

Evdokia Anagnostou and the concept of a good life

The Holland Bloorview clinician and research director discusses how growing up on a small island shaped her career and the existential questions that keep her up at night.

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This transcript has been lightly edited for clarity; it may contain errors due to the transcription process.

[opening theme music]

Brady Huggett

This is “[Synaptic](#),” a podcast that investigates the people, the science and the challenges of autism research and the greater neuroscience space. This is episode five of “Synaptic.” My name is Brady Huggett. I’m the host of this show, and welcome to it.

[transition music]

Brady Huggett

All right, for this episode, let's begin in Hoboken. Hoboken was ratified as a city in 1855 in New Jersey. Today, it's of moderate size as far as cities go. It was about 59,000 people in the 2021 census. It has an elevation of just 23 feet above sea level, and that's because it sits close to the Hudson River, which separates New Jersey from New York City.

Hoboken is a former industrial port, as one might expect with that geographical location. Frank Sinatra was born there. That's notable, but because of its easy access to New York City, it also functions as a type of bedroom community for Manhattan. And that's important for this podcast because in 1990, Evdokia Anagnostou arrived there to attend college.

That's our guest today, Evdokia Anagnostou. Until then, she had spent her entire life in Greece, and she thought this trip to Hoboken would be for just one year before she returned to her home country for the rest of her education. Yet spending time in New York City, which she did often, opened up a new view of the world for her. As she says in this podcast, she saw a life that would look different.

In New York, she says, it felt like everything was possible; everyone was there. And so she stayed in Hoboken with its easy access to New York City. And that decision changed her life. We talked about that in this podcast, and we talked about the complementary aspects of her career — being a doctor and a researcher — and how those two things feed each other. And we talked about the existential holes that she sometimes tumbles down, where she contemplates consciousness, free will and how to find meaning in life.

And, of course, we talked about the biology of autism. All that coming up in the next hour or so. Uh, it was a great discussion. I thought about it for days afterwards, if I'm being honest. I recorded her on July 19th at her office at the Autism Research Center at Holland Bloorview Kids Rehabilitation Hospital in Toronto, Ontario.

Evdokia was extremely busy on this day. The moment her office was free of visitors, I went in and set up mics over a little table in the corner of her office, and then when we were done, she ran off to another meeting. So I felt lucky to get on her schedule, actually. So let's pick this up here where I'm asking her about how long she's been at Holland Bloorview and how long she's lived in Canada overall. Here is your “Synaptic” episode with Evdokia Anagnostou, starting right now.

[transition music]

Brady Huggett

All right. So 15 years you've been here, yeah?

Evdokia Anagnostou

In this hospital, I've been 15 years.

Brady Huggett

Yeah. How long have you been in Canada?

Evdokia Anagnostou

So I've been in Canada twice. I did medical school and neurology in Canada the first time around, left, went to New York, did my postdoctoral fellowship, got my first faculty appointment there, and then got recruited back to Canada this time around for 15 years.

Brady Huggett

Uh-huh. OK. But so you were not born in Canada?

Evdokia Anagnostou

No, I was born in Greece. I was raised in Greece.

Brady Huggett

Yeah. OK. So tell me about that.

Evdokia Anagnostou

So my family comes from a small island called Astypalea.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

It's, uh, closer to the coast of Turkey than it is to-to the mainland of Greece. Um, lovely, lovely place. I'm one of five children and the first daughter of five daughters.

Brady Huggett

Oh, so you're firstborn-

Evdokia Anagnostou

Firstborn.

Brady Huggett

-and all-all daughters.

Evdokia Anagnostou

All daughters.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

My parents were very committed to the idea that we should be educated. So what they did is that we spent the school year in Athens, uh, going to school, and then went back home to the island, uh, every time, um, we had vacations or the-the schools were closed.

Brady Huggett

Uh, how-how far is that?

Evdokia Anagnostou

Uh, so at the time, it was a 24-hour boat ride.

Brady Huggett

OK.

Evdokia Anagnostou

Now it's an about 12- to 13-hour boat ride which is much easier, or if you get really, really, really lucky, you can get a half an hour flight because the island had a military base-

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

-and it had a military strip. The military base is not active anymore, but the strip is there, and so very, very small planes, the ones that can land and stop-

Brady Huggett

Yeah.

Evdokia Anagnostou

-actually make it there. Um, and so if you can find a ticket or a- or a seat, you can actually fly there for half an hour.

Brady Huggett

So that's- that's privately chartered somehow? It's not-

Evdokia Anagnostou

No, no. These are part of the, uh, system of, um- Well, there are companies who support the islands-

Brady Huggett

Yeah.

Evdokia Anagnostou

-in Greece, there's many of those. And, um, they actually keep very small planes, the ones that have like up to 40 people maximum.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

Uh, and so that's pretty much what you can land there with a really good pilot. [chuckles]

Brady Huggett

Right. So the problem is just if you can get on a flight, there aren't enough flights.

Evdokia Anagnostou

Exactly.

Brady Huggett

Yeah, exactly.

Evdokia Anagnostou

I mean, there's- I mean, there's very few seats too especially in the summer months where I go-

Brady Huggett

Yeah.

Evdokia Anagnostou

-back, uh, to-to-to-to find. So typically, I don't manage to get a flight. So typically, travel the same way I traveled when I was little, uh, in a boat.

Brady Huggett

OK. So, um, you're living on this island, why-why was your family there?

Evdokia Anagnostou

So, my-my family- my father- This is my father's family, and-

Brady Huggett

Yeah.

Evdokia Anagnostou

-they've been there for many, many, many, many generations. My mom actually comes from a different island. Um, they were introduced when they were in Athens because they're the two educated people in their families. So my dad was the only university grad in his family. Um, my mom was the only university grad in her family. They met in Athens, um, and-

Brady Huggett

But they were introduced?

Evdokia Anagnostou

They were introduced, the old-fashioned way. They were matched and introduced. Um.

Brady Huggett

So the-the parents on both sides knew each other and said, "My son is in Athens, by the way. He's educated." And someone, they said, "Well, my daughter happens to be in Athens."

Evdokia Anagnostou

No.

Brady Huggett

No.

Evdokia Anagnostou

None of this. Uh, so-so my grandparents- So it's an interesting story. So my mom's dad was a fisherman and my father's dad was actually the- a teacher on the island.

Brady Huggett

Uh-huh.

Evdokia Anagnostou

Although he was the- The definition of a teacher there at that time was, he was a 17-17-year-old teacher, right? So he-he was probably one of the more educated youths on the island that served as a teacher, uh, in terms of my grandparents. Um, my grandmothers, uh, they were both-

Brady Huggett

So he was- I'm sorry, he was 17 years old when he began teaching.

Evdokia Anagnostou

Yes, my grandfather.

Brady Huggett

OK. All right.

Evdokia Anagnostou

Right.

Brady Huggett

All right.

Evdokia Anagnostou

So don't think what we think of today-

Brady Huggett

He was a professor, right? Yeah.

Evdokia Anagnostou

Yeah.

Brady Huggett

Yeah.

Evdokia Anagnostou

Uh, when we think of teachers, my- He married my grandmother, um, so my paternal grandmother when she was 13 on the island, um, and my maternal grandfather married my grandmother, again, probably around 15 or something like this. So my grandmothers were illiterate.

Brady Huggett

Yeah.

Evdokia Anagnostou

Um, my grandfathers were not illiterate, and one of them was actually probably a pretty gifted young man. He died, uh, during the Second World War, of pneumonia actually, or heart disease or something like that. He was in his early 40s, left my grandmother pregnant with their fifth child. My dad was the firstborn, uh, so he left school, um, to run a little store to support the family.

Brady Huggett

Right. So your dad is suddenly now needing to take over what? Bring in some income-

Evdokia Anagnostou

Exactly.

Brady Huggett

-help run the family? Yeah. OK.

Evdokia Anagnostou

Uh, he was 9 or 10 years old, and by the time he was 13, an elder in the island had enough of the situation, stuck him on a boat, and sent him to Athens to go get educated.

Brady Huggett

OK. But so he didn't- he didn't go to school from 9 to 13?

Evdokia Anagnostou

Uh, no. He actually took, uh, an exam when he arrived in Athens, uh, and was put in grade 11. So he was studying on his own. And I guess there were people- um, there were a couple of people on the island that, um, had some education that were supporting him-

Brady Huggett

Hmm.

Evdokia Anagnostou

-but he was pretty bright, um, man, I would say.

Brady Huggett

So two things, uh, go-going back to the two women who were married at 13 and 15 and-

Evdokia Anagnostou

Yes.

Brady Huggett

-illiterate and you said that the- that the man was actually kind of bright, but we don't know anything about the women, right, if they're- they were illiterate because of the lack of opportunity.

Evdokia Anagnostou

Absolutely.

Brady Huggett

Yeah.

Evdokia Anagnostou

I mean, these ladies, um, I would not- I mean, I would- My prediction is that they were pretty bright.

Brady Huggett

Yeah, yeah.

