

AT Banter Podcast Episode 275 - Mona Minkara

📅 Mon, 2/28 1:52PM 🕒 1:01:00

SUMMARY KEYWORDS

people, blind, science, mona, accessible, london, gravity, experience, thought, access, city, plane, tokyo, travel, story, day, called, canes, question, episodes

SPEAKERS

Rob Mineault, Lis Malone, Steve Barclay, Mona Minkara, Ryan Fleury

R Ryan Fleury 01:58
Hey, and welcome to another episode of AT Banter Banter, banter.

R Rob Mineault 02:05
Hi, this is across the podcast where we talk with advocates and members of the disability community to educate and inspire better conversation about disability. Hey, my name is Rob Mineault, and joining me today the hardest working man on Family Day, Mr. Ryan Fleury.

R Ryan Fleury 02:25
Hello, everyone.

R Rob Mineault 02:27
And of course, joining me as usual, straight from his living room in his pajamas. Mr. Steve Barclay.

R Ryan Fleury 02:35
Hey, I dressed up, I put sweats on.

R Rob Mineault 02:38
Oh, good, Excellent, man. Damn. Well, if you were wearing pants, sir, you're doing the long weekend wrong. And a look who it is, our backbone our spine, the brains of the operation - Lis Malone

Malone.

L Lis Malone 02:58
I prefer tailbone but greetings, everybody.

R Ryan Fleury 03:01
Yeah, it wasn't that long ago. You said she was bringing up the rear, right?

L Lis Malone 03:04
I'm always bringing up the rear

R Ryan Fleury 03:10
Pipe down tailbone.

L Lis Malone 03:13
That's the coccyx to you.

R Rob Mineault 03:19
And the podcast has gone off the rails, going to be a great episode. Hey, Ryan, speaking of great episodes, and great segueways, what the heck are we doing today? Who are we talking to?

R Ryan Fleury 03:33
Today we are speaking with Dr. Mona Minkara, who is an Assistant Professor of Bioengineering at Northeastern University, and also an ambassador for an organization called Astro Access.

M Mona Minkara 03:45
Whoo. Hello, everyone!

R Rob Mineault 03:50
Yeah. Thanks for joining us. So there's so there's a bunch of stuff, I have to say I have so many questions. And I'm very excited to talk about Astro Access. I read your bio, and what you do,

and I understand none of it. So, but we'll get to that we will get to that.

M Mona Minkara 04:13

So my name is Mona Minkara. I am a professor at Northeastern University in Bio Engineering. I got my Doctorate in Computational Chemistry, which means I computationally model chemical systems. And the one that I'm really interested in and I have been studying now starting in 2019, before the pandemic happened was pulmonary surfactant, which is a substance found at the air, air liquid interface and lungs, it allows us to breathe. I am just like, I call myself a molecular detective. That's what I like to say. But I go and I want to understand how do molecules interact with one another on one another and how are these, how are the different components working together? What can we learn what can we take to apply? So like real world applications, so That's what I do. Oh, and I'm blind.

R Rob Mineault 05:04

That could that could be the new CSI series like CSI Aorta or something.

M Mona Minkara 05:09

Exactly. Molecular detective. Yeah. So um, you know, the reason why I mentioned that I'm blind is because along my journey, a lot of people were like, Oh, how are you going to be a scientist? Well, you know what? I'm a scientist. So...

S Steve Barclay 05:25

And Bravo, because tons of questions about that pathway for you. Because I, I've worked with a lot of kids over the years who have gone into University and tried to go on science paths, and have just met blockades all the way along. So fascinated about that story.

R Rob Mineault 05:44

Okay, so So given that we're sort of, we've started down the science path. Let's start there, we'll get to Astro Access a little bit downstream. But so talk to us a little bit about some of the barriers that you perhaps faced, when, when you you got interested in science.

M Mona Minkara 06:04

So let me start at the beginning. I was like, I am the child of immigrants. I was born in Maryland, and everything seemed like you know, you know, my parents are from Lebanon, they left to escape the Civil War, they came here to build life. And then you know, everything seemed, quote, unquote, normal. Until one day I started to complain about not being able to see like, I'll never forget this, like, looking at my pile of toys in my room. And one minute they were there, and the next minute, they weren't. It took over a year or so for the doctors to figure

out what was going on. And for me to get diagnosed. Before that point, I had always been interested in science I like, I'm the product of PBS, I used to sit down and watch Magic School Bus, Bill Nye the Science Guy, like I just am curious, was curious, hopefully, well always be curious about how the world works around me. And that was just a part of who I am, and still a part of who I am. And so when I was diagnosed, I could just everything, everything shifted, like the expectation of my future shift, shifted how teachers interacted with me shifted. It was just like, she's going to be totally blind, and what it what, what kind of life is she going to live? And so science was my passion. And it still is. It's, I suppose my story, in a nutshell, is a story of somebody who just wanted to express herself and honor what she enjoys doing. And so it's been a journey of me trying to do that, being told that there is no point me basically being placed in lower level classes because I was blind, not being intellectually challenged, just, you know, completely shift of expectation. Until one day when I was in high school, I realized, well, nobody expects me to succeed. So let me just try to challenge myself. I'm just so bored. And I went, and I asked to go into an advanced local biology class. And the, the head of the science department at my school, didn't want me to initially he said, I would fail. I told him, I didn't care. I want to just, I was like, I have a right to this is a public school. And he's like, okay, yeah, you do, but, and then like, I went to, I went to the classroom, and the teacher was like, you don't belong here. I'm not going to change anything for you. I said, I don't care. I thought I was so bored. I was like, I'd rather sit in advanced level class and just listen, then do like another lower level class. And I ended up getting one of the highest grades in the class. And the teacher actually apologized to me at the end the year. And that was like a revelation moment for me. I realized how much more I could do because nobody had any expectations of me. And so I started to explore it really, like I started to reignite my curiosity more. And long story short, I end up being the first blind person to graduate with a science degree from Wellesley College. I went to Wellesley, I did, I said, coming from Middle Eastern studies, I ended up being the first blind person graduated with a graduate degree in chemistry from the University of Florida. Um, and here I am. And then I went to the University of Minnesota where I did my Postdoc, and I had an amazing advisor, who also helped me realize more things about myself and my blindness. He was somebody who saw my blindness as an asset, which was a completely like, momentous turnaround point for me. And and now I'm here in Boston. In a dream job, getting to be a molecular detective, getting to be a scientist.

