

Math Teacher Lounge transcript
Season 3, Episode 5:
Developing an asset orientation with Lani Horn

Dan Meyer (00:03)

Welcome back to Math Teacher Lounge, folks. My name is Dan Meyer.

Bethany Lockhart Johnson (00:07):

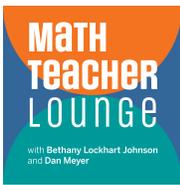
And I'm Bethany Lockhart Johnson.

Dan Meyer (00:09):

We're so excited to be here with you folks and with our guest today, tackling big questions about mathematics. I wanna ask Bethany first though: Bethany, it's been kind of a challenging couple of years for those of us in education, near education, just in life in general, of course. But I woke up this morning and the sun was out; the weather was perfect and crisp here in Oakland; and I found myself feeling optimistic, a sense of hopefulness. And I was wondering to myself, "What is Bethany feeling hopeful about in math education right now?" What's got you juiced up a little bit?

Bethany Lockhart Johnson (00:40):

I gotta say, that optimism, Dan, look at that! I can actually feel the sunshine just pouring through the microphone! So I thank you for asking. What am I feeling optimistic about in math education? Hmm. OK, this is gonna sound a little bit cop-out-y, but I have been so completely jazzed about not only our podcast, but the conversations that I've been seeing circulating in other math podcasts that are out there around curriculum, around new books coming out. It just feels like despite overwhelm, despite exhaustion, that most teachers really do love learning. And so there's like that kernel. And so I just feel like there's books on my shelf I wanna read; there's podcasts in the queue I wanna listen to; and summertime is the best, best time to do it.



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Dan Meyer (01:39):

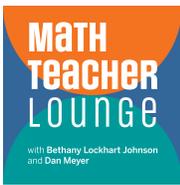
People still feel hungry out there for learning. They know the importance of the craft and its impact on students. And, yeah, people are tired, but also it is so cool to see people still jazzed about learning more about how to teach students more effectively. Me, I'm excited right now, I have a very specific excitement right now, which is that today we announced that Desmos, where I work, and Amplify, our sponsor, are no longer gonna be two separate things. That we are joining together. That I, and all these people who have done so much work over the last 10 years developing digital math technology, we're gonna go and work inside of Amplify as a division called Desmos Classroom. And we're so excited that...what we cracked, I think, at Desmos, is a way of thinking about how teachers and their tools—computers, for instance—interact with students in math. And I love what we did there. But we never really cracked the question of, "How do you support entire school systems in taking up these ideas and tools?" And Amplify has really done that. So I'm super-excited to partner up there. That's what I'm optimistic about and happy about.

Bethany Lockhart Johnson (02:40):

Congratulations! That's a huge transition, and I'm just so excited about the amazing work that both Amplify and Desmos do. But then, the idea of Desmos being in more classrooms? Those tools being available for more students? With the reach? I mean, I'm just excited! It's a big day, Dan.

Dan Meyer (03:00):

Thank you. Yes, exciting day. And I'm excited about also about our guest we're bringing on today. How's that for a segue? I'll be excited to hear what our guest is excited about in math education. I just wanna say that what our guest, Lani Horn, Professor Lani Horn, has exposed us to is this idea of an asset orientation and its importance. And I do think I'm not over-exaggerating or overstating to say that the idea of an asset orientation towards students and their thinking has been possibly the most transformative idea for me in the last five years of being an educator. And



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adopting it has led to my favorite lessons, my favorite teaching experiences, my favorite relationships with students. I say all that—you know, I don't wanna gas things up too much; is that too high of a bar here to have expectations? But it really has been tremendous! And Lani Horn gave a talk several years ago called "An Asset Orientation Is Everything," which really changed the game up for me. And Bethany watched it as well. So that's why I'm so excited to have on the person who gave that talk. And who's done so much research around what an asset orientation offers students and teachers. So we're bringing on today Lani Horn, who is a professor of mathematics education at Vanderbilt University, Peabody College, who centers her research on ways to make authentic mathematics, ambitious math teaching, accessible to students and teachers, particularly those who have been historically marginalized by our educational system. I think Lani has just a beating heart for students, yes, but also really respects the work of teaching in ways I think are so needed and sometimes uncommon in the world of math-education research. So Lani, thank you so much for coming on and joining us in the Lounge.