Evdokia Anagnostou

I met them, I grew up with them. Um, they were- they were pretty bright women. Um, but either they were not even given the opportunity to go to school at all, as it was the case with my maternal grandmother or, uh, my paternal grandmother, uh, went until-until grade three or grade four, something like this.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

And that was the norm for girls at the time on the islands in Greece.

Brady Huggett

All right, so I think I'm learning something about the islands. So the islands are more provincial than the mainland. Uh-

Evdokia Anagnostou

So at the time, the islands were very isolated, first of all. Secondly, they were not Greece at the time, right?

Brady Huggett

Mm.

Evdokia Anagnostou

So Greece has been under occupation by various people at different times. The islands that are closer to Turkey were under Italian rule all the way to Second World War.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

And in fact Greece got them back as part of the treaties that were signed at the end of the Second World War because Italy lost the war. Right. So, uh, at the time, they were under Italian-Italian rule. Um, I mean, they were pretty benign, uh, occupant force, uh, until fascism, uh, came to power. But they were also not the focus of how developing education-

Brady Huggett

Yeah.

Evdokia Anagnostou

-and developing their population, right?

Brady Huggett

Right. So the islands, even though they eventually became part of Greece, were kind of a little left behind in development.

Evdokia Anagnostou

They were left behind, yes.

Brady Huggett

Yeah. OK. So it seems like the idea if you were living on this island, either you wanted to get education or your children or whoever, you had to leave.

Evdokia Anagnostou

You had to leave, yes.

Brady Huggett

You had to go to Athens.

Evdokia Anagnostou

Yes.

Brady Huggett

All right. So that's what happened.

Evdokia Anagnostou

This is what happened. So my dad is put in a boat. It's in, uh, the middle of the war actually, and sent, at the end of the war, and sent to, uh, sent to Athens. Let me do the math here. I don't think it was during the Second World War. So basically, what happened is Greece, at- as the war finished, we had a civil war.

Brady Huggett

Mm.

Evdokia Anagnostou

So our war lasted much longer than the war of everybody else in Europe because we had a civil war. Uh, as, um, the big power is trying to divide who goes with Russia and who goes with the West. Right. So, uh, my dad was put on a boat under a tarp during the time that we have been in the civil war and sent to Athens, where, um, this aunt picked him up, um, and gave him housing, but he had work, um, to support himself. Um, and then what happened is that some of the people who had left before him had done really, really well. So there was actually a professor of genetics at the time-

Brady Huggett

Oh, wow.

Evdokia Anagnostou

-at the University of Athens, who came from the same island, who took him under his wing and made sure that he was fed and had a, uh, you know, appropriately supported and finished school and got into university. And he's the one who introduced him to my mother-

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

-uh, because I think what was happening at the time is they had like these kind of wise men, wise women that were trying to like match up people outside of their families, so the families would have no way of knowing each other, but these people had seen this young, educated woman in Athens-

Brady Huggett

And this young, educated man, yeah. [crosstalk]

Evdokia Anagnostou

-and I think- and they thought he would be a good match.

Brady Huggett

OK. One thing you said, he- they put him under a tarp on the boat. Did he need to be smuggled to the mainland?

Evdokia Anagnostou

He had to be smuggled, yeah, because it was in the middle of the war, and in- I think they were- The boats were traveling at night. It was a fishing boat at night, and they had to cross territories from- So the different juris- the different- the island and Athens at the time were in the hands of a different party. [chuckles]

Brady Huggett

So the-the idea was if they just saw it as a fishing vessel, that was fine. But if there's some young child or boy on there, they would wonder why. OK. So he was smuggled out. All right. So, but your mother, her-her family was also from the islands?

Evdokia Anagnostou

No, so my mom was from a different island, uh, a larger island, actually. So-so my father was the first and had tons of adversity in growing up for the reasons we talked about.

Brady Huggett

Yeah.

Evdokia Anagnostou

Um, my mom was the baby of the family. She also had five siblings. Um, my grandfather was a fisherman, and for that time, it was a decent job, actually.

Brady Huggett

Yeah, yeah.

Evdokia Anagnostou

He-he had an income for his family. Education was not something they thought about. Um, so her-her older siblings, only one actually went beyond elementary school, but one did, and that person that actually finished high school and, uh, became an elect- uh, electrician, I think, uh, was the one who made sure that she had the opportunity, if she wanted to leave, to go to university, that she did. And so she left and she went to Athens. Uh, she studied, uh, Greek literature, and, um, and became a high school teacher of history and literature, and then was introduced to my dad.

Brady Huggett

OK. So she was finished with university, that-that was my question. When did- when did they meet? So your dad is in Athens at 13. So he finishes what we would consider high school, right?

Evdokia Anagnostou

Finishes high school then, uh, goes into- He wanted to become a mathematician, the story goes. The story goes, he wanted to become a mathematician, but he had younger siblings-

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

-and three of them were girls-

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

-and they needed dowries. So he needed to actually come up- work enough to create dowries so he can marry them off. And so people said, "If you become a mathematician, you're not gonna be able to get dowries- to-to develop dowries." [chuckles]

So he became an accountant. Actually, he went to accounting to-to university to become an accountant. So he finished, my mother finished, and then they were introduced.

Brady Huggett

So at-at like 20 or something like that?

Evdokia Anagnostou

I think a bit older actually. I think they were in their like- I think, well, my mom was in her mid-20s.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

My dad was much older. My dad was, uh, had to marry off the girls first, had to marry the sisters off before he was allowed to get married.

Brady Huggett

Oh, OK. So not only like he's-he's taking on the role, your father- his father would've been responsible for the dowry for the daughters, right, but since that man had passed on, this was up to your dad to do this. It's-it's sort of like, um, uh, I'm a little shocked that he- Before he could think about his own marriage, he had to get these daughters married out- Or not daughters, I'm sorry, sisters married out.

Evdokia Anagnostou

They were his sisters.

Brady Huggett

Yeah.

Evdokia Anagnostou

But in fact, they were- Yeah, he had to behave as if they were his daughters. I mean, it's interesting. I-I- My dad passed away during the pandemic in- at the age of 92.

Brady Huggett

Wow.

Evdokia Anagnostou

And we've had lots and lots of discussions about these things and his idea of-of kind of duty to-to protect and-and-and- to protect the women, to make sure that women had protection in the context of marriage, kind of survived all the way to the end. In fact, he was very hard for him that me and my sisters have taken very diverse kind of, uh, roads. Uh, and it took him a while to figure out that a woman could be actually safe and happy outside of the protection, the way he saw it, of marriage, right?

Brady Huggett

Right. So marriage protects a woman not only financially, but physically. Yeah.

Evdokia Anagnostou

Ex-exactly. So it was- For him, it was- he had a duty to protect his sisters. And the way he could do this is to establish them in their own households with husbands that then would take care of them.

Brady Huggett

Wow. OK. So then he- then he's introduced to your mother when he has finished all his responsibilities for the rest of his family-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-and he can focus on forming a family of his own.

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

Five kids.

Evdokia Anagnostou

Five kids.

Brady Huggett

You're the first.

Evdokia Anagnostou

I'm the first.

Brady Huggett

And you were all born in Athens?

Evdokia Anagnostou

So, well, the actual delivery happened in Athens. Yes.

Brady Huggett

Yeah.

Evdokia Anagnostou

We were all born in Athens. Five kids in six years, by the way.

Brady Huggett

Oh, my God.

Evdokia Anagnostou

I know.

Brady Huggett

Well, I guess he-he'd come to marriage late, so they got down to it, I suppose.

Evdokia Anagnostou

Yes. There was a bit of that, and there was a set of twins in there, but they were still pretty traditional. I think when they got started, um, they thought, you know, they're getting married, they're having kids. My mom stopped working, although she- she had been a high school teacher before, and did not go back to school until- didn't go back to teaching school until I was, I think, 12 or 13. And that's because some priest in Greece called my dad and said, "You have a smart wife, and she's dying of boredom; you need to let her go work."

Brady Huggett

Wow.

Evdokia Anagnostou

The next day, my dad- My mom [chuckles] went to work and something like that happened. And so she was then working for a bit, although she-she got pre-pretty sick, um, right after and died a few years later.

Brady Huggett

She did.

Evdokia Anagnostou

She did. Yeah.

Brady Huggett

How old is she then?

Evdokia Anagnostou

Uh, she died, uh, in her late 40s, so I'm now older. Like she never got to be.

Brady Huggett

Yeah, you're the older woman in a way almost. Yeah.

Evdokia Anagnostou

Yeah.

Brady Huggett

Yeah.

Evdokia Anagnostou

I never- She never got to be what I- How I experienced life now, yeah.

Brady Huggett

How old were you when she died?

Evdokia Anagnostou

So I was, uh, finishing high school and the youngest one was finishing elementary school.

Brady Huggett

What did she die of?

Evdokia Anagnostou

Uh, breast cancer.

Brady Huggett

Ah, and don't tell me this was like, if it had been discovered earlier, she would've been- or no, what happened?

