Dan Seed:

Hello and welcome to Big Ideas. A podcast from Texas State University in San Marcos, Texas. I'm Dan Seed from the University School of Journalism and Mass Communication. On this month's episode we have a topic that is going to interest parents, How Children Learn To Lie. It's one that I'm really interested in as well and we're joined by Dr. Jennifer Clegg an assistant professor in the department of psychology and Dr. Katherine Warnell, also an assistant professor in the department of psychology. Thank you both for joining us.

Dr. Katherine Warnell:

Thank you for having us.

Dr. Jennifer Clegg:

Thank you for having us.

Dan Seed:

So as a dad to two girls, one is four and a half and the other is two and a half. As I said, this is a topic that really interests me and I'm sure other parents out there. So one that will have great interest for folks as they learn to navigate this topic with their children. But before we get into the work and the research, tell us a little bit about your backgrounds and research interests. Dr. Clegg, I'll start with you.

Dr. Jennifer Clegg:

Hi, I'm Dr. Jen Clegg and I have been at Texas State now for four years. It's hard to believe it, it's gone by pretty quickly and my interests are in cross-cultural developmental psychology. So what that means is I'm interested in how children's cultural environments and that can be anything from the family level to the country level impact how they grow up and how they learn. So really thinking about things like what are the kinds of skills that children are picking up on from other people and how do little things like cultural norms, right? So things that we don't even realize exists but really are just a big part of our lives, how are kids picking up on those and then how are they also driving how they learn from other people as they go on their way to becoming adults.

Dan Seed:

And Dr. Warnell?

Dr. Katherine Warnell:

Yeah. So I've been in Texas State since 2016. So I came in just before Jen started here and my research looks at social cognitive development. So social cognition is just a fancy way to say, thinking about people. So thinking about people's thoughts and feelings and how do you know that other people are thinking things that can be different than what you think, right? That other people can know things you don't know or might not know something that you do know. And so really looking at how children and then all the way through young adulthood, how we learn to process other people's emotions. How our ability to think about others thoughts and feelings influences our friendships. And so I was really happy when Dr. Clegg started on faculty here because there's so much cool stuff at the intersection of cross-cultural development and our social development and so we were really happy to get some collaborations started.

Dan Seed:

And so this topic here that we have, learning how children learn to lie of course, is rooted in research. And the research that we're talking about began before the pandemic and focuses on children between four and 10. Walk us through how this came about and what was the process for this research.

Dr. Katherine Warnell:

Yeah. So this is something that I kind of hinted at earlier that Dr. Clegg and I both had an interest in. So from my perspective, right? Thinking about other people's thoughts, what they know and don't know very important for pulling off any kind of lying, right? So if you're going to tell your parent that you did not eat the last cookie out of the cookie jar, you've got to kind of know, "Did they see me do it? Can I pull off the idea that the dog somehow has figured out a way into cookie jars, right?" You've got to be thinking about other people's thoughts, feelings, how they're perceiving you, how you're perceiving them. So, lying as kind of a real world example of all of these research questions is sort of how I got into it and then it dovetails really nicely. I'll turn it over to Dr. Clegg here with some of the things she was working on and thinking about.

Dr. Jennifer Clegg:

Yes, absolutely. So as we approach this question and this actually started with one of Kat's or Dr. Warnell's graduate students, so Callie De La Cerda, who is now a PhD student at UT Dallas, for her master's thesis she brought to us this idea of lying, which is something that neither of us had really studied before. But when we started talking more about it like Kat said, it really nicely presents an intersection between our two interests because not only do you have to have really sophisticated cognitive skills to be able to lie successfully. What is and is not appropriate to do in terms of lying, which is something that we'll get into is also culturally dictated. So the kinds of lies that we tell to each other, the kinds of lies that we learn about are actually part of children's cultural environment from an early age and something that is heavily culturally influenced. So here we have the intersection of social cognition and cross-cultural psychology and a really great real-world applicable question.

Dan Seed:

And my understanding is that this research was conducted through a parks program, right?