Lani Horn (04:41):

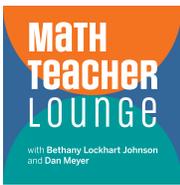
Thanks for having me.

Dan Meyer (04:44):

We would love to know what you are excited about and optimistic about right now in the world of mathematics education. What's got you a little bit gassed up?

Lani Horn (04:52):

Up, gassed up? Hmm. Let me reframe it, 'cause I don't know if I'm gassed up, but I'm cautiously hopeful that maybe that in the wake of the interrupted learning that's been sort of widespread during the pandemic that maybe we'll get some traction around more strategies for teaching in heterogeneous classrooms. Which I think every classroom is, to varying extents: a heterogeneous classroom. And I was talking with a colleague the other day about this idea of hmm, maybe modeling would be a really cool thing to focus teachers on. Doing some more mathematical



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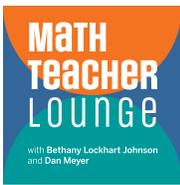
modeling across the grade levels. Because it just seems like there's a lot of opportunities for kids to kind of catch up on ideas and understandings that they may not have fully grasped because of interrupted learning, interrupted schooling. But also with room to engage in a lot of ideas. So we were playing with that and I was like, "Gosh, that'd be pretty cool if people took that on more broadly." 'Cause I don't think that there's been enough conversations about meaningful differentiation in that kind of way, like at the level of curriculum. So I would love to see an upsurge in interest in that kind of stuff, 'cause that's a big place where I have a lot of passion, so I'm ready! I'm ready for people to ask questions about that. And actually it's really very, very, very closely related to the topic today of having an asset orientation towards students.

Bethany Lockhart Johnson (06:34):

First of all, I'm so excited to have you on Math Teacher Lounge, have you in the Lounge, and get to talk to you, because when Dan sent me this talk, my first thing was, "Oh, I think I know what asset orientation is and looks like." You know, you kind of hypothesize about what you think it's going to be. And then you started talking and I'm like, "Wait, wait, why am I just hearing this now?" So I thought I knew what it was, but really I felt like there was so much to unpack. And I would just love for you to share with our listeners, in case they are like, "Oh, asset orientation, I know what that is. I've got it. My students have got it." What is it? And why does it matter so much to our teachers?

Lani Horn (07:19):

The most obvious point is that asset is the opposite of deficit, right? And we know that deficit thinking is very harmful to students. That there's a real teacher-expectation bias that that kids pick up on, that we communicate indirectly to students and that impacts their learning and their ability to meet our academic expectations and, other expectations in classrooms. So an asset orientation is looking for students' strengths and trying to work from those strengths as a basis for your teaching.



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Dan Meyer (07:54):

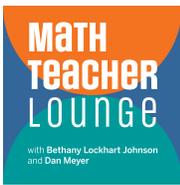
So that's a really fantastic starting spot there. And I think what's initially surprising to me about the research you cited in your talk, that is built around an asset orientation, is how...I think if you come at learning from a—I guess in research, they call a cognitivist frame, where learning happens when teachers say the right things that make a transfer from the teacher's brain to the student's brain. A lot of what you're describing is very counterintuitive, I think. The asset orientation describes a teacher's kind of subtle disposition. It's not what, like what they're saying exactly. It's what they communicate in the subtext and the body language, that all emanates from some perspective on students and the idea that that filters down somehow and students pick up on that—like a smell in the air—and that determines a lot of their learning, I think is one part of your talk and the research that I thought was really surprising. How close is that to like how this actually works? And can you add to that description or pivot it a little bit?

Lani Horn (08:54):

Expansion of the sort of cognitive framing of teacher and student interaction...part of what's really hard about developing and maintaining an asset orientation is that schools are organized in ways that rank and sort children. And so when we are just using the everyday language of schooling, sometimes we're injecting these preconceived deficit notions of students into our talk and into how we're thinking about, interpreting, looking at students. So not only is this interruption a sort of a cognitive lens on teacher-student interaction, but it's really looking at how the social environment is setting teacher-student interaction to take on certain kinds of framings.