Evdokia Anagnostou

So there is some of that, right? So she-she, um, had felt, uh, felt something in her breast and went to the doctor, and the doctor said, "Come back in six months." Um, and my mom got busy with the five kids and went back in a year.

Brady Huggett

Oh, no.

Evdokia Anagnostou

And then at that time, I don't know that it would have made a difference, but at that time-

Brady Huggett

Well, it didn't help.

Evdokia Anagnostou

-it was clear that it was- it had gone beyond what at the time they thought was manageable. Yeah.

Brady Huggett

Yeah. Well, that's-that's terrible. Um, did- So, OK. So you lost your mother relatively young-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-as well, but before we get into that, though, because it's clear, it seems clear why your father especially, and probably your mother too, were like, "Education is important."

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

Your father almost missed that chance-

Evdokia Anagnostou

Yes.

Brady Huggett

-completely.

Evdokia Anagnostou

Yes.

Brady Huggett

So when he had kids, he's like, "We're gonna make sure that you are all educated."

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

Yeah. That's where that comes from.

Evdokia Anagnostou

Mm-hmm. I mean, they-they were kind of interesting. So my dad, uh, wanted us to be educated. He valued education. He enjoyed us, I think. He enjoyed having good conversations with us, seeing us grow. Although if you asked him why I need to go to university, which we did, um, he would say, because we needed to have enough education to have stimulating conversations with our husbands in the kitchen.

Brady Huggett

Oh, come on.

Evdokia Anagnostou

So that was his original version. He changed his mind with the years. But his-his-his thought was that we would marry better if we were educated, right? Uh, well, my mother was a different story right here. She had two older sisters among boys, and, uh, the first one, um, did not go to school and was a nun in a monastery.

And the second one finished elementary school, was married off and sent to the U.S. Uh, and she migrated to, uh, to- with her young husband to be able to make a living. And so I don't think she thought this was the life she wanted for herself. And, of course, things were changing after the war. My mom was born in '42 so-

Brady Huggett

Yeah.

Evdokia Anagnostou

-by the end of the civil war for Greece, things were changing, and-and she saw more opportunity and thought differently about things.

Brady Huggett

So do you think- Well, it's hard to say because you weren't- You being the oldest weren't really of marrying age yet when even when she died. But you know those are two varying viewpoints where your father's like, "The reason to get education is so that you can stimulate your husband's intellect." That's not a good reason, right? Your mother probably did not agree with that.

Evdokia Anagnostou

So it was kind of interesting. I-I-I think she- I mean she did raise five very independent women. So although we didn't have explicit conversations about this, I think her signature is in all of us. Um, I mean I was- I was pretty independently minded from early on. Um, so I had ideas about what I wanted my life to be, and I would say that my dad kind of came along.

So although he had different views, he just wanted us to see happy. He could see us being happy. I-I like I don't think- I think he was worrying, but I don't think he-he never became a barrier, let's put it that way. He- actually the opposite, right. So I ended up living and coming to the States, and he supported me in ways that he couldn't even support me and-and made sure that I ended up having the opportunities I-I wanted.

Brady Huggett

Yeah.

Evdokia Anagnostou

So he couldn't get it. Like it was just a hard concept for him to get, but he never got in the way of us making different decisions.

Brady Huggett

Yeah, it's like, um, you know he honestly thought given the times and the way hi-his life had gone that that was the best thing for you. It wasn't as if he wanted to keep you from education but what was important was he- Right. And once he saw that you were actually flourishing this other way, he was behind it.

Evdokia Anagnostou

Yeah.

Brady Huggett

OK. So what- at what point do you think that you began to get an interest in science?

Evdokia Anagnostou

Oh, I'm interested in science very early on. Um, I would say as long as I remember myself, I was kind of interested in science. I changed my mind a couple of times. I was also playing music. I was playing the piano and at some point, uh, I had this idea that I would become a musician, but it was kind of fleeting. And then I had like this very weird phase when I was like between 6 and 7 years old where I was kind of fascinated with life, and beginning, and finishing, and what death really is. But not in a morbid way.

Like it was- I was not distressed by it. I just drove everybody else crazy because I got my first Lego set and I, you know in Greece your grave is actually a big thing. They're like- they're white marble structures that we go to every Saturday and wash and clean and talk to our dad and they're part of our like lives. And all of a sudden I got this Lego set and I made everybody their grave and I took it to them and everybody was losing their mind. And I couldn't figure out why everybody was losing their mind.

Brady Huggett

You were like, "This is- I made- this is what your grave was going to look like"?

Evdokia Anagnostou

Yes. And I thought I had done like a really good job. So I was proud of it. And I was telling showing them how they're gonna be different and pretty and whatever have you.

Brady Huggett

Honor them in death.

Evdokia Anagnostou

Yes. And it was really hard for everybody else except for me. Um, but then so I was kind of interested in like, this idea of like what life is and-and how it starts, how it finishes, and what it means and but not in a- in a traumatic way, more of a curiosity way.

Brady Huggett

Yeah.

Evdokia Anagnostou

Um, my mom got breast cancer when I was I think in grade six. And at that time I started thinking about medicine, um, mostly in a naive way first, the way all kids when their parents get sick they wanna do something-

Brady Huggett

Yeah, I can help you.

Evdokia Anagnostou

-they wanna have power. Uh, but also I would say there were examples of people in the medical field that really carried us through that I truly admired, and there were people who were devastating to our psyche as kids. Um, also well-meaning but not thinking through what it means to have a 40-year-old lady, um, having a terminal condition and having five- having five kids in the way they interacted with us. And I started developing thoughts about, you know, what it means to be a physician, how you impact people's lives.

Brady Huggett

Uh-huh. So you the- the way the doctors were talking to you, some-something about that didn't sit right? You-you were like-

Evdokia Anagnostou

So there were- there were a couple, like she had an oncologist. I still remember him, and I think kind of well of him. I hope he's well, uh, where a young oncologist who sat down and talked to us, uh, answered our questions. Um, you know if we were upset, he was there to support. If we didn't wanna talk, he didn't talk. He, um, gave our mom enough space to kind of figure out how we're gonna work this out, but was present if we needed him there.

Um, there were other physicians who just walked in the room, kicked us out every time; we were not allowed to be part of the conversations. Um, all we knew is we walked back in the room and my mom was crying, right, or my dad was crying. Right. So, and I was like, "There's something truly-truly wrong."

I-I-I'm sure they thought they were protecting us, but I started developing kind of ideas about what it means to be a physician and how you impact people's lives. I still cared about science quite a bit. It was my favorite thing in school, but I also started thinking about what it means to be a physician or a clinician. And then, uh, over the years the two kind of started merging more and more. Uh, and then I thought I would become a physician and figure it out later. But, um, finished high school and remember that aunt that left-

Brady Huggett

Yeah-yeah.

Evdokia Anagnostou

-when she was really-really young with elementary school education went to the U.S.? Well, she ended up in New Jersey and had made her family and offered that I go for a little bit, uh, and stay with her.

Brady Huggett

Just to see the U.S.?

Evdokia Anagnostou

And also, you know, I was a really good student.

Brady Huggett

Yeah.

Evdokia Anagnostou

Like I was- I was a good student in school. And so I could have entered- I had- I- part of me wanted to leave because I had appl- I had uh, applied for a scholarship and I had gotten it. And I convinced my parents who, at the time, they were both still alive, that I could- I can finish high school and go to the U.S. with my scholarship for a year just to see what it's like and come back.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

Uh, and then my mom dies. And- so I leave, actually. So my mom died the year that I left. Um, so I'm leaving and then my mother dies. And then.

Brady Huggett

You'd already, the plan, the plan was in place.

Evdokia Anagnostou

The plan was in place.

Brady Huggett

Yeah.

Evdokia Anagnostou

And then of course the plan was that I was gonna go back and I was going to go back because, um, families with five children, with four children or more in Greece have the right to transfer kids from one university to another just for economic reasons. So you can keep your kids all in the neighborhood. So your financial cost of educating your kids is lower.

Brady Huggett

All right. Say that again. So if you- what do you mean you can transfer them from one?

Evdokia Anagnostou

So if I started let's say university in the U.S. the first year, then I could transfer back to Greece automatically because my family had multiple kids.

Brady Huggett

Got it. OK.

Evdokia Anagnostou

Uh, so that was the original plan.

Brady Huggett

Can I- can I ask one thing about this? Because this is somewhat similar to what your father had gone through, right? Where, but what your father did initially was well I'm gonna put all that aside and focus on the family. And so your mother dies and now you're the head of these- you're the oldest of these five daughters and you-you are like I'm still going. Was yo- was your father-

Evdokia Anagnostou

So this is what happened. I had already left right before she died, the family expected me to go back. And that was the expectation, that I'm gonna go back.

Brady Huggett

Yeah.

Evdokia Anagnostou

And raise my sisters which were all in school still and all of that. And this was like where I-I really truly, truly appreciated my dad. So he, you know, he had this journey but he was like, "You don't have to come back. Like you really don't have to come back if you don't want to." And I struggled. I remember I did- I mean I did a lot of inappropriate things.