R

Rob Mineault 10:08

Yeah. And I want to actually, I want to talk to you a little bit and get you to expand on that this idea that you were just talking about this idea that actually ends in science, it benefits to have people involved who have different perspectives, and how your blindness, you see that as an asset, to be able to see things differently. Can you kind of speak to that a little bit more?

M

Mona Minkara 10:35

Oh, 100%, I deeply believe that you can bring different individual with different stories and different backgrounds to come and solve a problem, you're going to be able to solve that problem in a way that you can't, when you only have like one type of person working on it. So I will share a story. When I was a graduate student, I was studying this protein. And the way that we do that is we're able to model it on the computer and the sighted person would then just watch like a little movie that you create. And you can see the protein moving literally undulating jiggling and wiggling official terms. Anyway, so I couldn't do that I couldn't see the

protein. So I said that I was like, What can I do? What could be my first interface with the data. And I realize, wait, let me mathematically plot these amino acids and see how they move. Because I can interface with the mathematical plot more easily than I can with just a more view as huge protein moving. And because of that, I was able to find patterns that my sighted peers missed. So I was told that story about the unseen advantage, right? The fact that because I had innovated the data in a different way, I was able to pick up on different patterns, patterns that other people would miss. And so what else out there are we missing? So I'm a huge advocate for people of different abilities and different backgrounds to help solve the problems that we are facing.

R

Rob Mineault 12:00

Well the real the real kind of frustrating thing about this is that for years and years and years, you know, people who are blind, were you think of how many people were probably steered away from things like science, just because people were like, well, you, you obviously you can't do that. That it's very visual. And without really going that extra step and saying, Well, it's only it's only a visual, it's only visual is because that's how we built it like there. Yes, the thought of all these barriers that we've just put in place by not making things accessible. We have all the technology, we have all the knowledge, we could make so many things accessible. And we just don't.

M

Mona Minkara 12:41

Yeah, that's exactly right. And people need to remember, like, if they want people to contribute people like me, I'm also going to need things to be accessible to me too, right? You can't just expect me to be like, here, figure this out. And there's like no tools of accessibility? No, no, no, like, we need to all have access, so that we can all jump in and help solve these problems, help discover new solutions help work together, like we need to all be like hands on deck, figuring it out together.

S

Steve Barclay 13:13

So that leads me back to one of my questions. How did you get access to things like textbooks, all the materials that you needed to learn what you did? Did? Were there barriers in place to you have to fight through?

M

Mona Minkara 13:26

There still barriers in place. I would really love for there to be a movement in which and maybe there's something I could lead but like, even present day journals, if I want to go read an article about the research that I'm doing, it's not accessible to me. So yeah, there are huge barriers, we are nowhere near yet, making sure people who are blind have access to all the information that they need. So growing up, and throughout my entire past, there have always been barriers to access. And who knows what would have happened if I actually had full access to everything.

Like where, where else, you know, what more could I have done, you know? And so in the future, I really hope that could change. And I really want us to consider that one moving forward as a community as a society for sure.

R

Rob Mineault 14:14

Well, that's a great segue, because that's why I really think that the work that you are also doing with the Sci Access Initiative is super important. So can you sort of talk to step us through what what the Sci Access Initiative is?

M

Mona Minkara 14:30

So Sci Access is an initiative under Astro Access, where people are realizing that because space travel is opening up to humans at large, that we need to start making space travel accessible to all from now. And so they got together a group of people with disabilities. We put us on a zero gravity flight and they're like, run some experiments, and let's try to figure out what it takes to make space travel accessible. Obviously, this is the beginning steps. For me, what happened is back in the summer when I was like hearing about all these rich folks like getting to travel to space, and I was like, oh, now I go into space. Literally like two weeks later, I have a friend, Dr. Sherry Wells Jensen who called me up and was like, Mona, do you want to experience zero gravity? And I was like, of course! And she was like, well, we need you to do that so that you can help, like, design, like talk about accessibility in space. And I was like, oh my God, like it was just like this amazing combo of an opportunity. So like, definitely, I said, yes. I applied. And I am really lucky. I was chosen. And so we got to go on a zero gravity flight where we ran experiments.

R

Rob Mineault 15:43

So like, what was that like? What was the training like? Was it was it extensive? Did they just throw you in the plane and just fire you up there?

