberts) But it is unrelated enough to other material that I can see getting by without it.

(Morgan) You can squeak through without it, yeah.

(Roberts) I can say that I did complete the sequences and series part of my calculus curriculum, but I did know a lot of people around me that considered that to be the lost chapter of their calculus series even though they were there. They learned it. They studied it. They took the exam on it.

It is very out there when you first learn it, so you're probably not alone at understanding sequences and series.

(Morgan) Yeah. So I always think looking back, my parents who know me best would've not pushed me into a direction that I didn't want to go, but, "You really liked math all through…" I mean in high school I took probability and statistics as an elective, so I'd always gone out of my way and taken more math than I needed to, but it just didn't cross my mind, and as soon as it did, it was just obvious. And it ended up being a great major. It was nice because it was small, so I wasn't in huge lecture classes. I was in small classes with fifteen students. And I got to know my instructors and my professors, and it was a very cozy feel, and sometimes I look back and have second thoughts about where I went to college, but what I did at college and the department and the faculty and the experience of the major that I had, I've never second thoughts about that, even though I didn't go further into grad school or into that field specifically, I love my math major.

(Roberts) Well good. I feel like if you decide to go through with the full degree in math, it's something you should love, right?

(Morgan) Yeah, I mean I would always get those looks from people, like what are you going to do for a job? But I even managed to figure that out.

(Roberts) So, you didn't continue to pursue your major in grad school. You actually got a psychology degree. Now, biological psychology was the title of your graduate degree, right?

(Morgan) Psychobiology, so different schools put those in different orders. So some schools say biopsychology or biological psychology and where I was, it was psychobiology. I think because we were a psych department, we wanted to put the "psych" first.

(Roberts) That's funny. I think to emphasize the second word more. Maybe that's just how I hear it though. All right, so you pursued your psychobiology degree at UC, Davis, right?

(Morgan) Yes.

(Roberts) So how'd you make the switch from loving your math degree, and then you decided to not keep going with it?

(Morgan) So… Well I don't know that this is good for math. This isn't good for math people, what I'm about to say, but my brother in college was a geology major, and I would watch him after college. People would ask him

questions about, "Wow, you went on a trip to Mexico for spring break with the geology department," or "Wow, tell me what you learned," or we'd be driving down a highway. There are places in New England where you'd have cliffs on either side of that highway and they just carved out the path for the highway, and he would pull over on the side of the road and say, "Well look if you stop and look at this layer of rock, you can tell that this rock was put here during this epic of history, and here's what it means, and there was a lot of nitrogen in the environment here.

(Roberts) Just able to analyze the rocks…

(Morgan) Yeah! He could analyze the rock and people would look at him being like, "Wow. That is so fascinating." I never got that look from people when I said I was a math major. I would never get "Wow, can you tell me about what a torus is? What's it like to play chess on a torus?"

(Roberts) You get more of the "Oh… why would you do that?"

(Morgan) "I hated calculus." That would be what I would hear. Like "What's wrong with you?" So nobody wanted to talk to me about math.

(Roberts) Which is understandable. It's definitely a common complaint in the math world.

(Morgan) People are scared of it a lot of times. So I wasn't sure that I wanted to go on in math. The other thing I found is that I really loved solving math problems. I loved doing calculus and algebra and imagining finding the area under a curve and calculating it. But I didn't enjoy writing proofs as much. I could do it, but it wasn't my favorite part of math. I liked math as a puzzle where I could go through these steps and the logic, like if I go through these steps I'll get the answer.

(Roberts) I can definitely relate to that. I think that I'm most worried about taking linear algebra, which is funny, because you said that was kind of your transformation in class. It's a very proof-based class though, isn't it?

(Morgan) Umm… I don't remember. This was a long time ago, but I remember in that class doing more calculations. So it may depend on how it's taught, but I remember more calculations like calculating what the determinate of a matrix is more so than proving.

(Roberts) Well then maybe I have nothing to worry about.

