Theresa Stern: Welcome to Central Bark, a podcast from Guide Dogs for the Blind. I'm Theresa Stern, and I'm your host.

Well, hello everyone, and welcome to Central Bark. Thanks for joining us. Today we have a real treat. I am joined by Dr. Sarah-Elizabeth Byosiere, and she is a brand new staff member here at Guide Dogs for the Blind. She is our Director of Canine Research and Development. We're going to talk to her a little bit about her super amazing background and then also about the work that she's doing that will really help with the success and longevity of our partnerships with our amazing guide dogs. Welcome, Dr. Sarah. We're so excited to have you here.

Dr. Sarah-Eliza...: Thanks, Theresa. I'm excited to be here.

Theresa Stern: Cool. Tell me a little bit about you and about how you got into this. I mean, I read your bio. It's amazing all the work that you've done in terms of canine cognition and the human-animal bond. Tell me a little bit about your background and how you came to wanting to dedicate your career to this subject.

Dr. Sarah-Eliza...: Yeah, this is a great question, and it's one of my favorite ones to answer because I always say that I totally fell into it. That's because there is no career fair activity that tells you that you want to go and be a dog canine cognition researcher. It's not a thing. You get to meet the lovely firemen and the veterinarians, and these are more common, but we never really hear about the idea of becoming an animal behaviorist or learning more about how to do research with animals specifically to study how they think, how they see the world, how they interpret information, best training practices, how to improve their welfare, all of this.

I just went to university and I thought, "Cool. I'm going to go to my parents' alma mater, and this is going to be great." My mom had always joked, she said, "You do know that they don't study animals at the University of Michigan?" I said, "Yeah, that's fine. I don't really want to go to the competitor school Michigan State," that has a fantastic vet school and an agricultural program. I was like, "No, this is totally fine." First semester in my classes, I took every animal class that the University of Michigan offered, which was not very many. I discovered that there was this awesome world of animal behavior, and it had nothing really to do with veterinary school and that you could have this career studying animals and studying how they think, how they navigate, how they problem solve.

Theresa Stern: So cool.

Dr. Sarah-Eliza...: Then I went, "Oh, maybe I've made a big mistake, and I need to go transfer to Michigan State and come up with an alternative." But yeah, I found my niche, I found my area. For all of those people who are out there thinking, "I don't know if I want to be a veterinarian, but I want to work with animals," know that there are other ways to get involved in this field, and one of them is in animal behavior itself.

Theresa Stern: Wow. Yeah, that is amazing. I mean, exactly, you might not be into sort of the whole medical piece, but that whole behavior piece, it's just a really growing science right now as well. I know that you worked at Duke and a couple other places. Tell me a little bit about some of the work that you did along the way.

Dr. Sarah-Eliza...: Yeah, so the world of animal cognition has been around for a little while, but dog cognition in particular is relatively new. It's about 20-ish or so years old, give or take. Really it started at Duke and a couple of other places, but with Dr. Brian Hare, who has the Canine Cognition Center set up there. I was lucky enough to be one of the summer interns, and I got to volunteer and learn how to do this really amazing battery, so a bunch of different cognitive tasks with pet dogs. Actually that was my first experience where I got to work with service dogs. We went to CCI. I spent a summer at Canine Companions for Independence and learned about how to interact with service dogs and experience what it was like to live on campus.

Theresa Stern: Oh, wow. Pretty cool.

Dr. Sarah-Eliza...: Yeah, it was my first foray.

Theresa Stern: Yes, yes. I mean, this is sort of a newer position for us at Guide Dogs for the Blind, and tell me a little bit about what the goals are for your new role and what you hope to accomplish.

Dr. Sarah-Eliza...: I am super excited about this role. This is a role that you don't see very often. I am exceptionally enthused as someone who does not come from the nonprofit world and someone who does not come traditionally from working with service dogs or with guide dogs. It's so important and so amazing to see a dedicated position at GDB that really focuses on canine research. That's because, as we know, these dogs touch so many people from even before they are whelped to after they are retired. They have so many components in which humans are connected to them.

If we can start to understand how they're navigating those circumstances throughout their life, throughout their development, throughout their training, throughout their relationship with the client, the better that I can help and that we can help as an organization really assess what makes guide dogs successful, and where can we bolster that support? Where do we find that potentially we can really support individual dogs, but also the entire population so that potentially we could see more success? Or maybe we can just make their lives a little bit better, or we can adapt our training styles to fit an individual dog's certain needs.