M

Mona Minkara 15:53

Kind of, I mean, we are flown out to LA because we flew out of LA Long Beach the day before. I mean, not that like two days before. And we got to like meet one another, like discuss the flight. And then we got to actually explore the plane the day before, which was really helpful for me as a blind person, the plane, this was very fascinating to me. So what happens is you get on the plane, the back part of the plane is like regular seats that you'd find in a commercial airline three, three seats, and then an island, another three seats, so there's like four rows or something like that four or five rows in the back. And then the rest of the plane and towards the front was padded on the bottom, and then the edge of like the sides of the other three sides are kind of curved. And so they had put like rope so they can feel around. Um, and we all had like yoga mats. So there were 12 of us ambassadors, four of us were blind and the blind low vision group to deaf individuals, and six mobility impaired. So the four blind and low vision people were in the front of the plane, and then there's like two deaf people behind us. And then the six mobility impaired people. And so the way this works is you fly over, like they flew us

over the Pacific Ocean. And then when we're in positions are at 35,000 feet, and the way it gets experienced zero gravity was the plane literally plummets it literally freefall. As you're going down, you start to experience freefall, as the plane goes up, because it's a parabola, right, you don't want to actually hit the ocean, you go back up, and that is when experience like double gravity. So I was so excited. They had told everybody to like not use your legs in zero gravity. And so they had told us also that we were going to experience first Martian, like we did 15 parabolas. So the first parabola was Martian than to Lunar. And then the rest of the zero gravity. I was like, so excited. I was so excited that when they told us that we should probably take an anti nausea drug. I was like, what are the side effects? And they're like, Oh, you might be drowsy. And I was like, no, I'm not taking anything that could make me drowsy. I'm like the coolest day of my life. Right.

S

Steve Barclay 18:14

They sell it they sell a drug down there called Bonine. In the in the pharmacies, it's the best. I buy it all the time when I'm down there, because you can't buy it up here. It doesn't make you drowsy, it would have been perfect.

M

Mona Minkara 18:26

Well, I was fine. I didn't take anything and I wasn't nauseous at all. It's all good. But like I was just like, I don't have butterflies in my stomach. I was just like, I'm a huge adrenaline junkie. So this was like the one of the top exciting things I've done. So we're on this plane. And it's really cold. They do this intentionally too. And it's really loud, which was very fascinating experience for me as a blind individual. Because it really mutes everything, because it's so loud. So it's almost like I didn't really have my hearing as much like I would normally to navigate. And that was a really interesting also phenomena that occurred. So we flew out. We got we all found our yoga mats we laid down. And the first thing occurs like we start there, like Okay, we're ready about to go down. This is Martian gravity. So we start to go down. I start to feel really like I start to feel lighter because I'm on Martian gravity or like 1/3 your weight. And I get so excited. I literally jump up and hit the ceiling, but my head hits the ceiling. I'm like that excited. So I'm like, Okay, well now like I'm just like, it was I was just like floating and jumping at the same time because I still have gravity right? So I remember telling myself very distinctly to like calm down and telling myself that I will never get to experience your gravity for the first time ever. I will never get to experience zero gravity for the first time ever again. So I remember like, like having to calm myself down. And as we were doing as we were about to do the zero gravity problem, I laid really still on my mat, I had my hands like crossed on my chest like kind of like, like mummy pose. I'll never forget going on, like over the peak of the prep, like over the top, almost like when you're on a roller coaster, and you're about to like, drop. And then as soon as the plane started to drop, like my body started to float above my yoga mat, and my brain flipped out. Like, I just couldn't believe that no part of my body was touching anything. And I remember sitting up and like standing, and like, feel my brain was like, glitching be like, okay, brace yourself, you're about to fall, but like, I wasn't actually going to fall because I was in zero gravity. And then I just started to laugh and laugh and laugh like I couldn't. I cannot even describe the feeling of just floating and not being tethered to anything. You know, what was fascinating for me, was the what was harsh was going back up. So we would have to lay down and you get to experience 1.8 G. And so it felt like at one point, I felt like my skin was being pulled against the bones of my face. I'll never forget that. Like even lifting your arms up, you're

like, whoa, as if you had weights, like weighting your arms down, which is exactly what you're feeling. And that that to me was very bizarre. They were not letting us move on. But I really wanted to like sit up and see how that would feel sitting up. And like walking in 1.8 G.

L

Lis Malone 22:01

Was it hard to breathe?

M

Mona Minkara 22:04

No. i For me, it was a thrill. Like, for me, it was thrilling. It was unexpected, especially because so there's a few things that we wanted to check out, which was can a blind person find their spot again. And so after I floated away, right, the first parabola, like I was very intentional on trying to find my spot. And I did, and I was able to find my spot every time. But what blew my mind away is that there were moments in which I was completely unaware of which direction and how I was facing. I was unaware if I was upside down right side up, like completely unaware. And then there were moments in which I knew exactly how I where I was. And that was like, it took me a few times to figure out oh, I was able to like, triangulate based on touching something where I was, you know, but when I wasn't touching anything at all, like this ceiling or the floor, I genuinely had no idea of how I was floating around. And that that just tickled me like a complete lack of ability to know I remember one time I have some light perception. I remember opening my eyes at one point and my face was right in the light fixture of the ceiling. And I was startled like I had no concept of getting there. And that was like amazing to me.

S

Steve Barclay 23:26

My I had two friends who wrote a book called Star Dance, Spider and Jeannie Robinson they went to I think they won a Hugo for it. And the whole book was about a zero gravity dance. And years later, back in about 2007, some Arts Foundation actually funded Jeannie to go up and do with with a professional dancer and choreograph a zero gravity dance. So there's There's footage of that on on YouTube. She came back, just as giddy as you. She was so thrilled.

