

Sunita LeGallou 0:08

Hello, and welcome back to music for PhDs the art project discussed as a podcast. This is episode number four of eight. So we are at the halfway mark for the season. Thank you so much for listening and following along. And if you're new to the podcast, welcome, I hope you enjoy it. Today we're going to meet our youngest composer. Bekah Simms hails from St. John's, Newfoundland. And like a lot of East coasters, she grew up with a rich family tradition of music. She does a lot of really cool things with live electronics, and she's going to break down how that works and how she used it in her piece 'ForeverdDark'.

We'll also talk to Dr. Kate about 'timber' or the color of sounds and the fascinating phenomenon of synaesthesia. Synaesthesia is when multiple senses overlap. And it may affect everyone as an infant. Thank you so much for listening and let's dive right in.

How did you get started in music?

Bekah 1:21

I was brought up in a very musical family. St. John's has - really not just St. John's, but all of Newfoundland - has a very casual music culture. So a lot of people engage in music without any training. It's just something that happens in the house when friends are around

Sunita LeGallou 1:36

Kitchen parties?

Bekah 1:37

Exactly, yeah. So it was very um, didn't really require me like finding myself it was just kind of already there. And I loved music. I excelled at it in school. I actually was a very good recorder player. Yeah, I really latched onto it, and I would like learn all sorts of video game tunes, and folk songs.

Back when I used to go to church, my mother brought me to this like Christmas service. And there's this beautiful instrument up in the balcony. And I was like, that's what I want. That sounds beautiful. It's a flute. It turns out it was actually clarinet, but then not knowing the difference, I did ask for flute and that's what I got.

Sunita LeGallou 2:18

So I'm curious, like, I don't, I don't have a music background. But I'm always really curious to hear how... so you play flute and you have sounds like some early training and early familiarity with lots of instruments in a casual way. How do you go to compose something for a bigger cast?

Bekah 2:37

Yes, it's really challenging. And I remember asking, when I was in a youth orchestra, our conductor was also a composer. And he put one of his pieces in front of us and had us read it and afterwards, I hadn't really thought about the fact that living people compose music. I know that sounds very silly.

Sunita LeGallou 2:56

I'm the same way, that's why I'm doing this podcast!

Bekah 2:59

Yeah. I mean, I was aware that like people had jobs to create soundtracks or sound design for movies and TV and maybe even jingles. But this idea that someone would have a job that is writing for players and it's not accompanied by any visual or any other media. It's music for the sake of music all by itself. And it's presented all by itself. It didn't really click to me until I came across work by living people as a musician. And if I, if I hadn't come across that as a musician, I'm not sure when that would have really clicked for me.

But I remember asking him I was just like, how, how did you do this? And he said, whatever your whatever your instrument is, write for that. Start with that. So I was playing flute and piccolo in the orchestra and he said, write a piece for flute... and write a piece for two flutes... and then a piece for three flutes. I mean, it's hard to have like a full orchestra of flutes. I don't think many people would want that necessarily. But eventually, by the time I was ready to write for more instruments I had entered undergraduate studies and so I actually had training in and how to write for different instruments and orchestration that became available to me through school.

Sunita LeGallou 4:17

Oh, that's really cool! And do you have like, do you have a favorite, like is flute your favorite thing to write for, or do you have like a, like a size group that you find really comfortable to work within?

Bekah 4:27

That's so funny for a long time, I actually hated writing for the flute the most.

Sunita LeGallou 4:31

Ha! You knew it too well

Bekah 4:34

Ya! And I just knew that like, if I if I didn't do a good job, I would know best of all, you know what I mean? Like, there was more pressure on it, because it's like, oh, she comes from a flute background and doesn't look like she knows what she's doing for flute then she must not know what she's doing for anything. That sort of negative self talk that so many artists engage in.