So they were- we're close, right? So of course I didn't want to mother my teenage, uh, sisters who wanted nothing to do with me. But there was, uh, the baby of the family, right, that was, uh, six years younger and just finishing elementary school.

And I asked her, and she still remembers this. I asked her, we sat down and I was like, "Do you want me to come back? Uh, because if you want me to come back I'll come back."

Of course, she had- I mean, it was inappropriate for me- inappropriate. The whole thing was like we're all struggling to figure out where we're gonna- how we're gonna cope with the situation. And-and she gave me permission to not come back if you like, um, poor thing. Um, but the truth is I just didn't wanna go back.

Brady Huggett

Yeah.

Evdokia Anagnostou

I-I had seen a life for myself that would look different. My dad seemed to be supporting it, which I was totally surprised by and touched by. And so I decided I was gonna stay and finish under- so this was my plan. I was gonna- made a new plan that I was gonna stay and finish undergrad here in the- in the U.S. and then transfer back to the medical school in Greece after.

Brady Huggett

So you're just still thinking, OK, all right.

Evdokia Anagnostou

I'm still thinking I'm gonna do this.

Brady Huggett

So, uh, when you- so you'd-you'd gone to this- we should say the school was the Stevens Institute of Technology.

Evdokia Anagnostou

Yeah.

Brady Huggett

So that's in- that's in Hoboken, New Jersey.

Evdokia Anagnostou

Yeah.

Brady Huggett

So not-not far from your aunt. Uh, you said you had seen this life for yourself, what-what -what did you see? Like was it just the size of things versus the island? Was it the- I mean U.S. frankly can be culture shock for sure.

Evdokia Anagnostou

So again I-I mean I knew Athens, right? So because all my school year is in Athens so it's not just the- it was not just comparing to the island, I was comparing to Athens. But for me, part of it was that I was not just the role, right? So me going back- well the last few years of my mom's life I was quite a bit of the role right? So she-she was struggling with her health and I-I did have to do a lot of raising and supporting and cooking and cleaning and taking kids to school and all of that. So it was nice to see what it feels like to-

Brady Huggett

To just study.

Evdokia Anagnostou

-to just study.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

And, in fact, go to see my first movie. I had never seen a movie in a cinema before. Uh, I went to see a movie.

Brady Huggett

What did you see?

Evdokia Anagnostou

You don't wanna know. I'm not gonna actually admit.

Brady Huggett

Oh, come on.

Evdokia Anagnostou

So I went to see "Pretty Woman," and that was my first movie.

Brady Huggett

Oh, that's a great movie. That's a great movie.

Evdokia Anagnostou

Um, uh, but like this idea that there was like things that I had never experienced before, that I did not have to like fit into a day of like, cooking, cleaning, taking people, duties for other people, like actually feeling almost like the first- like almost like experiencing my adolescence all over again where I get to be selfish and have it be about me. We were totally responsible, studying really hard, doing well in school, but having kind of this kind of idea that this could be about me and not about everybody else.

Brady Huggett

Yeah.

Evdokia Anagnostou

Um, I did love New York. I did love- I had that feeling that everything was possible. Everybody was there. We-we joke a little bit, and we don't joke, it's tragic, but we joke that, uh, we just finished our, um, Black employee engagement in the hospital and, uh, we're having discussions about where we have- at an individual level, where have we been culprits, and-and what the opportunities are for reconciliation, if you like.

Um, and somebody once asked me, and it occurred to me- somebody asked-somebody asked me how I interacted with Black people first in my life if I grew up in a Greek island before migration was happening.

Brady Huggett

Mm. Mm.

Evdokia Anagnostou

And the only Black person I had met, uh, before I moved to New York, was the surgeon who took out my appendix when I was 6, because there was a program for Sub-Saharan African brilliant, uh, young people to come to Greece at the time to go to medical school, right-

Brady Huggett

Yeah.

Evdokia Anagnostou

-and to-to train. So coming to New York and having this experience of everybody, from everybody around the world fitting in, everybody fit in like everybody's- it was everybody's city. Everybody's future, everybody's excitement, everything was possible, was really kind of exciting for me. I was really excited. I was mesmerized by the possibilities, right?

Brady Huggett

Yeah. It seems hopeful sometimes.

Evdokia Anagnostou

It was quite hopeful.

Brady Huggett

Yeah.

Evdokia Anagnostou

I mean, I did- I didn't- I lacked, you know, risk appreciation. I lacked truly evaluating who was included and who was not-

Brady Huggett

Yeah.

Evdokia Anagnostou

-and who was supported and who was not. It was just a time of seeing the potential of like bringing the world together in one city and being excited about what this could do, uh, for-for the world. So I was- I was just excited. I was an excited 18-year-old, right? That had the opportunity to study, get my English better, um, do well in school, only worry about- I mean, I was worried about my family, but-

Brady Huggett

Yeah. But worry about yourself first.

Evdokia Anagnostou

-but worrying about me on a day-to-day thing. My lovely aunt, uh, was there to make sure that I don't totally screw up, and my cousin, and I owe them a lot. Um, but, uh, it was kind of an exciting time. And my dad actually did- he did- he did see through for me. Um, although he could not figure out what I was thinking, you know.

Brady Huggett

He just knew you liked it. Right. He just knew that you were enjoying yourself and you seemed happy.

Evdokia Anagnostou

I think he enjoyed seeing me happy. I also think he- like the story of the mathematician versus accountant, I've heard many times.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

Like I thought- I think he saw the opportunity for me not to have to become the accountant but become the mathematician, right, from his story, right, that I didn't have to compromise to-

Brady Huggett

Yeah-yeah.

Evdokia Anagnostou

-kind of to caregiving at the time the way he had done.

Brady Huggett

Yeah. But that is, you were choosing what you wanted, right?

Evdokia Anagnostou

Yes.

Brady Huggett

I mean, you were still- it was physician that's what you wanted. Yeah.

Evdokia Anagnostou

Yeah. So basically what happened is I had applied to a pre-med program, uh, and I had gotten in with a scholarship, although when I arrived, I realized that that pre-med program was, um, in collaboration with the state medical school. And I was not eligible as an international student. So it didn't quite work out like that. But it worked better at the end because it opened up many other options for me. And-

Brady Huggett

So you got, uh, your undergrad was chemical physiology and also-

Evdokia Anagnostou

Chemical biology, yeah.

Brady Huggett

And a- and a- and a master's also in chemistry or something.

Evdokia Anagnostou

Yeah. Basically, at the time, the premed program at, uh, Stevens, and I don't even know what it is now. You had the options to do biology, chemistry, chemical biology. There might have been another option. Um, I have an analytical mind, so I like biology, but I actually don't like biology.

Brady Huggett

Yeah.

Evdokia Anagnostou

I like biology because I underst- I-I-I start thinking about how you model the systems, but it was not about me taking a book and memorizing system after system.

Brady Huggett

Right-right.

Evdokia Anagnostou

So the way we get taught biology was not what excited me at the time. So I did- I had originally done chemical biology- I had started with chemical biology, and then, uh, I realized there was no chemical biology in Greece. And remember, I still had the plan of going back to Greece.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

And so I wanted to get an a degree that had equivalency and then got my extra chemistry stuff so that I can get an chemistry equivalency when I went back to Greece to apply to medical school.

Brady Huggett

OK. Well, you did not go back to Greece for medical school?

Evdokia Anagnostou

I did not.

Brady Huggett

So-so what happened there?

Evdokia Anagnostou

So, you know, by the time I was in my third, fourth year of undergrad, I had a pretty good sense of myself and what I wanted to do and where I wanted to be. My family was doing better.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

So, you know, my dad had seen what it means. He had come and visit- he actually came to New York and-and-and visited my aunt in New Jersey, and we took him around and got excited about things. Um, my sisters, except for the little one, had made their way out of high school. And so I was like am I going back, I don't wanna go back. Um, so I- but I was stuck because I didn't have a lot of money.

Brady Huggett

Yeah.

Evdokia Anagnostou

And how do you do medicine in the U.S. without money? And I already owed quite a bit, and he had worked, he had given me, he had worked really hard and he had-

Brady Huggett

Your dad?

Evdokia Anagnostou

My dad. And he had supported me, and I got supported by my aunt and my cousin. I lived with them. I didn't have expenses for housing. So again, a lovely, there are some parallels in the stories of my dad and I, but a lovely older professor at, uh, Stevens. So I was like, how am I gonna do this? Like, I'm not even eligible for-for loans. Like all my loans were on credit cards at the time because I was an international student, right, and I was moving the money around-

Brady Huggett

Oh, man. Yeah.

Evdokia Anagnostou

-trying to not, um, pay too much. Um-

Brady Huggett

So you-you'd get a new card with a lower rate and flip the money over-

Evdokia Anagnostou

Yeah. Then flip the money around.

Brady Huggett

Yeah.

Evdokia Anagnostou

Um, so this man just passed me an application to medical school at McGill, and he's like, "I know you're applying to U.S. and you're struggling about this, but why don't you check out this medical school? It's in Canada, and the cost is much lower and it's a really good medical school."

Brady Huggett

Yeah.