M

Mona Minkara 24:07

Yeah, I mean, some people I think that like, it's not their favorite thing to do. Like some people did feel kind of starting to feel really nauseous towards the end. Um, I just was like, floating around and like having no idea like, it was like I don't know, it is an amazing experience. They definitely had ropes so that you can tether yourself to something and control like, as much as you can not crashing into people. But yeah.

R

Rob Mineault 24:40

Now this was the this was the actual first flight, right? The first time they did this, and are they planning on another another flight?

M

Mona Minkara 24:51

I think they would definitely love to do more flights. I think the goal is eventually to send somebody up into space.

R

Rob Mineault 25:01

Listen, if William Shatner can do it...

M

Mona Minkara 25:05

I mean, like, look, I, I mean, on top of it being a lot of fun, what was also amazing is we started to ask a lot of really good questions. And I think, you know, we're gonna be able to publish some research about this. Even me like, I mean, a lot of us were really worried, like, how can a blind person find their way back? You know what, it was a lot easier than any of us thought it would be, which was a fascinating, you know, discovery, but then it's like, what else can we do? And what can we design and what devices would be useful? Like, there's so many what, why was I utterly like, unaware of which direction I was, I was completely aware of other points, I still don't have a very clear answer on that. So I think there's still a lot more research to be done. And I think that would be fantastic.

R

Rob Mineault 25:53

The other thing that though, the other part of that, that I want to talk about is, is the Sci Access part. So because I really do feel like the one of the huge, huge messages, I think, to come out of all of this is the message to send a blind youth to say, look, science is not off off the table for anybody. Really, it's it's these barriers that we put in place.

M

Mona Minkara 26:20

Science, accessibility is very important to me, it is a big part of what I value. And a big part of my personal mission is that I want to see more blind scientists. In this world, I want to see more blind individuals if they have the passion for science to follow that passion. And so I personally have created a website, monaminkara.com, but I have a whole Blind Scientist tools page on my website, where I outline every tool I've ever used to do my science from, from a glue gun to playdough, to pipe cleaners, all the way to screen readers and how I navigate a conference, how I teach a class, how I apply for the job, like everything I talked about all the things I've done. But I also make sure that I make myself available. So I have a place where people can contact me and I have people contacting me, if they ever need any help regarding blindness and their journey, it's really important to me, and I always try to make time for them on Fridays. And then on top of that, I worked on creating an accessible blind STEM curriculum. And it's not just accessible for blind individuals, but it's also cost accessible. So we did this. We created this curriculum. And we were able to implement it in a summer camp in Lebanon, where we had blind kids from the ages of six to 26. Like there were Lebanese Syrian refugees

and for two weeks, we just did science experiments at a really low cost, so that they can go home and if they wanted to do some of those experiments at home, they could. And it was fantastic. And it was amazing.

R

Rob Mineault 28:03

I really do want to talk to you about the YouTube channel because I did take a look at a few episodes today. And I was transfixed. I love it. I love the way that it's produced. And I love the idea of it. Can you tell us a little bit about the YouTube channel and how it came about? And you know, what was what that that's been like producing those episodes?

M

Mona Minkara 28:30

Okay, yeah. So Planes, Trains and Canes is an idea that started when I applied actually started before I applied to the Hohmann Prize, it was actually when I was asked to be a judge, again, there's a really common theme in my life, which is accessibility, access to things that, you know, people should have the right to access different things. So, in 2019, when I was applying to become Faculty, I want to have fun, and I applied to the home prize put up by the Lighthouse, the Blind San Francisco, where they give \$25,000 to any blind person with an ambitious idea. So I applied with this idea that I want to show a blind person traveling to five different cities around the world using only public transportation when they land. And this was really important to me the public transportation piece because public transport is access. Growing up in Boston having the MBTA here was for me, a symbol of freedom, a symbol of access, a symbol of being able to explore. It's a big part of who I am. So I wanted to know, how are those systems like in other cities around the world? How would it be like for me to travel on my own and explore the world. And so for Planes, Trains and Canes, you get to see me travel to Johannesburg, London, Istanbul, Singapore and Tokyo. All episodes are audio described and close captioned, because I want them to be fully accessible. And you get to see me experience sorts of adventures from arguing with people to befriending people to just like, exploring technology in Tokyo. It was, yeah, it was, it was awesome.

R

Rob Mineault 30:11

So how long did it take to sort of produce and film the whole series?

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Mona Minkara 30:19

So the traveling part was pretty much done in two weeks, it was actually amazing. We got the funding, so that it would be the funding for the year of 2019 and 2020. And I did all the traveling in December of 2019. So it was like two months before the pandemic hit. Um, that was like uncanny timing. And then it took a while to edit. So when we started off was just me and my friend, Natalie Busey, who was the camera woman. And I chose her specifically because whoever had to come along with me, had to be I mean, she had to just trust me, she never double checks my directions, she genuinely just followed me. We had a rule, whenever I was, I was on camera, I didn't know where she was, I couldn't hear her. I couldn't see her. I just have to trust that she was able to follow me. And she did. And she never like, she never

question that she just followed me when I got lost, she was lost with me. And when I'm on my way, she felt like she just did a really great job being an observer. And so many people would have such a hard time, especially with a blind person leading the, you know, at the helm, so to speak. And so we, we did the the taping at the end of 2019. And then we would produce one episode, like per month, like January, February, March, like so it took it took the quick part of 2020 to finish up, like releasing all the episodes. And the editor was amazing. He is still, we're still meeting, we're still trying to get funding for season two, we have some backing right now from MABVI, which is a Massachusetts Association for the Blind and Visually Impaired, they also back to me for Astro Access, which is amazing. And we're hoping to go for Season 2 in the summer.