Dan Meyer (09:44):

This is what I mean about Lani having such a generous frame towards teachers and the work of teaching. I wonder, though, if you could help us make concrete how an asset and deficit orientation might play out in a hypothetical classroom interaction.



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Lani Horn (10:00):

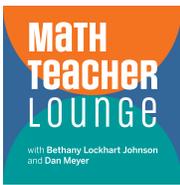
Sure. A really commonplace example is a teacher has a group of students. It's October or November. So there's already been a few assessments. And that gives the teacher an idea who the strong students are and who the struggling students are. And they're having a classroom conversation. And someone who hasn't performed well, a kid who hasn't performed well on those assessments—the teacher poses a question. A kid who hasn't performed well on the assessments is called on. And they sort of hesitate in formulating their response. And the teacher with that lens of "this is a struggling student" then may have to make a decision: "Do I persist? Do I support this kid? Do I help them formulate an answer? Do I try to draw out their thinking anyway? Or do I move on to a kid who is academically performed better in my class?" And I would say that a lot of teachers in that situation would very understandably say, "OK, I get it. You're not a strong math student. You're not confident in my class. I'm gonna move on because I need to get through this lesson to somebody who I know is gonna provide me with a correct answer." And they do it also out of, sometimes, a sense of care, of not wanting to put that student on the spot. However, part of what is another unintended result of making that choice is instead of trying out that student's thinking, listen to their sort of, maybe, hesitant answer, and trying to find the kernel in it that maybe could be supported and amplified, that kid then loses an opportunity to have their idea be a part of the whole class's mathematical conversation. Completely common, completely understandable kind of interaction that I see all the time.

Bethany Lockhart Johnson (11:52):

That feels so huge. And that I can actually picture that happening.

Lani Horn (11:56):

Of course. We've all seen it. We've all done it.



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Bethany Lockhart Johnson (11:58):

We've all seen it and done it. And I think it's so key that you mention often it's from a place of care. Of "I want that student to—look, I called on you; you're a part of the conversation; you're a part of our community." But with it, I brought all of that other information that I think I have about that kiddo. Right? And how I think they're struggling or navigating the question. And "Here, I'll help by..." You know? But what I immediately thought of is how much the other students also pick up on that, right?

Lani Horn (12:36):

Of course.

Bethany Lockhart Johnson (12:36):

I remember this time, this student in my class, a student who had struggled on some of the work we were doing, she came up and she shared her work. And then another student kind of like, it was almost like a strange little pat on the back, like, "Look at that! You did it!" And like really said it in a tone of...like, you're 5, where did that come from?? How had I set up that student to be—I really had to step back and say, "What role have I played in making this student seem like she wasn't capable of what she had just solved?" It was such a learning moment for me. Because I don't think teachers do it maliciously, you know, or even consciously.

Lani Horn (13:33):

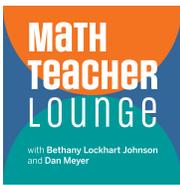
Absolutely.

Bethany Lockhart Johnson (13:34):

And it was so huge.

Lani Horn (13:36):

Thanks for sharing that, Bethany, wow.



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Dan Meyer (13:38):

Even in your description, Lani, you mentioned how the need to keep the class moving to fit, again, a policy that teachers didn't impose, that we have 45 minutes and way too many standards to cover in that many days...I wanna ask you about growth mindset. It feels like every last teacher on earth has finally got the memo about growth mindset. We all know it's the good mindset and that the bad one is fixed mindset. And we have the posters. The posters have been distributed. <laugh> A nationwide mobilization.

Bethany Lockhart Johnson (14:07):

I automatically pictured the posters.

Lani Horn (14:09):

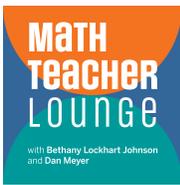
<laugh> Of course.