Dr. Katherine Warnell:

Yeah. So this project got started like Jen was saying with a wonderful student Callie, my very first masters student here and all of this wouldn't be possible without amazing Texas State undergraduates and graduate students. And so I had previously done work where kids come to my research space and they play games I mean, so one of the games we had them play was a sticker hiding game where they hide a sticker from a puppet and the puppet asks where they hit it. And if the kid tells the truth, the puppet gets to keep the sticker but if the kid lies they get to keep the sticker. And we found that kids as young as four just happily are lying to these puppets about where the stickers are and getting the stickers for themselves. And that's a great way to work with kids and families but as that project was sort of wrapping up, Dr. Clegg came to me with a really great idea that I'll let her talk about because it was something she was really passionate about, about getting even more involved in the community through the parks program.

Dr. Jennifer Clegg:

So part of being a cross-cultural psychologist means that I get to go to places outside of the US and ask developmental research questions but also means that I've never been restricted to a lab space per se. So, whereas a lot of developmental psychologists get trained in this idea that you bring kids to your lab space and you have this really controlled environment in the past when I've done research I've gone to the South Pacific and had to think about "Okay, in places where I don't have a lab how can I set up research to make it happen?" And so some of my favorite videos to show are when I'm in Tanna Vanuatu for example, which is an island nation in the South Pacific, and I'm doing research with kids and we're outside on a mat and a chicken walks by, right? So a very different training experience brought me in how to do research and as part of this and part of my training at Boston University, I had also seen a focus on going into the spaces where children already are.

Dr. Jennifer Clegg:

So rather than having to work to have families come to you, going to where they are going to be. And one of those places that we realized existed in San Marcos is the parks. So children are already going to be at the parks with their families I'm sure you know as a parent of two kiddos it's one of the best places to take kids.

Dan Seed:

They love it, yeah.

Dr. Jennifer Clegg:

Yeah. So we said, "Is there a way that we can bring this model of doing science where families already are that I had been trained in into our community." And so Dr. Warnell and I worked with the San Marcos parks department and we started the science in the parks program. So we were going to children's park in San Marcos and seeing families would want to participate in some fun games and studies there. And the other part of it was also just getting a chance to talk with families about child development. So, often our research gets stuck in journals or it get stuck in the classroom and this is a really easy way to go and talk to parents and kids and see what kinds of questions that they have. Well, they can also help us with our studies and participate right there without having to worry about coming into the [inaudible 00:08:21].

Dan Seed:

And so what exactly did your research find?

Dr. Jennifer Clegg:

That is a great question. I don't know where to start with that Kat...

Dr. Katherine Warnell:

Yeah, this is the big one. I was listening to you Jen [unequivocally 00:08:32] I can say no chickens have wandered by any point during any of our studies here in Central Texas, but you never know and I will note, although that program is of course on hiatus with the pandemic we're really excited for when we are able to safely restart it because we really do miss... we've been doing a lot of work over zoom and it's not the same as the same kids and families and in person. So I'll start with one of the first published papers from this program of research and then maybe Jen if you want to talk about some of the new exciting things that we have going on cross-culturally. So one of the first papers was with my graduate student, Callie De La Cerda and so I mentioned that sticker hiding paradigm and we had kids play a couple of different versions of that game. So these were four to seven-year-old so pretty young kiddos and they played a version where if they lied, they were able to keep the sticker for themselves but then-

Dan Seed:

Well then that's tough for kids. They want to keep it, right?

Dr. Katherine Warnell:

They want to keep it so they are-

Dan Seed:

They want to keep it.

Dr. Katherine Warnell:

...they are pretty willing to lie in fact, we started off with that version of the game and we had a problem which was that every kid just lied every time. And when you're studying child development you want what's called variability wants, some differences between kids try to figure out why kids are different from each other. So we added some new versions of the game with these puppets and we told kids that they were either on the green team or the yellow team and then randomly we flipped a coin that day. Well, kids love being on teams like this so oh, they're on the green team, all right they love the green team. And then they get to play these sticker hiding games with either people on their same team or people on the other team. And they could play some different iterations of these games where say, if Dan, you and I are on a team and Jen's on a different team I can lie to get you a sticker or I can keep it from Jen or I could lie to Jen and get to keep the sticker from her.

Dr. Katherine Warnell:

And we had a version even where a lie meant no one got to keep the sticker. So if the kid lied about where the sticker was hidden we just put it back in the box. And we found regardless of who you're playing against your teammate or someone on the other team, if you have a chance to keep that sticker for yourself you're going to tell a lie. So you are going to lie to someone even if we're on the green team together and I'm like, "Well, I could get the sticker. I guess I don't want Dan to get it and I'm going to lie to keep it for myself." But as soon as you know it's about helping a teammate out and there's no chance for me to keep it kids are much more willing to tell lies to help out this person on their same team than someone on a different team.