R

Rob Mineault 32:21

It's so fascinating to watch too, because I really feel like in watching you transverse all of these different environments, it really does shine a light on things that like small things that would take care of accessibility, that would just need to be in place, I thought it was fascinating, where there's footage of you and you're sort of walking an airport Concourse, and you're sort of you're looking for your gate. And as you're sort of going into the the area of the gate area where there's all the seats and stuff, of course, that area is carpeted, and the concourse is not and so you're kind of able to sort of tell where you were based on the texture of the flooring, which I thought was really interesting, but it also made me go well, wow, you know, how easy would it be for them to just put down textured strips along that concourse that would lead to the different gates or the or the desk? Yeah, like that would that's certainly not high cost. And it's certainly cheaper than trying to do things like oh, let's put in indoor beacons, or let's, you know, whatever, whatever high tech solution there would be. So I thought that that was such a really interesting exercise. And I think important for people to sort of watch, to sort of because, you know, if we can fix the easy things to make the world a little bit more accessible. You know, that certainly goes a long way.

M

Mona Minkara 33:53

And it also brings light to the fact that if we thought about accessibility, as we're creating a lot of these spaces, whether it be you know, an airport, or you're designing a city from the get go, just like we are with Astro Access, that it would just be like, an easy implementation to be part of the process from the beginning.

R

Rob Mineault 34:17

And you know, I have to echo what Ryan was saying earlier in just watching you and just how fearless you are. And just like just going in because like, I don't have a ton of of experience flying. I have a bit but I find airports like really, really freaky and you know, and I'm I totally get disorientated. I'm like worried about oh my god, I gotta find my gate. I don't know where where the heck am I don't know what direction I'm going in. Am I gonna miss my plane? There like all these things just make it so stressful. But you watch this video, and you just look like cool as a cucumber. You're just like, Oh, I'm just gonna go I find my gate. Were there ever any sort of nail biting moments where you like underneath it all like, were you freaked out?

M

Mona Minkara 35:06

Well, let me tell you, I think you bring up something really important, right? You said I look, I seemed fearless. I think what happened was, and this is something that I talked about, I had like a self exploration part in this whole journey, which is I learned, there's an element of mental freedom. I had to reach a point in which I was okay with truly getting lost, which meant I had to give myself this concept that I had a long enough time to take my time, because everything in my in my belief is solvable with enough time. So if I remember landing in Atlanta, and be like, I'll have two hours to my next flight. I remember giving myself a pep talk. It's okay, Mona, you know, you go try to find your game on your own. It's gonna be like, great when you when you do but if you don't, that's okay. If you miss your flight, because there's another flight. It will, you know, that's the, you know, be true to the story and give yourself space to breathe. And that freed me, that freed me. That was amazing to me. I feel like it allowed me to explore.

R

Rob Mineault 36:13

So during that, that process, so there were were there things that surprised you that were either maybe easier than you thought it would be?

M

Mona Minkara 36:22

100%. For example, Atlanta airport, I remember when I was going to Johannesburg, which was my first trip, I was really like, I was anxious. I didn't know how things were gonna unfold. I really want to challenge myself by not like just relying on someone taking me. I genuinely thought there was a huge chance I will get lost in the Atlanta airport. But I didn't get lost. I got to my gate. And I've got my to my gate with plenty of time to spare. In the meantime, I did get on the wrong train. I did go to the wrong direction. But everything turned out. Okay. So um, that surprised me.

S

Steve Barclay 37:02

Well you are one up on me because I got lost in the Atlanta airport.

M

Mona Minkara 37:08

Like, I figured out the pattern. And I also I remember, my Mom would always say, like, if you can ask, you won't get lost, right? So like, there's like an Arabic idiom like that. I remember thinking like, what's the worst case there's a million people around me, I can literally be like, hey, where am I? Like, where's this? You know, concourse D. Um, and that's literally what I did. And I remember realizing, Oh, there's the sound of more people here. So I think there must be like, where the escalators are, like, really paying attention to sounds when I had to narrate all the clues I was picking up on, I didn't realize normally how much I was deducing subconsciously. That also was like a flash, like a flash bulb moment for me. Like, wow, I am kind of picking up on the sound of the escalator as a clue I am picking up on the sound of tile over

carpeting I am picking up on the smell of like burgers or whatever like, and like, but saying them out loud was kind of amazing for me. And I feel like I even honed my navigation skills better.

L

Lis Malone 38:20

Mona during your travels at any point did you ever have strangers that sort of came up to you and offered assistance? Whether you wanted it or not? So that did happen quite a bit?

M

Mona Minkara 38:33

Yes. I mean, I had strangers -- So I really don't mind when people ask if I need help. I'll tell you where I get annoyed when people don't want to listen to the answer. So if I say no, thank you. And they're like, no, no, no, that's when I get annoyed. But if I say okay, yeah, sure, I'd love some help, like, um, Oh, we're so and so or whatever like that. Like, it's good. Either way, I just want to make sure that I'm being heard is number one. Number two. In London, it was really I don't know if anybody saw the London episode, it was a very challenging place for me. I got asked many a time where my caretaker was. And that was very insulting. I cut all those out, actually. Because I didn't want to just like show London badly, particularly. But then I got into an argument in the London Underground. All I wanted to know is where the train was. And then they were like, you can't travel by yourself. How can you do this? And I was like, What do you mean, I can't travel by myself? Yeah, you should definitely watch it. I've seen it caused so much debate, like so much debate on Reddit for that scene. There's a lot of comments under that video. Yeah.