(Morgan) Oh sure. [laughs] So I think that was my other concern that I liked problem solving and if I went into grad school it would be a lot more trying to solve problems and write proofs for things that maybe nobody had figured out before and developing new ideas and proving new theorems, and that wasn't really what I was interested in. And so my parents kept saying, "Well think about engineering where you're using math to solve problems," and I wasn't so interested in that, and in the meantime, I kind of got hooked on animal behavior. So my grandmother took me on a cruise to Alaska. She was going to go with her boyfriend at the time, her partner after my grandfather died, and he got sick, and wasn't able to go on the cruise. And he was fine, but I got to go. I got to take his spot, and we had a naturalist on the cruise to Alaska that would tell us "When a bear scratches a tree, here's what it means in human language," and he would tell us about orcas and sea otters and bears… and all these animals that we were going to see in Alaska, and would try to translate animal behavior into human language. Like, what does this mean? And I was fascinated by that. After college, I moved home for a little bit of time with my parents, which many people today are forced to do unfortunately, and I was reading books that I would get at the library about breeds of dogs and intelligence and which breed is the smartest and would try things out with the family pet at home. And we'd go walking every day. I would take my dog for a walk and I would just sit there and watch the squirrels, and try to figure why they were doing what they were doing. So I got bit by this animal behavior bug.

(Roberts) That's so much better than getting actually bit.

(Morgan) Yeah, by animals or bugs. Yeah. So I ended up deciding "Maybe I wanna study animal behavior." And from there you could go to psychology programs or zoology or anthropology, and I decided I'd have the easiest time transitioning into the psychology program, because after math as an undergraduate, I had the most classes in psychology. Because that's what I started as, and I stayed on campus one summer to do summer classes. There wasn't a lot of variety in summer classes. And the most interesting ones were in psych so I took a bunch that summer. So, I was like, "I'll try to study animal behavior in a psych department, and at UC, Davis, there was this guy named Jeff Schank; I think he's still there. He didn't get his PhD in psychology either. He had gotten his PhD in a philosophy department and was interested in the philosophy of science, so he's done a lot of different things in the field of science. What he had kind of started doing as a professor was he wanted to create computer and mathematical models of animal behavior. So he was doing a lot of computational projects. So when I was in graduate school, he was building robotic rat pups, so he was trying to program robots to move around and interact with each other in the same spatial ways that baby rat pups interact with their litter mates, and so I

reached out to him, because when I applied to grad school at UC, Davis, at the time, you had to be admitted to work with a specific faculty member. They recommended conversing with faculty who you might want to have as your advisor.

(Roberts) And you were interested in the rat pup robots.

(Morgan) Well I wasn't interested in rats. I don't like rats. The thought of holding a rat totally creeps me out. But I was interested in animal behavior and I had experience in math, so I thought "He does animal behavior and he does mathematical models, so maybe I could do both?" So I got in touch with him and I sent him a message saying "Here's my background. I'd really be interested in talking to you." And he said "That sounds great!" And we talked on the phone, and I came out and toured UC, Davis and had an interview and met him and met his other grad students, so when I was admitted into UC, Davis' PhD program in psychology, he was assigned to be my advisor. So kind of the fact that we had this mutual mathematical computational interest is what really made me attractive to him as a grad student…

(Roberts) And him attractive to you as a mentor, sort of, right?

(Morgan) Yeah, and so it was this great match that got me into grad school. In the long run, the fear of the rats kind of drove me off, so I didn't finish grad school with him as my main advisor, and I didn't continue doing that research, but I spent the first couple of years working with him. And I didn't actually do the rat research with him. We did other mathematical modeling; we were exploring other mathematical animal behavior biology concepts.

(Roberts) It's interesting. It seems like you had such a smooth transition through your whole schooling, and…

(Morgan) But it changed a lot.

(Roberts) It changed a lot, but it happened so seamlessly it seems. I mean of course it probably didn't feel that way when it was happening, but…

(Morgan) Yeah, and I think that's one of the things too when I talk to students now is I always emphasize to them that it doesn't necessarily matter what you major in, whether you're in math or psychology or history or wherever. You're getting skills. Your undergraduate career is just teaching you how to study, how to problem solve, how to think critically, and then from there, once you have those skills, you can really take that in any direction of whatever is interesting to you at that point in time. And then

from there it did kind of evolve. I started off very math-oriented and found that I was more interested in animal behavior and wanted more hands-on animal behavior work than computer models and robots and the math side. And so I shifted my interest into other animal behavior and psychology research, but any time you're doing research and psychology and you're collecting data, you still have to analyze it. So I was still taking statistic classes.