Dr. Katherine Warnell:

We even found kids as young as four are willing to tell a lie to keep the sticker out of the other team's hands even if it means no one gets it. So they're willing to tell a lie about where that sticker is hidden just to make sure that the opposite team doesn't get it even if it has to go right back in the box, we called these sort of spiteful lies that we're seeing. And even these young kids were, "Well, I'm willing to lie about where I hid it just to make sure you don't get to keep it even though I don't get to keep it for myself." And so really showing how young kids are really socially sophisticated. And if you've got a four-year-old in your life you may already be thinking about this but definitely how even very young kids are sensitive to the group membership, right?

Dr. Katherine Warnell:

What team they're on. They're able to use lying and sophisticated ways. They know when it's maybe more of a selfish lie, more of a helpful lie. And so all that work was about something called anti-social lying or sort of telling a lie to trick or deceive to maybe help yourself. There's a whole other type of lying out there that we're really excited about which is where you maybe tell someone they look great even though they don't look great that day. Oh, your new haircut that you gave yourself in March of 2020, new haircut looks fantastic. It did not look fantastic, right? And so I'll kind of turn it over to Dr. Clegg here about what work we're doing on that type of line which is called a prosocial or a white lie.

Dr. Jennifer Clegg:

So when we think about lying, right? The first kind of lie that comes to mind are those kinds of lies that Kat was talking about, right? Those lies that keep you out of trouble or are self beneficial in some way, right? They get you something. And these are also the lies when we think about when kids are learning how to tell them, these are the earliest emerging ones, right? So these are the ones where you start to see maybe you're three or four-year-old tell you like, "Oh, it wasn't me that ate that cookie or yeah, I brushed my teeth." When we all know that that's definitely not the case. But another part of the work that we had been doing with kids was starting to see well, we know that's an earlier emerging lie. What about these more complicated kinds of lies?

Dr. Jennifer Clegg:

So these lies that aren't necessarily directly beneficial to you but are more kind of social on purpose. So those things that help us to maintain good relationships with each other. So things like Dr. Warnell was saying, if someone shows up with a terrible haircut, are you going to be honest or are you going to go ahead and say, "No, you look great." Right? Or I think back to parents and especially being a parent with a pandemic baby, right? Without maybe some childcare support. If you go and you ask your mom on a Zoom call, "How am I looking today?" She's going to say, "Great. You look awesome." Even though you've probably looked very, very tired and [unflustered 00:13:37]. But going back to that idea of intersections we kind of take for granted that this is something that we do and this is actually highly culturally variable.

Dr. Jennifer Clegg:

So the idea that if someone asked you for some sort of feedback that you would automatically... the polite thing to do would be to say, "No, you look great." When they don't or "No, this food is amazing." When it isn't is true in the United States but not necessarily true in other places. And so we realized this through talking with colleagues about our research that there's actually a lot of cultural variability in the extent to which people are socialized to tell these pro-social or white lies. And I have direct personal experience with this because I'm actually married to a Hungarian and in Eastern Europe and in Hungary, one of the things we realized very early in our relationship is there's actually a lot more focus on direct feedback is the polite thing.

Dr. Jennifer Clegg:

So if I'm out there and am asking for feedback about an outfit or about a drawing as we do with kids and we'll talk about a little bit more in a second, it would be rude to not tell me the truth, right? Because part of our social contract in that culture that I expect the truth out of you. So this can lead to a lot of cross-cultural differences and misunderstandings, right? So in the United States we have this idea that maybe I don't want that direct feedback and that feedback is actually really rude whereas in other places not giving direct feedback is actually considered really rude. So we started wanting to look into how adults are thinking about this and then also working backwards to think how this is socialized with kids.

Dan Seed:

You mentioned the idea of a drawing and saying, "Oh, that looks great or you did a great job with it." I mean, clearly as a parent and you find yourself doing that with your kids, right? "Oh, it's beautiful. I can see that, that's mommy." When it clearly doesn't look anything like that. So this is something that we're teaching our kids without even really realizing it and then is that something that then they pick up? Is that part of how they learn to lie?

Dr. Katherine Warnell:

Oh, definitely. Yeah.