S

Steve Barclay 39:44

I think it's a particularly difficult city to navigate just because of, you know, every 10 feet you go then the name of the street changes.

M

Mona Minkara 39:53

I mean, there's that but like, I personally, I mean, I was willing to take on that challenge. I wasn't that intimidated by the London Underground. You know, it's almost like how lost can you really get? There's only so many like, it's your online, there's certain stops that people around you like I wasn't really that intimidated by it. But the people when I got to Heathrow when I got to the stop, leave the airport, they just weren't, they were relentless. They were like, You can't do this on your own.

L

Lis Malone 40:24

Did you find it challenging, like sort of being in that editing position? And trying to decide like, I think you kind of touched upon it when you said that you didn't want to show London in that light. But sort of was there any kind of editorial struggle that you went through in terms of maybe you should show certain aspects of that and tell that story?

M

Mona Minkara 40:45

I did. So I did show certain aspects like I kept that debate, the argument probably got the most attention. And I thought that was enough. From an editorial perspective. Other than that, not really, like I really, like the stories were very clear to me, because I had a certain mission, right? My goal wasn't to necessarily, like poopoo, any city or something like that my goal was to truly try to have people think, thinking about issues they might have not thought about before. And so how can I do that the best way is to show the stories as they unfold, and to not make them so negative, if they're not really that negative. So I tried to stay as honorable to the truth. But I also didn't want to overwhelm like, off the bat, like London was very emotionally challenging. For me, it was it was the most challenging city emotionally, out of all the five cities. I thought before I went on this trip, that London would be easy because I spoke the language and that in Tokyo would be hard, because I don't speak the languages. But it was like the opposite. Tokyo was so easy for me. London was very hard for me. And I think that showed. The truth showed.

R

Rob Mineault 42:09

One that's such an interesting exercise to be because there's there's a couple things going on when you're you're in a new city, and you're looking to take public transit, because you know, there certainly is the accessibility of said transit system. But then there's also sort of the attitudes of the population and the people around you and the commuters. So given all of that, and maybe you've kind of already spoken to that. So London was sort of the most difficult, was Tokyo sort of the one of the the easiest?

M

Mona Minkara 42:45

It was when I was on public transport. So Tokyo blew my mind on the technology that they had implemented. It wasn't like complicated technology, but they just had like little sound that played if you're near the bathroom, there was like running water, water sound. So you knew you're near the bathroom. If you knew the exit in an underground, like there was like a Tweety Bird, right? You knew you were like, near the exit. Every train line had a different musical tone. The cane guides, which are grooves in the ground for your cane as a blind person led you from the door of the train, to for example, all the way up into the sidewalk into the door of the bus that you wanted to take. I mean, as a level of detail. They had talking crosswalk sounds that were different for north south versus East West. And I have to tell you, I didn't do any research about any of these places. I also wanted to be authentic about me experiencing these infrastructures naturally. So every city I want to I didn't know exactly. Like how things are gonna unfold. I intentionally didn't really do research. I tried to figure it out on the spot. But Tokyo was so smooth, I figured out everything they were trying to do. And you can see this unfold by the way on camera. And on top of it, I never felt like I needed to use my eyesight now blew my mind.

R

Rob Mineault 44:19

What about sort of attitudinal barriers... was was any given city sort of more challenging than any others?

M

Mona Minkara 44:28

Yeah, London attitudes only for me was challenging. I mean, that was like, the caretaker concept. It was, you know, I was kind of hesitant to like, I was like, Is this just in my head? Like, am I like, am I experiencing this more because I'm a foreigner? I didn't know what was happening until I met up with a blind friend of mine in London, and we had a really honest conversation and he goes in London, they'll take you across the street, thinking they're helping you. But like, you never want to go across the street. Like they just like, drag you across the street. And then he's like when he went to San Francisco, he's like, they're they leave you alone until you ask them, then they'll help you. And so it's just a different cultural perspective. People there didn't know, it was like either zero or 100. And it was kind of bizarre, but I figured it out. I figured out that if I really wanted an answer from people that I needed to be like, a little bit more aggressive in my question, asking that, I'll figure it out, you know, and I ended, like, I really love London as a city. And I just love all the different lines. And I've been to London now enough to actually have their underground pretty much memorized. But you know, it's quite annoying when somebody comes up to you. And they're just like, where's your caretaker? And all you just wanted to know, is this is this the way to London Bridge?

S

Steve Barclay 45:58

Yeah, that's a strange question to ask too, because it's not like the RNIB hasn't been active over there. And, you know, education campaigns and guide dogs. But but that is a strange question. Where's your caretaker? Why would there be that assumption? Strange?

M

Mona Minkara 46:17

Yeah, they just did it. It's almost like somebody should be taking care of the responsibility of you. It's like, why are you asking me? I don't know. It was a bizarre. Again, not everybody was like this. I do highlight some pretty awesome, like kind hearted individuals that were very awesome, but my my friend, my camera woman, Natalie Hughes, she said to me, that she saw more people walking around, more blind people walking around in Tokyo than she saw in all the other cities combined. Yeah, tells you when the infrastructure is there. There's a difference.