(Roberts) So your math background was a really good foundation for you.

(Morgan) Yes, and I felt like I was one of the only people in stats class in grad school who had any idea what was going on, because I'd already taken stats in a college math department. So I definitely felt like I was a couple of steps ahead of other students. The biggest step for so many people is to just not be scared of math. So many people just shut down as soon as they hear math and see numbers that they don't really get a chance to see if they could understand it because they don't let themselves. And thankfully I never really had that math phobia. Even though I didn't go in the math direction career-wise, math helped get me to where I've ended up.

(Roberts) The magic of the math blanket.

(Morgan) Yes, absolutely. Or as I want to say, the beauty of mathematics. My eighth grade math teacher, that was her catch phrase: the beauty of mathematics. She had pencils made that she gave all of us that said that.

(Roberts) That's so funny. I think of my eighth grade math teacher as enthusiastic also, and she had little catch phrases that have definitely stuck with me. It's funny it was your eighth grade math teacher too.

(Morgan) And I thought back to her… I think it was probably the year that I started at Cabrillo which was a couple years ago now. Because as a bio psychologist teaching biological psychology and teaching about the brain, I came across an article about how if you show somebody a photo of something that's beautiful, whether it's a face that's beautiful, or a landscape scene that's beautiful, there are certain parts of the brain that become more activated when we see beauty, and what these researchers had done was they had taken what mathematicians would define as a beautiful equation. Like… Gosh I can't even remember examples. I think some of the characteristics are they're simple but profound math equations. Like they capture very complicated processes in very few… digits or terms. And then there's some famous math equations that I forgot now that has both e, i, and pi all together. So it's like this beautiful math equation with all of the defining special symbols in math. So what these neuroscientists found

is that if you show mathematicians these equations, the same brain areas that are active in the general public for beauty, are active in the mathematicians.

(Roberts) That's so funny.

(Morgan) And it just totally brought me back to… I wish I could go find Mrs. Raffles and say you are right. To the mathematician's brain, math is beautiful. There is beauty in mathematics. So it was one of those full-circle moments of me going from the mathematician to the biological psychologist and just tied it all together with a nice neat little string, and now I give out pencils that say I bring psychology to my students.

(Roberts) Well, yes, I've received one of those pencils. That's pretty fun. Wow! That must be so satisfying. Everything just worked out so well. You're an instructor here at Cabrillo College, and you seem to enjoy it when you're lecturing.

(Morgan) I do! Because of the students. It sounds so cliché but it's also… I mean, if I'm having a bad day, and I come into class and have to get my energy up for class, but by the time I leave class, I'm having a good day. The energy that students bring, and the questions and curiosity, it makes the job worth doing. I feed off of the students' energy. And every class and every student and every year, it's different. It never gets old because the faces and the interest… The faces change and the interest… Things that may be kind of "Well, I've heard this before. This is old news." To the students it's not; it's new; it's exciting. And their excitement makes me excited again. Speaking of that, you were going to ask a question and I didn't want to squash your excitement before.

(Roberts) No, that's fine. I think that's a really interesting way to look at teaching and what you get out of it. I think it's super important that teachers, you know, they find reward in teaching students a new thing. You're very knowledgeable about the material, but you're right; when you teach us, it's new to us. Wow.

(Morgan) Yeah, it's new to you. That's the thing that sometimes we… The more you teach the harder it is to remember that. The "Wow. What was it like the first time that I heard this?" Both for the excitement level and for the level of explanation. Like, what level do we need to explain things at?

(Roberts) It's so comforting to know that it worked out so well that you… As a student looking towards my future, you started with this path. You didn't know what you were going to do. You didn't know what you wanted to do,

and it seemed like everything kind of found you, and it worked out to this job that you love so much.