This is what I'm really excited about at GDB is really thinking about how can we use all of this wealth of knowledge that we have here that's already implemented, that people have spent so long creating, progressing, and moving forward. How can we start to look at the numbers behind these things that relate to our canine populations and really use those to make decisions or at least guesses about where we need to go next and evaluate how that's working out and then either revise or maybe who knows, maybe something amazing will come out of it and we'll go, "This is really working," and that's informative.

Theresa Stern: Right. Yeah. Yeah. Well, and I love the idea of really ... One of the things I think that Guide Dogs for the Blind has started to do recently ... Over the years, we've always been always trying to improve our program. One piece on the people side of things is really looking at people as individuals and everybody learns differently, and everybody has different goals and different motivators and things like that. I love the idea that we are sort of looking at the dog piece now and looking at each as an individual. I think that's so cool because I mean, obviously you've seen a lot of dogs over your years. Can you talk to a little bit how a dog isn't necessarily is a dog is a dog.

Dr. Sarah-Eliza...: Yeah. They're all so different. There's some really cool research coming out of just the pet community, the general dog community looking at genetics, looking at behavior, looking at heritability. Actually what we're seeing in these amazing new studies that are coming out is that a lot of the variation that you see in behavior is not really attributable solely to genetics, and it's not solely attributable to the environment.

That means that in these populations where we go, "Okay, we know the health of these dogs is amazing," we can look for certain diseases. We are breeding as efficiently as we possibly can to essentially establish a colony that has amazing guide dogs for our population. It just goes to show you that even within such a controlled environment, there's still a lot of dogs that ultimately will not get placed with a client. They are better at a certain career over others, and even within the same litter, you might see that there is immense variation. Then you start going, "Okay, why? What's going on?" It turns out that even in the broader pet community, this is true. Very little behavior that you see is actually explained by genetics or explained by how heritable it is. We can do our best with numbers, but sometimes it's not just all about the numbers, it's about the individuals.

Theresa Stern: Right. Right. Right. Right. When you're talking about these dogs, like you said, all of them have people, and especially for our dogs, they have maybe many different people throughout their life. They've got the volunteer puppy socializers and the puppy raisers and the instructors and then their graduate or whatever. It's like having to figure out how to adapt to all the different people.

Dr. Sarah-Eliza...: This is totally right. The idea that you have so many people involved in raising a guide dog, it means that every individual dog's path is unique to them. That means that from a canine research perspective, which is where I fall, I am interested in everything from the veterinary side. What is happening even before that puppy is whelped? What can we say about the sire and the dam that might help us make some decisions about how these puppies are going to turn out? Is this even going to work out well? Are they going to have a large litter? What do we need to be mindful of?

Then the next step, you have the puppies, and then we have to think about, okay, the medical care for the puppies, but also their behavior. Now they're here, now they're moving around, and how are they behaving? How are they interacting with one another? Do they like to leave mom? Do they not? Once that's all done, then we get to the real world. Now they're interacting with so many humans. New, probably smaller humans, maybe if you have kids in your household, maybe another dog in your household, cats.

Theresa Stern: Iguanas.

Dr. Sarah-Eliza...: Iguanas. The world is a scary place. There's lots of things out there. Then a year later, they come back and then they really get into it with our amazing trainers and go through some very important medical assessments to see how sound are they and what can we do to help them in terms of checking their eyes and checking their ears and checking their bones.

Even at that point, a year-and-a-half has gone by, and then potentially they're placed with a client or maybe they're career changed, and then they have X number of many, hopefully many, many lives left to live, many years to exist in this world. One of the things that we're interested in and moving forward is looking at the health and the longevity because we keep such a close eye on these dogs very early on. But once they're sort of out of the GDB immediate sphere, we're still curious as to what's happening. What health issues are they facing later on? Is there a behavioral concern that we need to be aware of? That's important for the current guides, the retired guides, but also the career change dogs because we need to know what's going on in all of our dogs.

Theresa Stern: That's right.

Dr. Sarah-Eliza...: This is one of the areas of focus that we're kind of leading into now is really assessing the health and the longevity of all of our dogs.

Theresa Stern: Right. No, I like that. Especially as a person who works with a guide dog myself, you always want those partnerships to last as long as possible with everybody happy and healthy. Having that health piece, but then also having some look at when certain things, because like you said, you're out and about. One of the things that sometimes can happen to a guide dog when we're out on the streets is maybe a bad encounter with another dog, and then that changes the behavior of your dog. Everything sort of has an impact on that dog. I think having you doing this research and helping us to figure out what's the best way to relate to our dogs in a way to help them through maybe some traumatic experiences as well.