R

Rob Mineault 46:54

Wow. So it's been quite a quite a couple of years for you. Sounds like you've been, you've done so much. And from the sounds of it really learned a lot.

M

Mona Minkara 47:04

Yeah, yeah. I can't wait to explore more of the world. If we get funding for Season Two, I want to go to Stockholm. They advertise that their public transportation is fully accessible, which intrigues me. But I also want to go to other like, other parts of the world that we haven't gone to, like South America. So let's see.

S Steve Barclay 47:27
How about the wilds of Canada, Vancouver's nice, least these days?

M Mona Minkara 47:31
How's the public transportation? Maybe I'll come.

R Ryan Fleury 47:34
Not very good. So come and tell us how to fix it.

M Mona Minkara 47:38
I mean, my my dream is for people who are transportation design, like, designers, I don't know if that's what they're called. But transit people are like city urban planners, to watch Planes, Trains, and Canes, while they're thinking about designing something from scratch, to consider all the issues that I bring up, at least from my perspective, and then maybe down the line Planes, Trains, and Canes becomes something bigger. We don't just focus on me, we're bringing somebody maybe on a wheelchair, I'm somebody who's deaf, like different, different people, and see how their story kind of unfolds.

R Rob Mineault 48:13
Yeah, and that's exactly why it's such an important exercise, because you're absolutely right. I mean, something something as fundamental as public transit is, is so important to to people's lives, who, you know, you have to navigate that on a daily basis. But listen, if you do Season Two, you have to promise to come back and talk to us about it.

M Mona Minkara 48:39
Oh, I would love to, I would love to. Let's hope this happens. And I really want plenty educators to get a lot of traction. It's already been getting a lot of mobility, orientation, mobility instructors to watch and show their students. I've had a lot of comments from blind individuals telling me that they feel venerated. Um, which was really cool to hear.

R Ryan Fleury 49:04
I have one more question.

R Rob Mineault 49:05

R Rob Mineault 49:05
Okay, go for it, my friend.

R Ryan Fleury 49:07
After Apple Maps let you down in Johannesburg. Have you ever gone back to it?

M Mona Minkara 49:11
No.

R Ryan Fleury 49:13
Thatta girl

M Mona Minkara 49:17
I mean, Apple Maps is not the best. But um, did anybody see in Turkey like sometimes even Google Maps ends up like glitching. Or like in London, I just it would just be like, oh, like can't find this. Like it would just glitch on you. And you're like, oh, no, my technology is failing. What do I do? And then you're like, Okay, I can ask people trying to figure that out.

R Ryan Fleury 49:48
Well, I think that's an excellent thing to rely on writers we know we can't rely on our technology 24/7 So being able to have the skills and the confidence in your own abilities. makes a huge difference.

M Mona Minkara 50:01
And recognizing also that you do not really need to speak the language. When I was in Turkey. That totally happened to me. Like, I couldn't rely on my technology. And I was standing there and I don't speak Turkish. And it was there's some pretty like heartwarming scenes when I'm just like asking this total stranger. And then, and then the guy was like, talking to me talking. I was like, I don't understand. I literally put up my hands up. And he's just like, like, says like something like to like, keep me there that calls like over a bus driver. And this like gets me on this bus for free. And that is to go amazing how you can still connect with other human beings when you don't even speak, which was pretty cool.

R Rob Mineault 50:52
Well, listen, I'm excited. I'm just excited to get through the rest of the the episodes that I haven't gotten through yet.

M Mona Minkara 51:00
Please like and subscribe.

R Rob Mineault 51:04
Honestly, like anybody's listening to this, like, seriously, go check it out. They're really, really good. Super interesting and well produced. And yeah, you guys did a fantastic job on them.

M Mona Minkara 51:16
Thank you, I have to give a shout out to Benjamin, who's our editor and he's in the Philippines. And he just like edited all of them. I think he did an amazing job. It is. One of my favorite parts about that project was the storytelling aspect. It's like after you like have four or five days of straight, like footage, and you did not have a story in advance. Right? This is like life unfolding. Like, what parts of those four or five days do you show? And how do you tell that story? That was like an amazing challenge. And it was a cool experiment to learn.

R Rob Mineault 51:52
Well, where the heck can people find you at or and where can they find the YouTube channel?

M Mona Minkara 52:00
Okay, so if you want to get in touch with me go to monaminkara.com. You can contact me there. There's also a project's tab to see all my projects and the Blind Scientists tab. But if you want to check out Planes, Trains and Canes, go to YouTube, type planes, trains, and canes, and like and subscribe. I also have the Blind Traveler channel on YouTube. And then all my science talks are also on YouTube under Mona Minkara. I have a lot of things going on. But please just contact me, especially if something strikes you.

R Rob Mineault 52:37
Well, listen, we want to thank you so much for coming on and chatting with us. This has been a lot of fun and fascinating. And please come back soon and talk to us about season two.

M Mona Minkara 52:51
I would love to thank you so much. And maybe one day I can tell you more about my science too.

R Rob Mineault 52:58
Sure. Absolutely. Totally. 100%

M Mona Minkara 53:02
I should put that also if you're interested in you are a budding Computational Chemist or Bio Engineer, check out my website makaracombinedlab.com where my research is all there.

S Steve Barclay 53:22
I have a feeling that website would probably melt my brain.

M Mona Minkara 53:28
Like it could use more but like it just has my group and the research that we're doing. And I don't know. It's something that I really love, and I can't wait to grow more.

R Ryan Fleury 53:40
how do you spell pulmonary? What was it? f7 on your keyboard.