Evdokia Anagnostou

So I filled the application, to be completely honest, I didn't even know where it was.

Brady Huggett

Yeah.

Evdokia Anagnostou

Um, but, and that I had to learn some French to actually go and study at McGill. But, um, uh, I filled the application, I got an interview, um, I got accepted to McGill, and the-the rest is history again.

Brady Huggett

Wow. So you, uh, I mean, so McGill's in Montreal, we should say that?

Evdokia Anagnostou

Yes.

Brady Huggett

And Montreal is a sort of bilingual city, French and English.

Evdokia Anagnostou

Totally bilingual, yeah.

Brady Huggett

Were the classes in French?

Evdokia Anagnostou

No. So education was in English, which is what made it possible for me. Um, but, uh, so got there for the interview. Um, uh, I remember that it was February in Montreal.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

It was like minus 40.

Brady Huggett

Yeah.

Evdokia Anagnostou

I didn't think you could get that cold.

Brady Huggett

Yeah.

Evdokia Anagnostou

Like, I thought it was an impossible state. Um, I was dressed like, you know, the way that 20-something-year-olds who go on an interview dress, in a little suit and my little shoes. And, um, it was, uh, for those of, uh, for-for the audience that doesn't know Montreal, the medical school is sitting on top of a hill.

Um, and so I-I remember I couldn't actually, uh, walk down the hill because I was sliding on the ice. Um, so I couldn't even actually go up and down to the medical school for my interviews but-but - and realize everybody's speaking French. So basically the education is in English, but the language of the streets is French.

Brady Huggett

Yeah.

Evdokia Anagnostou

And the language of the stores was French.

Brady Huggett

Yeah.

Evdokia Anagnostou

Um, and so I realized I-I had a first issue, of French, um, but I- but I loved the city. I- the city felt much more European to me and closer to what I was used to. Um, and there was some nostalgia around that, although I love New York. Um, and I remember in between, so I had an interview the first day, and then I had a panel interview the second. And so that night, the in-between night I went, um, to Place des Arts and I-I-I attended a classical music concert that I loved, and I was like, "Oh, this could be good. This feels good, I'm good here."

Brady Huggett

This could work. Yeah.

Evdokia Anagnostou

So, you know, sometimes you get a gut feeling that a place is the right place for you. And I had that. So got accepted and-

Brady Huggett

Yeah.

Evdokia Anagnostou

-moved to Montreal.

Brady Huggett

It's a beautiful city.

Evdokia Anagnostou

It's a beautiful city.

Brady Huggett

Yeah. And everyone says that it feels more European than- I mean, people say that about New Orleans a little bit in the U.S.-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-and-and Montreal-

Evdokia Anagnostou

Yeah.

Brady Huggett

-I think, uh, in Canada,

Evdokia Anagnostou

I mean, I would say it's a little bit- it felt a bit more European to me, both in the good and the bad. Right?

Brady Huggett

Yeah-yeah.

Evdokia Anagnostou

It just has like both of those kind of the legacy of the old, not flexible.

Brady Huggett

Yeah.

Evdokia Anagnostou

The things that really excited me in New York, that everything was possible-

Brady Huggett

Yeah.

Evdokia Anagnostou

-and everything then changed. You don't get that in Montreal.

Brady Huggett

Yeah.

Evdokia Anagnostou

You have a kind of the old continent kind of legacy, but you also get that kind of comfort feeling of something being stable and old and-

Brady Huggett

Yeah-Yeah. OK. So I think you-you earn your M.D. in like '98 or something like that.

Evdokia Anagnostou

Yes.

Brady Huggett

Yeah. Um, and-and you still- I-I- did you know what you were gonna study at that point? I mean, you've been a physician all along, but without an area of specialty?

Evdokia Anagnostou

Yeah. So it was actually hard for me. I liked a lot of things. I probably could have picked different routes. Like I think some of this is luck and some of it was, um, so I liked a lot of things, but I did like- I was really puzzled by some philosophical questions around, you know, the things that I was worried about when I was, uh, I was thinking about when I was making graves with my Legos, like the-

Brady Huggett

The existence of life and-

Evdokia Anagnostou

What does it mean?

Brady Huggett

Yeah.

Evdokia Anagnostou

What does it mean to be alive? What does it mean to be awake? What does it mean to have consciousness? Um, and I was also interested, um, I had like, um, I was interested in where behavior comes from, where wellness comes from, but also I had a- All my life I've been trying to kind of balance a little. I-I-I don't- I am not comfortable, as-as much as I am a scientist and, uh, understand- I-I wanna understand relationships and have clarity in these relationships. I was not comfortable accepting that all I see is all there is. And that, um, I can conceptualize meaning without spirituality, I was always struggling with that.

And at that time, I was also quite struggling about the nature of sin, if you like, versus, uh, failure because my brain is not working or because my environment has failed me. So I was having this kind of struggles around-

Brady Huggett

So like-like if, let's say someone has sinned, as you said.

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

Like what is a sin versus, uh, I wasn't prepared for that.

Evdokia Anagnostou

Yes.

Brady Huggett

I, um, I wasn't, didn't have an opportunity. I was led astray. All those things that might lead someone towards sin.

Evdokia Anagnostou

Yes.

Brady Huggett

What's the difference there?

Evdokia Anagnostou

So what is- what is the nature of sin?

Brady Huggett

Yeah.

Evdokia Anagnostou

Is it like our human condition predetermines our abilities? Is it- What is free will, where-where I have will, where I don't have will, where I have an illusion of will and create a whole universe around it. And where, uh, and I still sometimes struggle with stuff. Like sometimes I'm wondering whether I'm on somebody's, uh, video game screen and I don't know it, right? On the other side of a video game screen.

Brady Huggett

Yeah.

Evdokia Anagnostou

But-but at the time, those kinds of things, uh, made me think about psychiatry and neurology. And frankly, if there was more biological psychiatry in Montreal at the time, I may have picked, uh, psychiatry, but I wasn't. So I ended up in neurology, um, trying to kind of have some understand- trying to kind of deal with this idea of that I don't know where human experience comes from, how-how it gets organized, where responsibility lies, where free will lies, um, where suffering exists and how that kind of interacts with free will. And-and, um--

Brady Huggett

I mean, these are much bigger questions than-

Evdokia Anagnostou

Yes.

Brady Huggett

-um, can we remove the cancer? How do we set a broken bone? Right? So-so this, I understand why you did not end up being-

Evdokia Anagnostou

Yeah. They were quite attractive questions to me.

Brady Huggett

Yeah.

Evdokia Anagnostou

Yeah.

Brady Huggett

So how- what did you decide? I mean, so you just-

Evdokia Anagnostou

So I ended up going to child neurology, um, in Montreal and I trained. Uh, I stayed in Montreal, uh, and I trained in neurology, child neurology in Montreal. And then about halfway through my child neurology training, I started meeting kids with neurodevelopmental differences as part of the training. And there were a couple of interesting things about that experience. Firstly, it was- there was a very concrete problem. So neurologists get trained to localize a lesion.

Brady Huggett

Uh-huh.

Evdokia Anagnostou

So as you're training, you see symptoms and signs, and, in a patient, and then your supervisor says, "And where do you think the lesion is?" And you have to map it backwards and think about where the lesion may be in the brain.

Brady Huggett

Yeah.

Evdokia Anagnostou

But with neurodevelopmental kids, um, if you ask the question of where the lesion was, it was very hard to think about, um, how you would localize, uh, all the things that you saw in a particular location in the brain. So my science part, the curiosity part of like how things are put together and what is it that we understand and don't understand, and how these things come about, uh, was kind of getting excited, uh, around, uh, kids who were neurodivergent at the time. But the other thing is that I actually truly liked them.

Brady Huggett

Yeah.

Evdokia Anagnostou

Like there's something about how, um, neurodivergent kids approach problems and think about the world that I thoroughly, thoroughly enjoyed. So I was having a good time.

Brady Huggett

Yeah-Yeah.

Evdokia Anagnostou

And so as I was finishing child neurology, um, I was thinking that my later training should be in-in that space.

Brady Huggett

And that's what- so then you had a postdoc at Mount Sinai?

Evdokia Anagnostou

Yeah. So then I finished, um, in Montreal and got a postdoc in Mount Sinai Department of Psychiatry there. So I have moved between neurology, psychiatry, and pediatrics credibly, depending on who claims what-

Brady Huggett

Yep.

Evdokia Anagnostou

-and how we devise these sectors. So I moved to New York, did my, uh, postdoctoral fellowship in neuroimaging and clinical trials, uh, in autism. And then I got my first faculty appointment there.

Brady Huggett

At Mount Sinai?

Evdokia Anagnostou

At Mount Sinai.

Brady Huggett

Right, so I think your first paper, anyway, that I could find, was 2005, and it was looking at like repetitive behaviors.

Evdokia Anagnostou

Yeah. So the first research project that was totally my research project was to try to map repetitive behaviors to basal ganglia structure and function, uh, in the brain. And at the same time, I was working on a couple of clinical trials that looked at whether- the premise there was that the symptom domains that autistic kids may experience distress around overlap, uh, with other conditions. And can we explore, um, interventions that have had benefit in other conditions in this population?