And so I avoided flute for a really long time, and I think my favorite thing to write for ... it would probably be string instruments. Yeah, just because they're so flexible and they have such a large range and so many different types of sounds and, and know and noise and they're quite capable producing a lot of sounds that are between pitch or notes and noise that they are very, very malleable, which I like. And in addition to that, I would say anything that's extremely, extremely low. So a contra bassoon, a bass flute, tuba ... Yeah, I like things are really low.

Sunita LeGallou 5:34

Do you work with electronics or mixing typically, or is your stuff written just to be played, played straight?

Bekah 5:44

I'm increasingly writing for more electronic elements. That term isn't always clear what it means for me to have electronics. So for me, what it used to me when I was first starting working with them, is that I would create power for digital sound, it would basically exist as a file- like a WAV file - that would play over a set of speakers alongside an instrumentalist part.

And so the electronics would be set in stone, they existed the same way every time. However, lately I've been also looking at live electronics rather than fixed. And so live electronics, they takes like a signal from a microphone. So player is amplified and plays into the microphone. It takes that signal and transforms it or processes it live in the moment at the time. And it spits something out, that's processed into the speakers. And so there's a lot more... um there's a lot more like vitality and what can happen. It's not the same thing every time. And live electronics requires coding and processing or, or sometimes hardware like guitar pedals and stuff. It's a little more challenging.

My experience as an undergrad was that every piece that had live electronics always broke down in the middle of performance! But I've opted to do a type of live electronics called ear cam. And that model is that you hire a programmer you hire someone who knows programming, who knows how to work with a program like Max, you describe what you want, what the effect of the sound is, let's say they like I had this microphone with a cello. "And at this point, I want it to sound like there's 10 cellos and they're spread across both speakers and they have a lot of reverb on them. Can you do that?" And then they just go do that. And you don't have to worry about the programming yourself. You're just making the sound decisions. And that's what I've been doing more of lately, which is what I did in the piece 'ForeverDark'.

Sunita LeGallou 7:38

Oh, that's so cool. All right, you're gonna have to dive into this because I'm having some trouble picturing it. So you'd have like that the cello be on stage and they'd be playing and you'd have this code that was written. And sorry, this sounds really basic, but like, where does the code go? Is it... do you have a laptop on stage or ?

Bekah 7:57

Definitely a laptop involved. The cellist is playing with a microphone. In this case of this piece, the signal is attached right to the instrument body. And so then that sound, that signal is sent to an interface which is hooked up to a laptop. So it comes into the laptop as an audio in. And then the coding is done in a program called Max, which is still coding but a lot of the objects within max are pre coded, then it's a little easier to use. So then the the program processes and changes the audio, and then that that audio comes out of the laptop back into two speakers that are next to the performer.

Sunita LeGallou 8:34

And this is all happening like split second like as they're playing on the cello. The sound is also... the kinda kind of modified sound is also coming out of the speakers?

Bekah 8:45

Yeah, exactly. The reason a lot of electronics sort of fail in the middle of a piece or they don't work at all is because of well there's usually routing issues, but most of it is just the program itself crashing. And that did not happen but just in case we actually had the program running on two simultaneous computers like four simultaneous ins and outs. So that if if one of them crashed, it would just go to the next computer and then we would turn the audio up from that computer and just try and make it as seamless as possible. I was having heart palpitations for sure on that end.

Sunita LeGallou 9:16

What draws you to using electronics? You kind of mentioned that it took you a while to sort of want to work with it live at least just for that ... call it the fear factor, but what do you think it adds to your work?

Bekah 9:31

I'm very concerned in my work with differences of timbre or like the colors of sound and less and less concerned with what the pitches are, what the harmonies are. And when you think of all your different possibilities with how something can sound, it's certainly not limited but with electronics you expand that palette almost like to infinity.