Dr. Jennifer Clegg:

That's part of what we're trying to explore. So this is actually a pretty underexplored topic with indevelopmental psychology. So there's limited research looking at when prosocial lying develops and also the ways in which kids are picking up on it. So is it that kids are looking at their parents because we don't know when those drawings situations do, they actually think their drawing is really bad and so when you say it's great, are they thinking, "You're lying to me." Or do they think they're drawing is really great and then you're just confirming that they think it's really great. And do parents even view that as a lie? Is another part of the kinds of questions that we're asking. So this is actually... Kat talked about some of the research that was out there and was published. We're in a really great spot especially for those interested in being a part of research where we want to ask these questions with parents and children. And we're also looking at this cross-culturally with collaborators in the Netherlands and I don't know if Kat wants to talk a little bit more about that.

Dr. Katherine Warnell:

Yeah, I know. I think it's such a great question. We're doing this over Zoom now so we've set up... and now I feel like all four-year-olds have become very proficient at the world of Zoom. So we're always looking for families to get involved but we show the kid over the video camera and we're doing this back in person in person, and we say, I worked really hard on this drawing and this is where podcasts can only do so much as a medium I can't show the listeners what it looks like but it's not a good drawing. So I say, I worked really hard on this drawing and then you hold it up to the kid and it is very, very bad, right? And you ask the child, well, what do you think of my drawing?

Dr. Katherine Warnell:

Is it good? Or is it bad? How many stars would you give it? And we do find the four-year-olds, the five-year-olds typically are pretty honest with you at that point. I've had many four-year-olds look me in the eye and say, "It is bad, one star." And then as they get a little bit older you start to see by seven, eight, definitely say nine, 10, "Oh, it's great, five stars." And we do a little check so I'll leave the room and Jen will come in and she'll go, "What do you really think?" And then those eight, nine, 10-year-olds go, "It's not very good." I remember one kid we asked, "Well, then why did you say it was good?" And they said, "To help her self esteem." Which probably is something thinking about this idea, this socialization or what we learned from those around us.

Dr. Katherine Warnell:

They probably got that exact phrase from somewhere, right? And so that's what we're trying to kind of investigate. We're curious why some six-year-olds are already kind of telling these little white lies and other six-year-olds maybe are being a little more honest and we're collecting some data here and in the Netherlands about how parents talk to their kids about these sorts of things to try to unpack it more. But yes, if you want a four-year-old to look at you and tell you your drawing is bad, this is the business to be in for that. So it's been a lot of fun to do the work and like Jen said, we love having a families listening to this are interested we'll do a little plug at the end about how they can get in touch with us to get on Zoom and see what their four-year-olds say when they see that art.

Dan Seed:

I can speak from experience that our four and a half year old, she's usually pretty kind, right? "Oh, daddy looks good." But occasion should go that does not look like that at all. That is not what that looks like, deep down and you're kind of like, "Oh no, I've worked hard on that." I did my best but they can be very honest and blunt in that so it's interesting to hear you say that. So when our kids do something, right? Like most parents there's a reaction from us, why did you do that? Or don't do that, all right. And then comes the parenting, the teaching comes but I'm always fascinated by the why. Like, "Why does she do that? Why is she thinking like that? Why is she reacting in such a such way?" And appears to be from what I've read about your research, the same goes for lying that there's an underlying reason for it in the sense that it's developmental, that it's completely normal.

Dr. Jennifer Clegg:

So being developmental psychologists and also being parents, we have some weird takes on things sometimes. So when our friends share stories about their kids lying for the first time, Kat and I both get really excited. And we say, "Do you realize how cool this is?" Because it shows that your kiddo has gotten to a point where they've reached so many important developmental milestones. And so to be able to be a successful liar and I know Kat started talking about this a little bit earlier, you have to have so many of those brain building blocks come into play. So first you need to understand that what's in your head is not the same as what is in what's in other people's heads, right? And so any parent of a three-year-old will tell you this is one of the biggest challenges, right? Is that your three-year-old thinks you know exactly what they're thinking.

Dr. Jennifer Clegg:

And that can lead to a lot of disgruntlement among three-year-olds because they think you're a mind reader but as they get to four and five they start to develop something called theory of mind. And so they start to understand, "Okay, so what's in my brain is not the same as what's in my mom or dad's brain." So if I want to eat that cookie and they don't see me unless I tell them they won't know, right? And that's really, really cognitively sophisticated. That's huge. And I don't know if Kat wants to talk about some of the other milestones that have to come into play to be a really good liar.