Brady Huggett

And I saw that you did a paper on spinal muscular atrophy someplace-

Evdokia Anagnostou

That was my fellowsh- That was- I was still in Montreal for this one, it was just late coming out. So as a resident, um, while I was doing, um, while I was training as a neurologist, I was quite interested in, um, how you map genes through brain and brain to something that's measurable, whether it's behavior or signs or symptoms. And so my first-first paper was on spinal muscular atrophy.

Brady Huggett

Hmm. OK. So while you, so, OK, let's talk about your first faculty appointment.

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

But you're also seeing patients, you start to see patients, right?

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

In my reading of your-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-work, these two things sit side by side. And they're actually very important for the way that you-

Evdokia Anagnostou

Yes.

Brady Huggett

-do your work. Not only do you do this research, but you are seeing human beings.

Evdokia Anagnostou

Yes.

Brady Huggett

And that is driving the research and maybe even the research is sort of driving the way you treat the patients.

Evdokia Anagnostou

Yes. I would say that's how it has worked for me. Uh, for me, the original drive, I've always liked science. I enjoy it, um, very much. But on its own, um, it gets me back to my existential holes about whether I'm sitting on somebody's video screen-

Brady Huggett

Yeah.

Evdokia Anagnostou

-and on a video game. Right. Um, to feel that-that-that there's some meaning to-to what I do and-and my life on this planet. I choose to believe that there is meaning, and that comes from the impact we have on each other. And so, as a physician, I find meaning in the idea that somebody's life is better because they happened to have met me. And I don't mean this in a grandiose way, because I know I often fail kids and families. Like, this is a relationship, right?

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

So sometimes we fail each other, sometimes we support each other. But by understanding the nature of these relationships, understanding what people are telling you, and then using your science skills to think about potential solutions to problems, sometimes you get it right, not always. And on those sometimes, then there is meaning, right? The-the, that these-these people's lives have been better because you existed and therefore there is meaning to your existence.

Brady Huggett

I'm assuming that the way you interact with patients or their parents is the opposite of what you felt when they were kicking you outta the room 'cause your moth- Exactly, right?

Evdokia Anagnostou

Yeah.

Brady Huggett

Yeah. So you, you're always like, I'm gonna sit down with these people, take every question they have.

Evdokia Anagnostou

And understand, understand their experience, right?

Brady Huggett

Yeah.

Evdokia Anagnostou

And that's why sometimes I get a little defensive to-to protect the experiences of the people I have seen in clinic because I feel like this is truly a trusting- a relationship that requires trust. That when-when people actually allow you to get into both their triumphs but also their suffering, um, enormous amount of trust is required so that harm is not done. And so I wanna defend that trust, that fact that I've been entrusted with their experience, not that I always get it right. Like not that I don't misinterpret what they have to tell me sometimes, but the fact that I sat down with them and I was entrusted with their experience, for me, it's a, is a sacred thing, right?

Brady Huggett

Yeah.

Evdokia Anagnostou

That I need to honor.

Brady Huggett

It's a- it's like a privilege almost.

Evdokia Anagnostou

It's a privilege. It's an absolute privilege. Yeah.

Brady Huggett

So I- You-you said something that I thought was interesting and it was that, um, I don't know where I-I heard this some, some recorded talk that you gave, I think, but when people, now we're talking about autism.

Evdokia Anagnostou

Yeah.

Brady Huggett

When people come into your clinic and you see them, they are not coming because they're having-having problems with their repetitive behaviors. They're not coming because they, um, they're coming because they have GI issues. They're coming because they have problems with sleep. They're coming because they have OCD issues that they can't control. That's what they want help with, right? And because you've seen and heard from people what they actually want help with, that is how you tend to drive your research, towards those ends.

Evdokia Anagnostou

Well, I would say, um, I would take a step back from that. I would say that I, ober- observed.

Brady Huggett

Yeah.

Evdokia Anagnostou

That as the kids were coming- So when I met 18-month-olds or 2-year-olds, the-the concern was the social, the delay in the language, the social difficulty, the repetitive behaviors. But as I followed these kids over the years, these kids kept accumulating types of difficulties that would not necessarily map onto the core symptom domains, right? So it could be physical health, as you mentioned, could be their mental health very often.

Brady Huggett

Yeah.

Evdokia Anagnostou

Um, and I also started observing that some kids seemed to be on very different trajectories. So some kids would grow up with very little co-occurring symptoms. And some of them, it's almost like they were on a trajectory that predicted that they keep accumulating diagnoses and symptoms. So first of all, there was a basic science question for me. So if-if you're predicted to be on a course that, um, is likely that-that-that suggests that you're gonna get all these other conditions or symptoms or signs or whatever you wanna call them, uh, that will be distressing to you and-and you will need help for. Um, but you started from the autism diagnosis.

Does it- What does that mean about the category of autism, right? The way we define it right now? So the first science question for me was like, do we have the right- Should we learn from watching the kids grow and become youth and adults and question whether the way we define these categories, um, may not be particularly helpful. And secondly, if two kids start from the same place, but end up having very different trajectories as I follow them up, but they looked very similar to begin with.

Brady Huggett

When you say look very similar to begin with, meaning-meaning what? Like-

Evdokia Anagnostou

Meaning they showed up at 18 months or 2 years. They had some language delay, they had poor eye contact. They were only having parallel play and were not developing.

Brady Huggett

So phenotypically they looked similar.

Evdokia Anagnostou

Phenotypically they looked very similar. And it's clear why we-we would have given them the same diagnosis at the time but ended up looking very different as adolescents. Is it possible that category that is meaningful for us to understand is not just a

combination of symptoms at the beginning, but what this trajectory looks like. So that as a physician who's- my job is to provide health-related service to- that actually is meaningful to people and makes their lives better, that my job is not necessarily to spend I don't know how many weeks giving a diagnosis and having kids waiting in waiting lists forever and ever because we take so long to give a diagnosis and do all the extra, extra tests.

Brady Huggett

Yeah.

Evdokia Anagnostou

But actually trying to understand what is the predictive trajectory for that child, and then intervene on the areas where I know my older youth that I see, um, are experiencing distress, and they want help with.

Brady Huggett

Right. And so your answer to that-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-is to look at the biology.

Evdokia Anagnostou

So my answer to that-- Well, this is one of the answers.

Brady Huggett

Yeah.

Evdokia Anagnostou

So the basic answer as a scientist is OK, if the category as defined right now is not giving me all the information that I need to predict what this person's biological trajectory and-and behavioral trajectory will be, should we go back to biology and actually interrogate these categories that we defined some time ago by observation, but never actually validated biologically? So I started thinking about, um, using standard methodology where we usually compare one diagnosis to another.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

But-but taking multiple modalities. So from genomics to brain imaging infrastructure and function and other omics to actual behavioral characterization for kids who had a variety of developmental diagnoses, to see whether I could actually distinguish them. And this- what I was observing as the kids were growing was mostly about social determinants of health and not necessarily about what the original biology was. And-and the first learnings were that actually we could not biologically validate these categories, right?

Brady Huggett

Yeah. Well- So I mean, you-you were beginning to see things, but you could not go "There it is."

Evdokia Anagnostou

No.

Brady Huggett

Right. You-you're start- You're-you've been finding, 'cause you know, in some of your papers, you've been finding things that are leading you to think about certain areas, but there is not some determinant that says this is the ASD you will have, this is the one this child will have.

Evdokia Anagnostou

No.

Brady Huggett

Yeah, exactly.

Evdokia Anagnostou

No. What-what I think what I'm learning from the data that I'm looking at right now is that the original diagnosis that we give to the kids is not necessarily the one that predicts their trajectory. And there are other factors, uh, as to why we- something is more salient to us at the beginning, or a community has expertise to diagnose one condition versus another. We ignore one and-and we think something is primary and something is secondary. We have developed all these kind of narratives about how you decide what's a primary diagnosis in a person and what are maybe secondary phenomenon, but none of them have been-

Brady Huggett

Yeah.

Evdokia Anagnostou

-validated. Like it's-it's about our interpretations of the world, right? And so I'm learning that there are kids who have the same diagnosis, that have very, very different biologies and predicted to have very, very different trajectories. And there are kids who have very different diagnoses, different diagnostic labels, but in fact, biologically they look very similar and they're likely to actually grow and have very similar trajectories. So I am interested in this, not because it's just a theoretically satisfying, uh, exploration of-of how you organize the world, right? Uh, but because as a physician, I know it's possible to do harm, and we've done harm. Harm-harm has been done, right?

Brady Huggett

Yeah. Yeah.

Evdokia Anagnostou

So if we organize sectors around these labels, and some kids get service, for example, and some kids don't, based on their label, but the label is not actually what predicts the need, then we have created sectors that don't serve the needs of people, right?

Brady Huggett

Yeah.