Dr. Sarah-Eliza...: Yeah. I have to say this is, as someone who is new here and who has just told you that it is so exciting to have a position like this at GDB, I also have to highlight that there are amazing people at GDB who have been supporting this movement forward. Even though this position is new, it's not to say that Guide Dogs for the Blind has not been involved in this amazing research.

There are so many phenomenal people here who have really worn more hats than probably they should be to kind of facilitate the research that the organization is interested in. A lot of this comes from amazing community members, volunteers, and donors. I would be remiss to not highlight that my position and this entire Canine Research Unit is really attributed to a donation from the Gard/Furlongs, which is very exciting to me because it is so important for our community to identify that research is really a way forward, particularly canine research.

If we don't know what's going on with our dogs and how that is playing out over their lifetime, and without any of this research, it would be really difficult to move forward and make any decisions about breeding, about training, about socialization, even puppy raising. We need this support, we need this guidance, we need this influence here at GDP. It is so exciting for me as a newcomer to really see the dedication to creating this environment here.

Theresa Stern: Absolutely. We have the most amazing donors, volunteers, puppy raisers, clients. Everybody's sort of pulling together. What I think really is the glue that keeps us really moving forward is that what really bonds us all together and wanting to move forward and wanting to make things great for the dog side of thing and the people side of thing, and I think that's the human-animal bond. Can you talk a little bit about that and what's your experiences with the human-animal bond and how that's sort of driven your life forward?

Dr. Sarah-Eliza...: Sure. I always say, do you want my researcher hat or do you want my personal hat? Because my answers will depend on which hat that I wear.

Theresa Stern: I want both. I want both.

Dr. Sarah-Eliza...: For me, I have always wanted to focus really on the applied side of animal behavior. That was something that for me, I found that I was missing in my past career. I got to work with amazing dogs. I got to work with lovely guardians and owners, but I felt like I was always limited in what I could do. That was a focus where I could just provide some suggestions about how pet owners should interact with their dogs, but I never really felt like I was able to implement those things.

For me, the human-animal bond is sort of that intersection, that connection between dog and human, human and dog. It's bidirectional. It's fantastic. It's beautiful. We all love coming home to a furry friend who's always happy to see us. It makes us feel good. From the research side, we know that there are love hormones, oxytocin, things that are involved in maternal bonding with infants that you also see when humans are interacting with their dogs.

Interestingly enough, we also see that those hormones are present and increasing in dogs as well. At least this is not you're the only one gaining a benefit from interacting with your furry friend. Rest assured that they're hopefully also getting some of these hormonal increases that are involved in bonding.

Why I bring this up and why I want to pull this all together is this is something that I see here at GDB. I see the connection between all of these humans and all of these dogs. Where I felt like I could not be a part of a greater movement forward that had direct implications for my community, I can now see how I can be involved in research, studying dogs, whether or not it's through their behavior, through their health, or through the humans that they touch to really have an impact on something that is truly remarkable.

That is the guide dog community, placing a guide with a client. But it's also larger than that. As you mentioned, there are so many people involved, so many volunteers. Even a career change dog can have an amazing impact on their family that they're placed with. Canine Buddy Program is truly astonishing and just goes to show how many roles these dogs can have. I really love that here at GDB we try to find the ultimate career for each individual animal that they are best suited for and that they seem to enjoy. It is remarkable.

Theresa Stern: Right, right. Right, right. At the beginning of our chat, you talked about that your parents were like, "You know what, Sarah? You need to go to a school that does animal behavior, animal research." You must've had a pretty amazing relationship with pet animals at home, or how did they know for sure that's what ... Were you always into animals?

Dr. Sarah-Eliza...: It's an interesting one. I never really thought, looking back that I was so focused on animals, but apparently I must have been. We didn't have a ton of pets. I remember my childhood dog when I was a teenager, that was my first dog that I ever had. She was an amazing mutt Labrador mixy thing that I absolutely adored. I wonder if in some ways just having her be around and be present is really what led me to be interested in studying dogs and in studying animals.

I have to say, the other connection that really has gotten me into this community and into this applied world is the fact that I puppy raised. I puppy raised a female black lab. She's career changed and so she is now she mine.