Dan Meyer (14:11):

We've got the posters up, people! So we're good! And now here comes asset orientation, which has some of the similar kinds of happy feelings, good vibes, about teaching and students and learning. So I was just wondering if you could help us kind of differentiate those two kinds of concepts.

Lani Horn (14:28):

I think that an asset orientation is something you're never done cultivating. I think it's an ongoing stance that you have to constantly reset and reexamine. And it is recognizing the links to the social categories that students inhabit, the identities that they bring with them, the bodies that they live in, the different abilities and disabilities. And it's actually a place where, when you really engage this work in a meaningful way, I think it has the potential to make you kind of a better human being. Because you have to constantly say, "Gosh, why did I do that? What is it that my expectation was? Why am I having such a hard time with this particular student,



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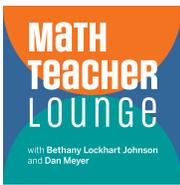
finding something that they're smart at, something that they're really good at?" 'Cause that's the question. That's the asset orientation question. You look at your students and you say, "What is it that they are smart about? How are they smart? I understand that school values this; I understand that my assessments value this; but what are they smart at? And how could I bring that into the meaningful work of my classroom?" Which is a very hard question sometimes.

Dan Meyer (16:03):

Yeah. Oh, so many thoughts here. Like one, I just feel like it's such a value for teachers, for anyone, to have a big, clear, unanswerable-in-your-lifetime question to motivate your work in teaching. If you don't have that, then the job is too small, basically. So I love that it's a question that offers ways to dig in every single day. Every interaction is an opportunity, and it will never be answered. That's wonderful. I love how I just feel like there's...sometimes we have conversations with Lounge guests, Bethany, where it really gets out of the realm of the school. And it starts to creep on in to the personal life. It starts to creep on in to the spiritual life. And I find, with this sort of idea—the value of a human being—I feel when I have an asset orientation towards my key relationship in my life—my best friends, my spouse, all these things—that that's an indication to me of a really big and valuable idea. And the question of the difference between growth mindset and asset orientation, I wonder if it's relevant here that a growth mindset is a concept that was studied and originated by an education psychologist, Carol Dweck, and you are someone who operates with a social-cultural frame that considers more than the student's mind in the unit of a student, but like what is going on and what are Bethany's students perceiving in that moment you described, Bethany, that was you and a student, but everyone kind of feels what's going on. I wonder if that's a useful differentiator here. Do you have any thoughts about that?

Lani Horn (17:30):

Yes. I do think that the anthropological perspective that I take—where I really look at the cultural sources of these perspectives and these expectations and narratives,



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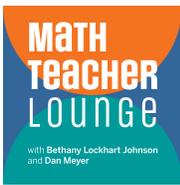
I would say, about who can learn math—are really, really important. And they're part of what sometimes becomes invisible in the classroom. Though those are a really, really important part of the ongoing work of developing an asset orientation. And of course, I come to it from my own personal experience. I was an undergraduate math major. And sometimes by the time I got to my senior seminars, I was the only woman in the room. And you know, I felt that. I felt the stigma of low expectations. I felt the missed opportunities to dig deeper because people were trying to protect me from being wrong and embarrassing myself. And so on. So it's personal. And of course we see this applying to other social categories as well. We know that the bias is not just against women in math, but people of color, against people with different kinds of abilities, and so on. So I think that that's why it's sort of this ongoing personal work. And I think, too, that we will inevitably in the course of committing ourselves to this find students who challenge us, especially in our society right now, the way things are so fractured. You know, what if you have a student in your classroom who holds political views that you find really odious? How do you find a way to engage that student in a way that respects what they do have to offer to your class, while also making sure that the class is a safe place for everybody? I mean, those are really, really complex dynamics to manage. And, you know, I can talk a lot about that too.

Dan Meyer (19:30):

What a job; what a job. Yeah.