Evdokia Anagnostou

Uh, but so it's just some abstracted, uh, kind of category we created. And also I'm a little bit worried sometimes about what we teach people, uh, especially young kids, where we label them in ways that are not necessarily predicting something for them, right? So, um, yes, there is, uh, there is autistic identity, and it's very important to people for those that find solace and community and purpose in that identity, I think it's extremely important.

Brady Huggett

Yeah.

Evdokia Anagnostou

But not everybody does. And so early on, understanding the category that will give you the most help to-to experience the-your life as a good life, I think is what's probably the most important thing. And sometimes the label helps with that and sometimes the label harms with that. And so trying to figure out what are the categories that most of the time actually help is- is a thing that I'm interested in, right?

Brady Huggett

Yeah. But, yes, but what would those categories be? There's such a wide range-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-of phenotypes that how-how would you come up with language to cover all that?

Evdokia Anagnostou

I mean, first of all, I don't feel strongly that there has to be a single word to- for each category, right? In fact, I don't even think of categories as stable, right?

Brady Huggett

Yeah.

Evdokia Anagnostou

So we can change categories as we grow and as we interact with our environment-

Brady Huggett

Yeah.

Evdokia Anagnostou

-and all kinds of other things happen to us. So I'm not sure that we need a system that just replaces one-one word with another word.

Brady Huggett

Or many.

Evdokia Anagnostou

-or-or many. I think, uh, we need a framework that is mapping to- So we need to have clarity on what the ultimate goal is. So even that we don't have consensus on, but my version of what the ultimate goal is-is the same whether you're autistic or non-autistic, it's a- it's a- it's your personalized version of a good life.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

What do you envision as a good life? That is the ultimate goal, right? So, uh, everybody's job in a developing child's life, whether you're a physician, a parent, a teacher, a neighbor, is to facilitate that version of a good life. And so I'm not sure that we necessarily need frame- The labels may be useful for certain things, but I also think we need frameworks that talk about things we do well, things we don't do well, things we need help, things we don't need help with. And also incorporate cultural perspectives, diversity-

Brady Huggett

Yeah.

Evdokia Anagnostou

-intersectionality, and all of that, that creates a framework for every person who's struggling, if they're struggling, about what they're working on, what the evidence is, that's, uh, you know, effect- That evidence is for investing in an intervention or a treatment or a therapy or whatever it is, where you leave people alone to- to actually thrive in their own way. Um, and-and that supports their version of a good life. And I'm not sure the labels help us with that.

Brady Huggett

It-it's almost-- I-I think it sounds like what you're saying is the labels just need to be more fluid.

Evdokia Anagnostou

Yeah.

Brady Huggett

You-you- Someone may be like this, but they're not- That doesn't lock you into that category for the rest of your days. Right? You-you may move in and out as you improve on some things and, yeah. Oh, that-that makes sense.

Evdokia Anagnostou

Right? Right, so where you are experiencing permanent distress does not have to be a stable thing.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

In fact, we know it's not a stable thing. Right? So people experience disability, first of all, in and out. There are people like- So unless you have, um, a, uh, devastating physical disability that actually, uh, restrains you to constrict its kind of setting of movement, it's-it's hard to argue that disability is always a stable construct, right?

Brady Huggett

Yeah.

Evdokia Anagnostou

We all have experienced some version of disability in some part of our lives. Now, some kids, some youth, will experience more than others. And I don't wanna put everything on a spectrum of where we all-we all experience some, right? So some-kids are on predicted courses of disability. And in those cases, I wanna know what this predicted course is because then there is the opportunity, not to prevent the difference, like the- we obsess about this quite a bit, but this is not about the difference. This is about your inability to enact the version of a good life that you had think- thought for yourself.

Brady Huggett

Yeah.

Evdokia Anagnostou

And so the whole point of intervention is to give you options and opportunities to enact this kind of vision, like to enable this vision for your life. But that needs to be flexible, needs to be fluid. It's not always about your primary secondary label, right?

Brady Huggett

Yeah.

Evdokia Anagnostou

Especially because these kids are gonna end up with a lot of labels by the time they grow up.

Brady Huggett

Yeah.

Evdokia Anagnostou

We know that happens.

Brady Huggett

Yeah. There's a few things I wanna ask you. Uh, I'm gonna have trouble remembering the name of the paper, but it came out in 2009, and you're one of many authors on it.

Evdokia Anagnostou

OK.

Brady Huggett

There's a *Nature* paper, and you're looking at, the group was looking at a-a bunch of SNPs to try to find some copy number variants, which then, uh, were linked to ubiquitin degradation, and neuronal cell adhesion.

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

Do you remember this paper? No, you don't.

Evdokia Anagnostou

I barely but yes, OK.

Brady Huggett

So it's like super interesting.

Evdokia Anagnostou

Yes.

Brady Huggett

It is, it had shown, I think for the first time-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-that ASD might be related to these two pathways, right?

Evdokia Anagnostou

Yes, yes, yes.

Brady Huggett

And great paper but you think fairly translationally. I mean, I know that-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-you have some patents and I think Roche, you work with Roche sometimes. So my thought is like given your clinical background when you look at that paper, what do you do with that?

Evdokia Anagnostou

Yes. So, uh, we have actually- I've thought quite a bit about this and struggled with this. And I think part of the reason we struggle a lot is because we are being too simplistic. [chuckles] So the original idea was that we're gonna find whatever, 10 to 12 genes, whatever the original model was, and then we're gonna have these molecular targets, and then we're gonna go after these molecular targets-

Brady Huggett

Yeah.

Evdokia Anagnostou

-and everybody's life is gonna be better.

Brady Huggett

Right?

Evdokia Anagnostou

Of course, it's a super naïve, [chuckles] um, version of how biology works. First of all how genomics works, how biology works. When I think about biological pathways right now, so I still think that there are biological pathways that are associated with difference, and there are biological pathways that are associated with distress and dysfunction. They're not always the same thing, um, but sometimes they're the same thing-

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

-and we-we know for example that there are certain rare variants where it is very hard to conceptualize an outcome of a variant like this as a desired outcome. Right? That they-they actually in those cases, the difference and the disability kind of, uh, almost become the same thing. Um, but so I-I am very interested in thinking about biological interventions that open the

opportunity, uh, make the opportunities for potential outcomes to be a bit wider. To give you- to-to allow us to cons-consider outcomes that are not what we originally predicted as possible, um, by making it biologically possible, right?

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

And that's how I think about medication trials and things like that. I don't think it's as simple as thinking about what my molecular target is in genetics and going after it. Occasionally, this has worked in medi- in medicine, but often it hasn't worked in medicine.

Brady Huggett

Yeah.

Evdokia Anagnostou

Forget development, which gets particularly complicated-

Brady Huggett

Yeah.

Evdokia Anagnostou

-because it changes with time. I think the idea is that there is a downstream target, uh, from that original biology that, uh, is usually circuitry based, um, that creates, uh, conditions that make it harder for this person either to learn or creates mental health vulnerability and things like that. So then I'm thinking about the biological interventions, not necessarily mapping the original, original genetic variant and our understanding of it, but what is the net effect of that variation-

Brady Huggett

Yeah.

Evdokia Anagnostou

-on biology as the child grows, and is there an opportunity to manipulate that?

Brady Huggett

Yeah, and if it's a problem, can it be-can it be-

Evdokia Anagnostou

Yeah.

Brady Huggett

-can that suffering be soothed in some way? Yeah.

Evdokia Anagnostou

Exactly. If-if-if it's a, so I think a lot of this genetic variation that we have identified, um, leads to basically a disorder of learning in a way, right? It constricts how much you learn and how you learn. And so if I could contribute, um, to the knowledge base that allows kids to have a wider repertoire of potential, uh, kind of learning, uh, pathways and opportunities, that would be something that I think, I would be- I-I would feel I have contributed to. And some of those variations make it more likely that you are vulnerable-

Brady Huggett

Yeah.

Evdokia Anagnostou

-when it comes to mental health. And again, this is a barrier, this is not, uh, learning necessarily slow but sometimes it is, but sometimes it's a barrier to your ability to envision this good life, where you constantly interrupted by vulnerability related to your mental health or your physical health. So those would also be wins. And that's where I see the role of biological interventions, right?

Brady Huggett

Yeah.

Evdokia Anagnostou

It's not- They don't teach skills. Drugs don't teach-teach skills. Devices don't teach skills on their own. They're facilitating either the skill-based acquisition programs that we have. The potential is to facilitate it if they open up learning, or they remove barriers when people's mental health and physical health gets in the way of them being able to accomplish what they could otherwise accomplish.

Brady Huggett

Yeah, OK. Sometimes when you speak or when I've seen you speak, and I think in particular I'm thinking of, um, INSAR in 2022, before you speak you sort of gave off to the crowd- and this was like a keynote, so there are a lot of people- your, kind of your identity markers. I'm a woman, I can't remember what you said, I might be of this age. I was born here-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-I'm whatever. And you felt it was important for the audience to know that.

Evdokia Anagnostou

Yes.

Brady Huggett

Why?