Dr. Katherine Warnell:

Oh, yes. I mean there's... and again, when we were saying, you're really good [inaudible 00:21:24]. We're really talking about the four and five age range. So I do want to caveat that-

Dan Seed:

This aren't complex [crosstalk 00:21:29] simple. Yeah.

Dr. Katherine Warnell:

They are simple lies. And it's certainly the case that if you start talking about older kids, teenagers, there can definitely be kinds of lies that would be a concern and that a clinician would maybe be concerned about. But at this when the four-year-old comes to you with their face covered in chocolate and says, "I did not eat the donut." Right? That's showing they're almost all the way there but they haven't quite figured out yet. Well, they can see... my mom can see the chocolate, so she's going to see through that. So they have to have that kind of complex understanding to pull a lie off. It also requires this whole suite of ability is called executive function. So these are things like being able to plan out what your lie is going to be and being able to inhibit.

Dr. Katherine Warnell:

So I know the truth but I can't blurt it out right you have to kind of stay consistent with your story, you have to be cognitively flexible, you have to hold in mind what your story was. And all of those same executive function skills are super important when we talk about going to school and starting to learn in that way. So a lot of those same skills that are important in a lots of contexts help underscore lying. So yeah, all of these kinds of stories our colleagues tell us, although Jen and I's kids are too young yet to be lying. So check back in a few years and maybe we'll kind of change their tune.

Dan Seed:

Yeah. I will just say it's an interesting perspective to come to parenting with what you know and what you study, right? It's going to give you a different view on things. So in that sense I guess, what would be some takeaways that you would give parents based off of your research, based off of your findings and what are some things that personally you're going to take away from what you do and just how you work with children?

Dr. Jennifer Clegg:

I think that's a great question. So when we think about lying and the social sophistication that goes into that here we're talking about more of those anti social lies but also the other flip side that we were talking about those prosocial lies. I know one situation that can be really stressful for parents is, "Okay, my kid's birthday is coming up or a gift giving holiday is coming up and they might receive something that they are not excited about. How can I get them through that social situation." Right? Or "We're going to visit our friends and our friend might not be a great cook. I don't necessarily want my five-year-old blurting out at the table this is really gross, I don't want to eat this." And so part of what you need to keep in mind there is that if we're in a culture like the United States where we want to... maybe our more polite thing is to tell a prosocial lie in that situation, that's a good thing to practice with your kids.

Dr. Jennifer Clegg:

And so you might say, "Hey, we're heading over to so-and-so's house and sometimes the food that she cooks may not or he cooks may not be the greatest but could you for me smile and say, [mm mm 00:24:25], or keep those thoughts to ourselves." And really helping to scaffold your kids. And so there you're kind of engaging in some social emotional learning with them, scaffolding and also transmitting a cultural norm. I think the other part of that is our kids are picking up on this, we're excited in studying more how we're showing them this but also realizing if there's a behavior that you don't necessarily want your kiddo to engage in such as anti-social lying, be really aware of when you're doing that around them. So if you want to teach that honesty is important it's going to be a little bit confusing if you go to the theme park and say, "Okay, I know you're six but today we're going to say you're four, right?" Then you're saying, "I think anti-social lying is okay." So just be aware that kids are watching those examples and picking up on those examples.

Dr. Katherine Warnell:

Yeah. I think that's great and in thinking about it too the example you're talking about is also a good chance with the bad cooking for your kid to practice being in someone else's shoes. And so to say think about maybe how you would feel if you worked really hard on something and someone said they didn't like it, right? So especially if we're in a culture where sort of normalize to be polite and be glowing in our reviews of things, right? To sort of work with your kid about well, how would you... if you gave someone your macaroni art and they said they thought it wasn't a very good present, how might that make you feel? And that's a great tool for what we call perspective taking.

Dr. Katherine Warnell:

Kind of that theory of mind is the term that Jen was using of just thinking about other people's thoughts and feelings and that empathy and trying to take as many lessons as we can from this as we watch our own kids grow up too about it's very developmentally typical to tell lies. It's something that's very expected developmental milestone. So when that happens that is something to be expected it doesn't mean that you did anything wrong as a parent. That's something that kids are just going to learn to do because they don't want to get in trouble for eating the cookie, right? That's a very natural human reaction. So we're excited to keep exploring this and I'm very excited for my own daughter's old enough to do one of these studies.