Bethany Lockhart Johnson (19:33):

I was really struck, too, because I feel, like Dan said, we've gotten the posters. And not to undermine the power of growth mindset—I think it has impacted many, many students and communities—but it sometimes stops there. The conversation stops there. Well, you know, we have a chant we do every day. We have the poster on the wall. My students have a growth mindset. And I think what I really appreciated in your talk, and as I've learned about your work, is the invitation to teachers to be vulnerable and to really look at... I do feel like even sharing that



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story, you put a certain amount of vulnerability of, like, have I failed in some way? But I care about my students. I'm committed to cultivating a safe space. So I guess something I'm really curious about is: what do you think needs to happen or needs to be possible for teachers to further cultivate an asset orientation? Because even the ability to pause and to be reflective, sometimes it doesn't seem possible. So I think it's beyond just the teacher, but in the school, the district...what are some things you feel?

Lani Horn (20:49):

Are you letting me be the queen of designing schools? 'Cause that's a job I've always wanted! <laugh> OK. So if I were the queen of designing schools, teachers would have fewer student contacts.

Bethany Lockhart Johnson (21:04):

Say more.

Lani Horn (21:05):

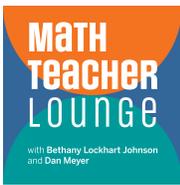
When I taught high school, I had sometimes...I think the most I got was 180 student contacts a day.

Bethany Lockhart Johnson (21:12):

Wow.

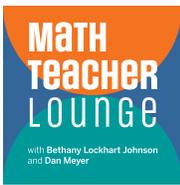
Lani Horn (21:13):

So when you're looking at 180 kids a day, that is just sort of a capacity issue. How am I supposed to really look meaningfully at each of those individual people and find what's valuable and strong and smart about each of them? I think that in the U.S., teachers have more instructional time than any other developed country. We need more planning time. Because that's an opportunity to consult with colleagues. Sometimes when we encounter students where we do have that personal struggle



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of, "Oh, gosh, I am really having a hard time connecting with you and seeing your strengths," wouldn't it be great to be able to go to their last year's teacher or their English teacher or some other teacher and say, "Can you tell me about your experiences with this student? Because I'm really wanting to connect and I'm having trouble." And wouldn't that be wonderful if we had resources to do that? The other thing I would do is I would get rid of a lot of the meaningless accountability, which I have found has only amplified sort of the sorting, and sort of put a technocratic veneer over kids' deficit thinking about their own selves. Kids get a printout saying that they're "below basic" and you say, "Hey, that was a really good idea!" And they don't believe you 'cause they have this printout that puts them in a different category, so there's no way they could be good at math. So I think we've really done a lot of harm in the annual testing of kids in that way. Especially with the individual reporting. And often the metrics we're using to do that are not designed to be disaggregated to the individual level. So we have a lot of measurement problems. I'm kind of going back to your question before, Dan, about what's the difference between growth mindset and an asset orientation. I think that sometimes—I don't think this is the way Carol Dweck intended it, but I think sometimes—and I've seen her rebut the way it's been used in schools—but I think sometimes the way that growth mindset has been used in schools kind of brings it back to an individual problem: "We don't have unequal funding in our school system! We don't have systemic racism! We don't have childhood poverty and malnourishment! It's just about having the right mindset!" And we know that all of those other things have a huge impact on who engages in school and who's able to get access to schooling and the formal learning that goes on there. And so there's a little bit of an erasure that happens in the way that growth mindset has been taken up, and putting the onus back on students and teachers as opposed to going, "Wow, we're in this system where the cards are stacked a certain way, and I have to somehow navigate that as a teacher and figure out how to hold you up in a system that is trying to push you down." Which is a really different kind of job than to put a poster on my wall and do a chant in the morning.



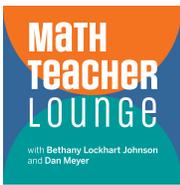
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Bethany Lockhart Johnson (24:39):

And I'm wondering, if you were looking at how you would hope that asset orientation gets brought into the classroom...it's not another poster, right? What do you think would really help make some meaningful change around the way we think about that and teachers and systems take that on?