R Rob Mineault 53:59
Alright, thank you so much about and it's been a delight talking to you. And we will we'll stay in touch and let's do this again.

M Mona Minkara 54:08
Thank you so much for having me and have a wonderful day.

L Lis Malone 54:11
Take care. Wonderful. Thanks. Thanks, Mona.

R Rob Mineault 54:14
Holy cow.

R Ryan Fleury 54:16

Energy, so full of energy. Now, yeah, on fire.

R

Rob Mineault 54:22

I keep telling you guys stop booking people who make me feel bad about myself?

R

Ryan Fleury 54:29

Yeah, she went to Johannesburg in all these other countries. And Rob went to Subway for lunch today.

S

Steve Barclay 54:39

I just loved that she was bored in school and she did the exact opposite of what I did, which was screw these guys and slack off. She she went and she said, well, I got to find stuff that interests myself and she went for it. That never even occurred to me.

R

Rob Mineault 54:52

Yeah, yeah. Yeah, and it is like I can't even I mean, we didn't even really talk about that. But that must be so incredibly challenging to follow that path in an in a school of science, when there's just no accessibility.

S

Steve Barclay 55:14

Well, and this is this is one of the reasons I'm fascinated about her story is, you know, I know, you know, I can think of one one instance right off the top of my head of a girl who went to a particular university near here, not gonna badmouth them by name. But she was basically told, Oh, you want to take chemistry? Well, no, you're blind. So no, you should take something else. philosophy or, you know, something like that. They basically just tried to push her off to to a course other than the one that she was actively trying to pursue. Which is disgusting.

R

Rob Mineault 55:49

Yeah. And it's, you know, it's, it's a real shame because for some people like science, that's, that's their calling. That's what they're good at. That's their thing. And the fact that how many, how many people have not been able to follow that path? For no other reason, then materials aren't made accessible. I mean, they're just really is there's no no excuse for having his things like inaccessible materials, or even like feeling like, oh, you know, there's only one path to, you know, you, you it's this has to be a visual medium. Because clearly, that's not the case. So I think that that's a really important message to take away that is that, you know, kids that are that are growing up that are interested in sciences, it's it's absolutely a lucrative path for them.

R Ryan Fleury 56:38
Well, and Mona did design an accessible STEM curriculum, right, so maybe we can share that and use it as a baseline and education systems can start changing.

R Rob Mineault 56:50
For sure, you know, and the like, since I mean, she's changing the world like she's, she's trying to make science accessible and she tried to make transit in different cities accessible and international travel accessible.

R Ryan Fleury 57:03
And Rob said no tomatoes Sorry, I'm throwing you under the bus. I'm sorry.

S Steve Barclay 57:16
What? They didn't put tomatoes on your Subway sandwich.

R Rob Mineault 57:18
No, no, forget it. I'm trying to get my acid reflux under control, and I'm trying to do

S Steve Barclay 57:27
Oh, yeah, that's a big one for me, too. Red wines worse though.

R Rob Mineault 57:31
Alright, let's get out of here. Hey, Lis.

L Lis Malone 57:36
That's Rob.

R Rob Mineault 57:37
Where can people find us?

L Lis Malone 57:39

L Lis Malone 57:39
They can find us online at www.atbanter.com

R Rob Mineault 57:44
Hey, they can also drop us an email if they so desire at cowbell@atbanter.com

R Ryan Fleury 57:53
And if they're one of those socially media types, they can join us on Twitter or Facebook as well if they're so inclined.

R Rob Mineault 58:02
Yeah, although I have to I have to say I have to give a shittygram to Facebook, because I don't know what's going on but me and Ryan here in Canada can't get on our Facebook page. But Lis down there in the US of A can absolutely access it so I don't know what the deal with that is

R Ryan Fleury 58:27
She pilfered our Facebook.

R Rob Mineault 58:29
I don't mean that but I didn't even think of that. Ryan she does have the keys to the car.

S Steve Barclay 58:36
You gave her the keys to the castle.

R Rob Mineault 58:37
Oh, so maybe do some sort of a hack job. Maybe? What do we really know about Lis?

L Lis Malone 58:47
Hey, it's all, I blame it all on Meta.

R Rob Mineault 58:51
Meta...

L Lis Malone 58:52
Whatever that is.

R Rob Mineault 58:54
I really, you know, I won't even get into that. I won't get into the rant. God I really hope that please please let Meta fail.

L Lis Malone 59:05
Mark Zuckerberg

R Rob Mineault 59:15
Mark, if you're out there, can you please fix our Facebook page so Ryan can post it please?
Thanks, please, please.

R Ryan Fleury 59:23
Otherwise anyways, anyways, we're going over to MySpace

R Rob Mineault 59:32
MySpace and Google Plus.

R Ryan Fleury 59:35
Getting a video camera and doing Tik Toks

L Lis Malone 59:38
There you go. People used to call it Spacebook

R Rob Mineault 59:43
That's cooler.

R Ryan Fleury 59:45
Quick get the domains [Spacebook.com](https://www.spacebook.com)

S Steve Barclay 59:48
You know that's gone.

L Lis Malone 59:50
That's been gone.

R Rob Mineault 59:53
Yep. Ah, where are we? Okay, well, that's it. We're outta here. Ah, thanks everybody for listening in, of course big thanks to Mona. Please go check out her channel [Planes, Trains and Canes](#). It's very cool. And we could use the spread the word of accessibility. We will see everybody next week.