Dr. Jennifer Clegg:

Yes.

Dan Seed:

Yeah. I know like I said, our four-year-old does those little lies and rather than coming out with their face covered in stuff, she'll go hide in the pantry and know you can't have this. And then all of a sudden you hear something open, "What are you doing?" "Nothing." And then you walk over and there she is, right? So that's good, that confirms that I suppose what she's doing is completely normal. So quickly, I want to just get back to that cross-cultural research that you're doing. I know that you're doing research with a university in the Netherlands. What are we looking for there? What's that process going to look like?

Dr. Jennifer Clegg:

So we're working with two researchers in the Netherlands Dr. Rianne Kok and Dr. Nicole Lucassen. They are both also interested in how lying is socialized across cultures and in particular, how kids are learning from the kinds of lies that parents think are okay. And so in the first part of this research we've been working with Texas State undergraduates and masters students and the researchers in the Netherlands to just kind of get a baseline idea of what lies are considered appropriate in the US and the Netherlands. And why the Netherlands is a good place to do this is that anecdotally people will say well, the Dutch are more direct, right? And you see this on travel websites warning Americans or maybe Brits who are from less direct cultures. When you go and someone gives you feedback it's going to be a little bit more direct and they're not being rude this is just how their culture is.

Dr. Jennifer Clegg:

And in work that we're putting together for publication right now, and that has been presented at a few conferences, we've actually found that this holt when you ask adults... So you're asking Dutch adults, "Is it appropriate to tell prosocial lies?" Dutch adults don't think it is so they don't think that it's actually polite to lie whereas US adults tend to think it's a little bit more appropriate to do so. And then when you ask about different social situations, like imagine that you're in a cafe with a friend and that friend shows you a doodle and it's really bad. What is the appropriate response? Americans are a little bit more likely to say the appropriate response is to lie and to tell them it's a great drawing whereas the Dutch are a little bit more direct in their feedback, right? And they say, it might be appropriate to tell them it's a terrible drawing. And so in future work we're interested in moving from beyond that baseline of cultural differences to really seeing well, what happens before adulthood? What kinds of things are parents saying? What are their values that they're transmitting to children?

Dan Seed:

Fascinating stuff. So lastly, how can people get in touch with you if they want to participate in one of your studies?

Dr. Katherine Warnell:

Good. I was hoping you were going to ask that question so thank you for setting it up for us. So we would love to have folks from all over get involved. One nice thing about pivoting to Zoom studies is if we have listeners who are maybe alums are interested in the Texas Big Ideas but aren't local anymore they can still participate. So if you send us an email to childstudy, so all one word childstudy@txstate.edu, our students look through those emails. Just let us know if you're interested we're looking right now kids aged four to 10 so kind of a really interesting time period where lying develops. Teenagers are really interesting too we just don't have any projects for them right now and families can send us an email there we'll get in touch with more information. Studies last about 20 minutes on Zoom and you get a $5 Amazon gift card for participating.

Dr. Katherine Warnell:

Legally we can't give it to the kids but we can give it to the parents for them having a kid participate in one of our cities and we're also happy to chat with families who just want to know more about science. And then if there are listeners as well who are current Texas State students, we love working with students in our research too. And so they can... even though they're not going to be enrolled in the child study they can still send an email to that same email address and we're happy to talk more.

Dan Seed:

Dr. Jennifer Clegg and Dr. Katherine Warnell, thank you so much for joining us here on Big Ideas.

Dr. Jennifer Clegg:

Thank you for having us.

Dr. Katherine Warnell:

Thank you for having us. It was a pleasure and we're not lying about it. It really was a delight [crosstalk 00:30:49].

Dan Seed:

A delight response, no lie, honest. Okay, good. And that's it for this month's episode of Big Ideas, until next time stay well and stay informed.

Speaker 4:

Big Ideas TXST is a presentation of Texas State University and the Division of University Advancement. Subscribe to experience more innovative thought-provoking content. If you like what you hear consider leaving us a star review five, if possible. The views expressed during this program are those of the individual participants and do not necessarily represent those of the university. Big Ideas is hosted by Daniel Seed, produced by Jayme Blascke, with technical assistance provided by Manuel Garcia. Strategic consultant is Kelly Raaz.