Lani Horn (24:59):

So I think that the important thing is helping teachers develop a vocabulary for recognizing students' mathematical strengths in particular. Recognizing a strength is not, "Wow, you did really neat work!" or "You have really nice handwriting!" Those are not authentically mathematical strengths, right? So I try to think about—ah, for color theorem, "How cool! What a great way to be systematic!" You know, that being systematic, developing a good representation, asking a good question, asking the next "what if," all of these are profoundly mathematical ways of thinking. And there's more—I'm just giving you a few examples—that are not always recognized in classrooms that are built around quick and accurate calculation. Right? When that is the most valued form of smartness, kids who can do all these other great things, like, "Wow, that that is such a clear way of explaining the connection between that graph and that equation! I love it. That helps me see what's happening every time that variable increases." You know? I love when kids do that! That's not quick and accurate calculation, right? One of the most heartbreaking things I've seen sometimes is teachers doing a really good job of pumping kids up and helping them feel mathematical and seeing their mathematical strengths in the everyday lessons...but then they get a standard assessment and are told they're a C student. How do you support the messaging you're doing in your teaching and in your interactions so that it aligns with assessment? And this is where the sorting mechanism of school kind of inhibits some of the ways that we really should be valuing kids in a way that would support their ongoing learning and their own particular flourishing.



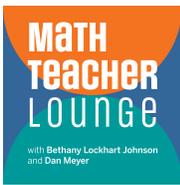
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Dan Meyer (26:59):

I love how you describe this whole process as a career-long trajectory, how one does not ever finish creating an asset orientation in oneself. I'm wondering if there is some way for teachers who are listening to start to experience, to enter into that kind of feedback loop, that experience, of what an asset orientation offers them and their students. Do you have some way for us to start digging in here? A challenge, if you will?

Lani Horn (27:24):

Yeah, sure. This is a process I learned from teachers I've worked with, so I did not make this up. It's called a roster check. It's where you take a roster of one of your classes, and you go through student by student and see if you can specifically name a way that that student is mathematically smart. And it's a private exercise if you want it to be. And just sort of go through. And then for the students who you really struggle to name how they're smart, step back and see if there's some kind of a pattern. And when I've done this in PD, as an exercise, I've had teachers have some real light-bulb moments where they go, "Oh my gosh, I really don't know the quiet girls in my classroom," or "I really don't know the multilingual learners in my classroom." So they can sort of start to see a bias in who they're interacting with and who's been able to engage in ways that uncover what their unconscious bias might be. And sometimes it's not unconscious bias. Sometimes it's not necessarily a category like that. It's just the kids who are more outspoken, the kids who are high achieving. It doesn't have to necessarily be linked to an obvious social category. However, I do think that then what you can do with that list of kids who you don't have a name for their strengths, is you can kind of take a couple of them a week and make that your project to really observe them a little more intentionally and a little more closely. Try mixing things up. Have a chat with them. Say, "Hey, so what do you like to do? What are the things that you like to do in the world? What are your hobbies?" So maybe you can start to get some insight that way. You can talk to other teachers. Most kids have something that they're passionate about, something



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that animates them and wakes them up in the morning, and knowing that and finding ways to meaningfully tie that to their mathematical learning can be extremely powerful.

Bethany Lockhart Johnson (29:35):

Lani. I love that idea, taking that time to reflect and allow yourself to be vulnerable as you take a look at your biases and how that's impacting your classroom space. I have learned so much from our conversation. I know we're just scratching the surface of the work that you do. So if folks want to learn more, want to continue engaging in these ideas, where can they find you, or where can they find more about your work?

Lani Horn (29:58):

I'm pretty active on Twitter. My handle is @ilana_horn. No "e" on that. And I've written a couple of books for teachers. One is called *Motivated*. Another is called *Strength in Numbers*. People can check those out.

Bethany Lockhart Johnson (30:17):

I love it. For our listeners, we are thrilled to share this conversation with you, and we wanna hear how you take up this challenge: What do you uncover? What do you notice? What are you learning about an asset orientation? And you can share that by finding us on Twitter at @MTLshow, or you can also continue the conversation with us in our Facebook group, Math Teacher Lounge. We're so excited to keep learning with you. And thanks for listening.

Lani Horn (30:42):

Bye! Thanks for having me.

Dan Meyer (30:44):

Bye, folks. Thank you.