Theresa Stern: I didn't know that. That's so cool.

Dr. Sarah-Eliza...: Yeah. Yeah. I absolutely adore her, and she has had the most tremendous impact on my life. I'm not sure that I would be here at GDB if I hadn't puppy raised, and if I hadn't been involved in this community of guide dogs. I kind of attribute it to her in some ways, which is really nice. See how the community comes together. You might have a new career path in mind.

Theresa Stern: It's so true. It's just so weird how all of those connections, it's kind of spooky how all that works. Tell me about her. She's a black lab. What's her name?

Dr. Sarah-Eliza...: Her name is Sadie. I raised her during 2021, so the height of lockdowns, which was very fun. She came from a very large litter of 12.

Theresa Stern: Wow.

Dr. Sarah-Eliza...: Yes. They called her litter just jokingly, the Downton Dozen. If you watch Downton Abbey, I think she was like Lady Anna or something.

Theresa Stern: I love it.

Dr. Sarah-Eliza...: But she's great, and I adore her. Now we do nose work together, and we've just started agility. Recently we've started enjoying the local California nature, which is new for us because we spent the last few years in New York City. Now she is a paddle boarding doggo so she's-

Theresa Stern: That's amazing. I don't know how-

Dr. Sarah-Eliza...: Living it up.

Theresa Stern: You get them to stay on there.

Dr. Sarah-Eliza...: Lots of treats.

Theresa Stern: Lot of treats.

Dr. Sarah-Eliza...: Yeah, treats are good. Treats are good.

Theresa Stern: Smear some peanut butter on that board. They'll stay put. Well, it's kind of funny. I have to ask you sort of a stupid question because I know I am always ... Whenever I'm working with my dogs or talking to my dogs, I'm like, they totally understand ... Being so close with dogs as you are when you have a guide dog. I had a pet dog at home or whatever. But I think they're so much smarter than we think they are. Is that true?

Dr. Sarah-Eliza...: I like to think they are. I think we are maybe just not smart enough yet as humans to figure out how smart they are. A lot of this when it comes to studying their behavior and their cognition is coming up with the appropriate test to test their abilities. Sometimes what we think we're testing is really not what we're hoping to test. It's just something totally different. We can only learn this by trying it out and failing colossally and then going back to the drawing board and trying to reassess everything.

But it's hard because how do you test animals and their cognition? Do you give them a written test? No, it doesn't work. Then do we test chimpanzees and bonobos in the same way that we test dogs? What if I asked them all to climb a tree? Who's going to succeed? Well, the chimpanzees and the bonobos are going to succeed, but the dogs may not climb the tree. But if you give the dogs a certain task like use your nose, they might excel at that in comparison. It's really hard to comparatively assess cognition and behavior in animals. I think when it comes to dogs, if we're not learning that they are amazing at the things that they can do, it's probably because we're not amazing at coming up with the test to assess them.

Theresa Stern: That's kind of what I think too, because what's smart for a dog is not necessarily what's smart for a person. But it does always fascinates me when they sort of put a few different things together. If I had to take a test on being a smart dog, I would not probably be very good at it. But they take these tests on being like a person, and they really seem to, I think they adapt to us better than we adapt to them.

Dr. Sarah-Eliza...: That they do. They are truly great. They are remarkable. There is a reason why dog cognition as a field has boomed. There is a reason why this is now a multi, I think million or maybe billion dollar industry, the pet industry. There's a reason why many, many homes have animals. We're just starting to scratch the surface and discover what's going on and trying to figure out the reasons why they bring joy into our lives, and hopefully that we can also bring a little bit of joy into their lives. All about us. It's also about the connection with our animals and how we can improve that for them, whether or not it's learning how to better be a communicator with your animal, or just thinking about what the world looks like when you're two feet off the ground compared to five feet.

Theresa Stern: That's right. That's right. That's right. Well, it's very exciting. I'm so glad that we were able to scoop you up and have you on the GDB team. I'm just excited to see how all the research goes, and I really appreciate the work that you're doing to really change the lives of the dogs and the people who love them. Thank you so much, Dr. Sarah. Thanks for being with us today.

Dr. Sarah-Eliza...: Thanks for having me. I'm super excited to be here, and I really cannot wait to see what this role will allow us to uncover. Like I said, it's totally new and totally amazing, and I can't thank a million people for bringing me here.

Theresa Stern: For more information about Guide Dogs for the Blind, please visit guidedogs.com.