Like for example of a piece of flute and electronics. The electronics part could also be flute sounds but going way lower than a flute could ever go - way higher way, faster way slower... The electronics part doesn't need to breathe. You know, there are a lot of possibilities of especially with my mixed music. The electronics part usually also sounds fairly instrumental. What I'm going for is mystery of 'what is the sound? Where's it coming from? Is it the live person? Is that the electronics?' You don't know. It's like a mysteriousness of sound source - ambiguity.

Sunita LeGallou 10:28

Yeah, yeah. It really blends in, but at the same time, it goes farther than it could with it with a human player.

Bekah 10:35

Totally. And likewise, there are a lot of things sometimes called extended techniques, where you play the instruments slightly different and the timbre changes - becomes occasionally less recognizable as that instrument. And the same way that ambiguity is attractive to me in electronic and acoustic interactions, the way that you can make an instrument sound not like itself is also attractive to me.

Sunita LeGallou 10:58

So tell me about ForeverDark - what's the backstory to this piece?

Bekah 11:02

Yeah, so forever dark is the first piece I've ever written in the form of a concerto, which is where there is a really defined well defined solo part. And so I was commissioned by an orchestra called this Espirt orchestra. And I had concerti on the brain for some reason I was really into that formatting and so I pitched the the director a concerto, and he was like, okay, it wasn't like their first suggestion

It's a little bit more work for the organization because they've got to bring in a soloist and I told him that I wanted to do electronics and you know, I was, I was and continue to be a good self advocate. If I want to do something I, I stand up and pitch myself quite a bit. They were good sports about it, though.

And particularly I really wanted to work with a good friend of mine named Amahl Arulanandam, he is a cellist and he has a really interesting way of anticipating the types of sounds that I want without even me being clear in those sounds. He's like a mind reader. He's really, really great. And I've worked with him a number of times. And so I knew I wanted to write the solo part for him.

And one of the things that me and Amal have in common is that we are into metal. A lot of my recent music, maybe 50 to 60% of it, I take outside source material, like little quotations and integrate it into the piece and make it a very important part of the fabric of the piece. And so considering that I was working with a friend who is into metal, and I'm into metal, I decided that this concerto had to be founded in metal.

Yeah, it had to be there's no other way! This piece is interesting because it's the first time that I used multiple quotations within one piece. Normally, I would just take one thing and just stretch it as far as it can go, which is sort of a challenge that I enjoy. But in this piece, my challenge was to take like 10 quotes and still make it sound like it made sense and all belonged in one piece. They came from three metal bands but sort of a bunch of different songs from each metal band. They were Bathory. I also use some quotes from Strapping Young Lad who are a Canadian metal band. And then lastly, I use some quotes from System of a Down, who are like an Armenian American new metal band. They were they were really really popular when I was like 10, 11, 12, which is my first time getting into metal.

Sunita LeGallou 14:02

Why did you title it ForeverDark.

Bekah 14:03

(laughs) Well, there's one of my one of my favorite battery songs is called forever dark woods. But ForeverDark. Also, besides being from the song title, it's somewhat cheesy, but I liked metal. I really looked like I liked metal for a long time when I was a teenager, then I for a long time, I kind of stepped away from those scenes. And then as I was approaching my mid 20s, I just like got back into a lot of these bands for the first time in almost 10 years, and was really enjoying it. And my wardrobe started turning around, I started wearing all black again. I dyed my hair and I was just like, you know what, I'm not gonna deny, like, my inner self is like, it's forever dark.

Sunita LeGallou 14:46

That's awesome! No, I actually really liked that because I feel like there are these little personal stories that go into the music kind of outside the like, well I need I need the piece to be for these kinds of players. And that's that kind of thing. So That's cool. So it's really sort of a little bit of a homecoming?

Bekah 15:05

Yeah, I like that! Yeah, it was absolutely a homecoming. And like, I like a lot of different types of music. And I definitely do write things that are very tender and soft. But this piece was it gets it gets heavy like it's, it's not heavy the whole way through and I didn't want it to be heavy the whole way through. But it is um... Yeah, it's it's home. It feels like home.