(Morgan) Yeah, I mean, it just kind of… It just worked. I don't know if I was supposed to end up here, but this is where I ended up, and I'm happy with where I am. Yeah. There were moments in grad school that I second guessed what I wanted to do. I was tempted to go back to more mathematical fields. One year in grad school just for fun… Because I'm the one that took multivariable calculus and linear algebra as electives, I bought a calculus book! Just bought it online. Like, who buys a college textbook when they have to buy it? I bought it for fun just to go through it. Like, yeah, I'm just going to brush up on my calculus. And I sat in on some structural engineering courses, just to pop in and see what was happening and was very tempted to drop out of grad school to go get a master's of education to be a high school math teacher, which is what I really… There's even now a part of me that says, "That's what I would really love to do." But I love what I do now, and I could do that, but it's nice to be in a career, and to be doing it, and I still have the contact with students even if I'm teaching psych rather than math, but it was tempting for a while.

(Roberts) I can see that.

(Morgan) I kind of feel lucky that all along I was never scared of math. I think that really helped me get where I am, and it reminds me of something else. It makes me feel like so much of my family… My parents know when to push and when not to push. I think they would've really been helpful that day when choosing that calculus class. They're also probably the reason that I didn't drop out of grad school to be that high school math teacher. They really pushed me to "Get your degree first. Finish you PhD, and then you can do whatever you want. You've already started it. If you get your PhD and then want to go to school and get a master's of education and be a math teacher, go for it, but just finish what you start." And then that kind of lead me to not leave psychology, but not through their fault. But they were always really good about… There are some stereotypes about how women aren't supposed to be as good at math as men, and I never got that from my parents. I think one of the things in my family culture was that anybody can do anything, and I came from a family with really great role models. I have really strong female science and math family members in the generations before me that my… I already told you about one of them.

(Roberts) Yeah, I was definitely going to ask you about it if you didn't mention it.

(Morgan) So on my mother's side, my grandfather's cousin, so I guess that makes her my first cousin twice removed. She was a woman named Grace Murray Hopper, so I'm related through the Murrays which was her maiden name. And she helped work on the very first computers and computer programming languages. She worked on the Univac computers when a computer would take up an entire room. And she helped with developing the first universal programming code. And legend has it she coined the phrase "debugging a computer," that there was a problem. She might have invented the compiler, I believe as well. So the debugging, there's a problem with the program and they went in and found a moth in the computer, so you have to go through and fix the problems; you're debugging a computer.

(Roberts) Whether it be actually taking a bug out…

(Morgan) Exactly. But don't get bitten by that bug, right? That'd be bad. So, I'd written papers about her throughout my life. So she was a very accomplished woman who was a computer scientist. She was also at the time the highest ranking woman in the navy; she was a rear admiral. She since had the most computerized ship in the navy at the time named after her: the U.S.S. Hopper that the family was able to go to the ship christening. Oh, I should've looked this up… She died in the 90s sometime, and so last year in his last awarding of civilian medals, President Obama was giving medals. I guess every year they give out a certain number of medals, and last year he gave a medal to Ellen DeGeneres; I wanna say Tom Hanks. There are a bunch of people I remember seeing in the photos, and Grace Hopper. And so she passed away before this, and so her family members got to go receive it for her. And so I have a second cousin twice removed… But we grew up together. We spent our summers together and were roughly the same age. So she and her parents and siblings and she was the one who got to go up and receive the medal. So she's there with the president and with all these celebrities and she and her brother, who's a little bit younger than us, all of the celebrities got together and did a mannequin challenge. So she's in the mannequin challenge with them.

(Roberts) That's so neat that you have her as a role model in your own family to look up to, and like you said she was praised so much recently even after she had passed.

(Morgan) Oh and just this year, Yale University, where I think she did some graduate work, one of their colleges had been named for a white supremacist, Calhoun. He's not the best guy, so there'd been talk for a long time about how Yale should rename the college to somebody who is more positive of a role model, so just in this last year, they decided to rename Calhoun College at Yale, the Grace Hopper College. So in the last year, she's