Evdokia Anagnostou

Um, I think the way we interpret the world and our version of what a good life is, is influenced by our intersectionality, and we all have some. And sometimes part of the difficulty in this space is that we don't recognize that the concepts of a good life can come- can be very different based on not just our underlying biology or where we grew up, but a lot of other identity markers.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

Um, so I don't pretend that I have some objective view of the world. Uh, I'm very clear that I have a biased view of the world. I have a biased view of what a good life is. It's something that makes sense to me.

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

Um, I have a biased view of what a good outcome is. All of these things are biased because they're influenced by my own and lived experience of what a good life is or what a good outcome is. And although part of the gift of being a clinician is that you get to sit in these interactions with the families and learn, and have almost like a lived experience of other people's versions of a good life. The idea that you can completely remove yourself from your own experience, and have a totally objective, if you like, version of health, wellness, disease, disorder, condition, identity, outside of the things that have shaped your understanding of those things, is probably a bit naïve.

So I've come to the point where I just disclose where I come from and-and maybe it's helpful and maybe it's not but, um, I want people to know why I think, uh, what-what are the things that shape, uh, how I think about good life and good outcomes? And if they clearly come from a different place that's conflicting with the types of experiences I have, to give themselves permission to totally ignore and disregard what I'm talking about.

Brady Huggett

Yeah, but it also does this thing, or I thought it was an interesting thing, where it tells the audience that you're aware.

Evdokia Anagnostou

Yes.

Brady Huggett

That you may- that not that you may but you do have biases.

Evdokia Anagnostou

Yes.

Brady Huggett

Because it's so you're-you're saying, uh, here's who I am. Now you can disagree, you might have a different background, but at least kind of I'm thinking about it. I'm aware that this is where I come from, which isn't, doesn't mean that you're objective but at least opens the door to objectivity kind of in a way.

Evdokia Anagnostou

Yeah, and it allows you to interrogate. So, you know, our brains are Bayesian instruments, right? So our brains are built to use previous experience to shape, uh, the expectation of what could come next, you know? So-so we use our posterior previous probabilities of what we think the world is about to shape what our potential outcomes that can happen, um, uh, in the future, right?

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

And this is neuroscience. This is not debatable, this is not particularly debatable. This is not a metaphysical or religious position. Like this is neuroscience. Our brains are biased and they're biased by design.

Brady Huggett

Yeah.

Evdokia Anagnostou

Because it makes them efficient, uh, in learning, right?

Brady Huggett

Yeah.

Evdokia Anagnostou

So we learn much faster if we constrain the potential, um, possibilities of what's next to be learned, by what we learned before, right? So Bayesian systems are very efficient, they're effective, they're learning fast, right? But they're also biased. They're racist, that's why human condition is racist by definition.

Brady Huggett

Yeah-yeah.

Evdokia Anagnostou

And so I acknowledge I have a Bayesian brain, right? Like the-the experiences I have do constrain a little bit how I think about what-what could happen next, or how to explain things, but acknowledging that we are also working from a Bayesian brain is that we can think about how we interrogate a Bayesian system, right? To, uh, find the problems that lead to biased conclusions, right? So I mean we talk a lot about AI and the risks of AI.

Brady Huggett

Yeah.

Evdokia Anagnostou

The whole idea here is that if you know you have a Bayesian system and you know that it's being influenced by certain types of information, then you can develop algorithms and-and-and approaches to actually test what you fed it, how the decision-

making was, uh, was done and why you end up with a biased result. So I think acknowledging that we are learning in a biased way, this is how we are made, this is how our brains are made, gives us also the opportunity to create approaches that interrogate the process that made us efficient learners, but also made us biased.

Brady Huggett

Yeah, OK. Last question, and this goes back to you being young, I think. So you're young and you're thinking about, you know, what does it mean to be conscious? What does it mean to be alive? What does the meaning of life? What does it mean to be die? What happens when you die? Here's your grave that I made you from Legos. Um, and then your-your mother dies before you're-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-20 years of age. So you saw, as you said, you're now older than she was, right?

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

So you've seen her truncated life, if you will.

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

Do you think about what the meaning of it? It-it-it's- Because my-my- I've lost a parent too.

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

And I-I've seen the scope of their life now. I mean, I wasn't there at the beginning, but I've seen the end, and it makes me wonder sometimes now that I've seen the end of it-

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

-what was the meaning of it?

Evdokia Anagnostou

Mm-hmm.

Brady Huggett

Do you think about that with your mother at all?

Evdokia Anagnostou

I do. I mean, I think about my mom, my dad, uh, now, but it's a more recent death.

Brady Huggett

Yeah. And your dad too, actually, yeah.

Evdokia Anagnostou

Yeah. Um, you know, I, I'll be honest, I have my- I have different kinds of days, right? So I do see the signature of my mom's life in not only on her children, uh, but other people she actually influenced and lives that she touched. I can see how in the way I

see the world and I interpret the world, I see his signature in-in-in-in the environment that I'm in. Or, um, you know, by the time my dad died he had a bit of, um, vascular dementia, and the brilliant mathematic mind that could do like calculations and computations and we used to test him all the time and it was a game in the house was not there anymore.

But there was something about him that was there that was kind of loving, caring, and a stable force that provided some sense of continuity in his children when his wife died and they were teenagers and they were having all these kind of difficult- kind of "the rock" guy, he was a rock of a guy, right?

Brady Huggett

Mm-hmm.

Evdokia Anagnostou

That he was still a rock of a guy when he lost his computational mathematical ability. Um, so I can see that signature also in our family, you know, that there was kind of this continuity, um, dependability that he-he, even when he screwed up, you could see how he got to screwing up and it wasn't- it was not that anything had changed about how he- committed he was to you.

Brady Huggett

Yeah-yeah.

Evdokia Anagnostou

And he was for you. And so those, in those things sometimes I find meaning I-I see their lives as meaningful. I mean, I'm not gonna lie, on the days where I'm thinking I'm on the computer screen for somebody it's hard to find meaning, right?

Brady Huggett

Yeah.

Evdokia Anagnostou

Although I did hear a very interesting interview. Sometimes when I drive to work, I drive to work, uh, these days because, uh, I-I have a route that's not very good for public transportation and, uh, if I have a very early morning meeting, I'll drive and, um, on Canadian, uh, broadcasting, um, company radio, so the CBC, there's some interesting interviews sometimes early in the morning, and there was an interview with somebody about how do you maintain joy if you truly believe you're a computer screen or a video game screen, right?

Brady Huggett

Yeah-Yeah.

Evdokia Anagnostou

And there was an interesting conversation about how then I will provide the best game for the person playing the game that I can possibly provide, right? So in-in some ways, it's a choice, right? So of course, I have rabbit hole days where I'm like, there's a lot of suffering in this world.

Brady Huggett

Yeah.

Evdokia Anagnostou

There is joy, there is suffering, and sometimes it's very hard to make meaning out of it, but sometimes finding meaning is a choice.

Brady Huggett

Yeah.

Evdokia Anagnostou

You-you make the choice that you will find meaning and within the constraints of what the human experience is, you will contribute meaning to the best of your ability. And that's the end of science, right? Like beyond that you are crossing the metaphysical spaces, which is why I still have some of that because I need it for managing my existential distress, right?

Brady Huggett

Yeah.

Evdokia Anagnostou

Like, it's hard to-to-to maintain that belief and commitment and choice all the time, um, by just using your logical brain.

Brady Huggett

Perfect. Thank you.

Evdokia Anagnostou

Is that OK?

Brady Huggett

Yeah. Thank you.

[transition music]

Brady Huggett

An incredible mind. I-I love that she spends her time thinking about hardcore biology and then also the questions that plague us late at night, such as, why are we here? How do we know that we're here? It's fascinating. OK. Thank you, Evdokia, for participating and for being a guest on "Synaptic." This will be archived on spectrumnews.org, where we also have a transcript, and the show can be found wherever you get your podcasts, Apple, Spotify, YouTube, and whatever app that you use. If you enjoyed this and feel inclined to rate our podcast, please do so as it helps others find the show in what is a very crowded podcast landscape.

If you'd like to comment on this show or whatever we do at *Spectrum*, you can find us on Twitter, where our handle is [@Spectrum](https://twitter.com/Spectrum). Our theme song was written and performed by Chris Collingwood. The next episode will be out October 1st. I won't say the guest, but it's already recorded and I think you'll like it, or anyway, I hope so. That's it. This one is over, and I'll let the music play us out.

[ending theme music]

Brady Huggett

Is your 3 o'clock in here?

Evdokia Anagnostou

It's not, actually.

Brady Huggett

OK, good.

Evdokia Anagnostou

So you can take your time.

Brady Huggett

OK. All right. Good-good.

Evdokia Anagnostou

Um, how you gonna get home? You got- How are you gonna get to the airport? You're gonna Uber it?

Brady Huggett

Yeah. Uber it, uh.

Evdokia Anagnostou

Yes.

Brady Huggett

I'll figure it out.

Evdokia Anagnostou

OK.

Brady Huggett

It's OK. Yeah, you can go.

Evdokia Anagnostou

No, you have time. Time you have, but I'm not sure how much.

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