Sunita LeGallou 15:26

That's awesome. And, and so you mentioned you writing kind of other pieces with different moods. This is a broad question, but like, how do you see ForeverDark sitting into your collection of things you've made?

Bekah 15:42

Right now, it's one of my favorite pieces that I've done. Like as a composer, I for a long time, I felt like I wasn't yet writing the music that I wanted to write. Because I had so many things to learn. I had heard pieces and I love them. I knew that I knew why I liked them. I just didn't seem to be able to produce something of a similar character or caliber or quality and with ForeverDark I feel like it's something that I am proud of.

Sunita LeGallou 16:08

So my painting to ForeverDark wasn't really as dark as you'd think. All my paintings are mixed media on white or cream paper. So I use India inks, water soluble crayons and small eye droppers with pre mixed water color. I don't have synaesthesia, at least not anymore - we'll talk about that more later with Dr. Kate.

But when I listened to Bekah's piece I really wanted to use intense blues and purples. Oddly enough, I think that had more to do with my idea of Bekah herself than the music. Bekah does have a pretty Goth look, and her hair is currently green. So maybe that had something to do with the kinds of rich, vivid, witchy colors I was drawn to.

I also painted this piece right around Halloween and my notes have things jotted down like 'high murdey sounds' and 'creepy fairy tinkles' and 'chainsaw?'. So maybe it's a little bit dark after all. I love how much is going on in the soundscape and I'm really pleased with how it came out on paper. So if you want to check out the full size version, there's a link in the show notes to my website. Now back to Bekah and the ever popular lightning round.

Do you have any guilty pleasures?

Bekah 17:36

I try and have integrity in everything that I like and own up to it and not be guilty about it. I mean right now Star Trek Voyager is on in the background and I hear a lot of people... a lot of people give that show a hard time so maybe other people will feel guilty about liking it.

Sunita LeGallou 17:52

No, I don't I don't think I hear that kind of chatter, but OK, that's awesome. I like that. Own what you like. Just like it What was the last country you visited?

Bekah 18:03

The last country that I was outside of Canada was Austria. It was for kinda like a new music conference slash Academy. So I had some lessons while I was there. A duo performed my piece, there were lots of concerts, so it was good.

Sunita LeGallou 18:17

Who or what were you named for? This is basically like, what's the story of your first name?

Bekah 18:23

I wish it was interesting. But being a Rebecca from 1990... My parents were basically asking the age old question of Jessica or Rebecca, and they went with Rebecca.

Sunita LeGallou 18:33

If you could be any animal, what would you be?

Bekah 18:35

I feel like a crow or raven.

Sunita LeGallou 18:38

Okay, again, forever dark. (laughter)

What would your superpower be?

Bekah 18:47

Um, I think I just would want to fly. Like I don't think that my personality would suggest that that would be my superpower, but that's the one that would be most attractive to me.

Sunita LeGallou 18:57

Do you want to talk about any concerts you have coming up or projects?

Bekah 19:00

Well, I have a number of things coming up particularly in early 2020, December 16. I have something in Vancouver with RedShift. I just wrote a little six minute piece of music that's going to be spatialized around a room in complete darkness alongside some other pieces that are similarly in the dark. I think it's called the iphotic zone and it's happening in Pyatt Hall in Vancouver. And after that, in the new year in 2020, I actually have two orchestra performances back to back, which is pretty unusual for me. One of them is part of the 21 C festival in Toronto. They're performing a new piece that I'm working on for soprano and harp soloists with electronics and chamber orchestra. And the piece ForeverDark is actually being performed again in Toronto in January, as a part of the University of Toronto's New Music Festival by their contemporary music ensemble.

Sunita LeGallou 19:59

One thing that Bekkah said that I found really intriguing was this idea of timbre and the color of sounds. As an artist who paints to music, I had never heard this term before. So Dr. Kate, can you tell me a little bit about what timbre is?