gotten a lot more recognition. She's somebody that a lot of people have heard of; a lot of people haven't heard of her, but the other thing that was interesting was when I was growing up, legend has it, family legend this time, that my father got a perfect score on his math SAT. So this was in the 60s so the scoring was a little different. So he was the go-to tutor in high school for my brother, myself, our boyfriends, girlfriends for math and chemistry and all these other sciences including me. If I had any problems that I couldn't figure out, so I'd say "Dad, when you get home from work, I have just a couple of problems that I'm stuck on," and he would help me. And I tried to carry that over when I went to college. There'd be times when I'd call him up during linear algebra or intro to analysis, and I'd call him and tell him I'm stuck on this problem, and I'd talk him through it over the phone, and I'd say could you help me out with this. And through calculus and maybe even multivariable calculus, he was able to help a little bit, but then as I kept going, you know, Euclidean and non-Euclidean geometry, and intro to analysis where I started learning number theory and things like that, I'd call him up and he'd say "I don't know. I never did this math." Because he was a psychology major and went to medical school, so he didn't go in a math direction. He'd say "It's time for you to call grandma for help on math." Because his mother, she had seven kids, and she had been in college when she met my grandfather, and they met because he was a WWII veteran, and when he came home he needed a tutor, and she was his tutor. She was very bright. So they ended up getting married and having kids, and wasn't able to finish college because she got married and had seven kids. So when her youngest of seven went to college, she went with him. This was in Iowa, so when they both graduated from high school, he went to Iowa State University for college, and she moved into adult student housing; not with him, on her own, and my grandfather had died, so it was just her; the kids were gone, and just for basically most of my memory in life, she was living on the Iowa State University campus riding her bike to class, and she was there for decades just taking classes. So she kind of got her dream. She finally got to go back to school.

(Roberts) That kind of is the dream, isn't it? Go about your life, but then go back and learn about the things you wanted to learn.

(Morgan) Yeah, so she spent some time studying anthropology and she did world religions and she did math, and so she had done the math degree, so she had gone back and learned a lot of that stuff, so later in college, the only person that I knew that had done this was grandma. I never called grandma. I think I tried once, but her hearing was going, so it was just too complicated, but I knew she could do it.

(Roberts) Yeah, that was someone directly in your family just…

(Morgan) And a woman in math!

(Roberts) Wow. They're just flooding all over you. That's so exciting. A lot of people don't have that: people around them, people related to them who have surpassed the challenges and overcome the stereotypes, but that's so interesting that you and two others directly in your family had as role models. I mean I do; people listening probably do. People appreciate so much having you as a role model. The math degree, you overcame it. I mean you're doing what you want to do. That's so neat!

(Morgan) And it's not always the plan that you expect, but it always seems to… For me, it's worked out, I should say.

(Roberts) I'm so glad. I expected you to be a great guest on the podcast, but I mean, wow.

(Morgan) I hope I've been a good guest.

(Roberts) I've learned so many interesting things! Thank you so much for talking with me. I really appreciate it.

(Morgan) I'm so glad that Cabrillo has put this podcast together. When you first told me about it, I thought it was a fabulous idea. It's a hands-on way to start to encourage… Women in the maths and sciences, there's always a lot of talk about how can we encourage more of this? And this podcast is one real hands-on way that you're actually doing it, and your experience may actually make a difference.

(Roberts) It is really cool to be a part of this project and I'm thankful all the time. And I've told you about this. One of the coolest things actually, it actually isn't a Cabrillo-run project, it's just a number of individuals who are genuinely interested, and we've gotten a lot of people who you wouldn't think to be a part of something like this, and you're right, it's incorporating a lot of people who might be afraid of math or afraid of pursuing what they want to in math, and it's been a really rewarding experience for listeners and participants.

(Morgan) Well keep it up! Keep up the good work.

(Roberts) Yeah, thank you so much! Really quick before I sign off here, I want to read the t-shirt that you're reading here.

(Morgan) I have a thing with t-shirts and ties and socks that they usually match up to something that we're talking about in my classes. So today, I didn't wear a shirt related to my classes. I wore a t-shirt that my parents just gave me for my birthday that relates more to this podcast. So you can't see it, but Tori will read it for you.

(Roberts) I will. It's really cool, and it's very color coordinated with everything else. So this t-shirt has a bunch of math symbols. It says "Never underestimate a woman with a math degree." That's a good way to sign off. Never underestimate a woman in general, really.

(Morgan) That's right!

(Roberts) Alright. So thanks everyone for listening!