Kate 20:16

Timbre is the way that we can tell apart different kinds of sounds, like different voices or different musical instruments. Sometimes we call it tone color or tone quality. There's four different ways you can describe a sound. So you can describe the pitch of a sound, the duration, the loudness, and the timbre. When the pitch, duration and loudness of two sounds are the same, but the timbre is different than we can tell them apart. So timbre is what makes a piano sound piano-ish and a guitar sound guitar-y, even when they're playing the same note.

Sunita LeGallou 20:55

So with Bekah's music, I mean, I wouldn't be able to tell where the cello ends and electronics begin. I have no idea what the limits of the cello are.

Kate 21:05

Well, think of the the fake violin or fake drum sounds that come pre programmed on digital keyboards. Those are synthesized sounds called MIDI imitations and they don't sound convincing. Listeners know their digital and not the actual instrument itself. Timbre is how listeners can tell the difference between real cello and synthesized cello.

What's different about using software for live electronics the way Bekah does, is that the structure of the cello sound hasn't changed. So the audience hears a manipulated version of the actual cello timbre, and the timbre is really convincing. Even if you use electronics to achieve impossible sounds, like a note that's too high or too low for a real cello to make. The sounds themselves are still cello-y.

Sunita LeGallou 21:56

So that kind of reminds me about episode one. We talked about how music is multi sensory and how your brain takes in cues from many senses to combine them into what you think you're hearing.

Kate 22:08

Exactly. Music is multi sensory for everybody. But about 4% of adults have a more extreme version of multi sensory perception. It's called synesthesia, and people with synesthesia are called synaesthetes. Synaesthetes have consistent strong associations between two of their senses that are linked together. One common type of synaesthesia is to associate particular colors and particular sounds. But other people might see letters as having colors. And some people say that they can taste different words. So far, scientists have recorded more than 90 different kinds of synaesthesia, but they're always finding more. Because people with synesthesia have perceived things this way for as long as they can remember, they don't tend to know they're different from everybody else until they reach adulthood.

But scientists now think everyone is born with a version of synesthesia. Some people grow out of it, and a few don't. One of the first studies to show this in 2011 demonstrated that two and three month old babies associated colors and shapes, so they think of circles as being blue, or triangles as being yellow. But by the time those same babies are eight months old, they don't have those preferences anymore.

It's actually pretty common for very young babies to have these types of preferences that go away as they get older. One of the hardest things babies have to learn is to determine which sensory information is real and what they can ignore. Newborns take in nearly everything because they don't know yet what's important. Before your first birthday, sensory processing specializes to tune out information that doesn't matter, and to focus on messages that are important to survive. The theory right now is that people with synaesthesia have kept some of those extra connections in their brain that other people have trimmed away. They have connections between their senses, like sound and color that other people don't have anymore.

Sunita LeGallou 24:22

That's so cool. I remember when I was a kid every year had a different color. So in my mind, 1991 was very yellow, and 1994 felt kind of magenta pink, but it kind of petered out when I was in junior high.

Kate 24:38

Yeah, when I was a kid, I remember there was this one key on my piano that was pineapple. I don't actually remember what key it was or when that stopped, but unfortunately, I don't have that perception anymore.

Sunita LeGallou 24:55

Thank you so much to Bekah and Dr. Kate for joining me. The full show notes are up My website including links to Bekah's upcoming shows. There are also a ton of links for synaesthesia, if you are as fascinated and intrigued by this concept as I was. Apparently Frank Ocean has synesthesia, and he named his album channel orange after it? At least according to Wikipedia.

For our next episode, we're going to leave the heavy metal behind and talk to Jared Miller. Jared's beautiful piece "Under Sea, Above Sky has been described as a love letter to planet earth and I think that's totally appropriate. So please join me, Jared and Dr. Kate on the next episode of Music for PhDs: the art project disguised as a podcast.