

SPEAKERS

Krys Boyd, host, "Think"

Jaipreet Virdi, assistant professor at the University of Delaware and author of "Hearing Happiness: Deafness Cures in History"

Krys Boyd 00:00

Welcome to Think.

Jaipreet Virdi 00:02

Lovely to meet you. And I'm happy to be here.

Krys Boyd 00:05

You were so little when you became critically ill. And I'm sure that your memories were affected by having a high fever and the trauma of being in a hospital. When did you realize that something had changed with your hearing?

Jaipreet Virdi 00:20

It was everybody who was around me how they started behaving differently. I remember being little, and following my cousin around trying to have them meet my needs, or give me something and having a lot of trouble communicating. And I remember my aunts always giving me presents, and so it was clear that something had changed. But because I was only four when I lost my hearing, I think it took me some time to realize just how much my world had changed.

Krys Boyd 00:52

Were you angry when you couldn't make yourself understood?

Jaipreet Virdi 00:56

Yes, I have quite a temper. So I do remember my mom and my relatives telling me that I would often get very frustrated and throw a temper tantrum whenever I had trouble communicating with everyone. I would also sometimes withdraw into my own little world where I felt safer, rather than trying to make everyone understand what I was trying to say or what I wanted.

Krys Boyd 01:23

You write that your mother became convinced that you got sick because of something she had done wrong as a person and your illness was kind of a punishment for her? How did that affect the way she thought about your deafness and her responsibility to fix it?

Jaipreet Virdi 01:41

I do know she felt a lot of guilt. And I think our relationship was strained for some time, because on one hand, you know, my mum really loved me and I adore her. And she was trying to fix me while I'm trying to come to terms with who I am as a deaf person. So there's clearly a conflict here, two different identities: one of which being imposed on me by my mom who loved me and wants me to have a happy

life and would do everything she could to help me get there. And me growing up and trying to come to terms on how to live as a deaf person and how to navigate with hearing satiety. Because I also felt and many times in my life that being deaf meant that I wasn't good enough. And it wasn't till years later, you know, me my mom finally kind of had this conversation about the tension. And that led me to interviewing her to kind of fill in the memories and writing that passage.

Krys Boyd 02:40

Has she come to terms with your deafness now? Does she still feel like she wishes you were “fixed”?

Jaipreet Viridi 02:46

Oh, absolutely. I do know she gets frustrated when I don't phone home. That's possibly the most difficult thing we are dealing with, that we have to go through. Because when I shifted from wearing analog hearing aid to digital hearing aid, I had a lot of trouble hearing on the telephone, which meant it's not as easy to call home. But we do supplement with obviously with video chat.

Krys Boyd 03:10

You don't use ASL and you don't consider yourself culturally Deaf with a capital D. But it's clear that you have respect for Deaf culture. Can you explain why you don't feel like that is your culture?

Jaipreet Viridi 03:22

Well, the truth of the matter is, I used to communicate with ASL because I went to a school that had deaf and hard of hearing children. I have a lot of deaf friends who communicate with sign. But I don't really feel like it's my culture because it's not what I'm surrounding myself in. It's something that I weave in and out of constantly. But that doesn't mean that won't change down the line. The more I engage with people who belong in Deaf culture and different kinds of community, the more that I feel welcome.

Krys Boyd 03:59

So, you use a variety of technologies as tools to help you navigate this world that assumes everybody can hear. And you haven't ever tried to cure your deafness, per se. I wonder if that's because you don't believe it's possible or because you don't think of yourself as needing to be cured?

Jaipreet Viridi 04:20

When I was younger, especially when I was a teenager, I would read every new magazine article, every journal that covered the latest deafness cure, especially for surgery. But after, you know, asking my audiology and my doctor whether I qualified for this surgery and being told no, I'm too severely deaf to qualify, I gave up after a while. And that doesn't mean that it's a negative thing. It does mean that I have to really think of myself as someone who has this identity dependent on a medical construction, and just figure out the best way to live my life with that. I do use the medical technology, the first and foremost of them being my hearing aid. Though my hearing aid I have the tools to navigate through a hearing world and I communicate largely by lip reading, so that's helped me a lot as well.

Krys Boyd 05:22

How did you start to get interested in the long history of cures, some very sincere and science based and some complete quackery, that have been proposed for deafness over the centuries?

Jaipreet Virdi 05:37

That was a complete accident. Back when I was in grad school, I was working on a term paper for history medicine class. And in the library, I came across a textbook talking about deafness and upon reading it and becoming interested in the topic, because at that time, I would really focus on doing research on medical anatomy. And here this book talking about the anatomy of deafness and hearing and how we can kind of develop physiological cure, and it was early 19th century kind of paper. But when I went back to the library's computer, and Googled the author, though, I got information about this author as being a quack, being discredited. And when I first looked at that textbook that wasn't my impression. So having fallen into this topic, I just went down the rabbit hole. And through my research, I started discovering a lot of deaf theories that were advertised, were promoted by people who were accused of being quacks. And throughout the story, I had a hard time finding how deaf people or people who were diagnosed with any kind of hearing loss felt about these cures, and that's what I became really interested in. So that became a side project whenever I would go into the archives and working on my PhD dissertation. How many deaf people responded to these advertisements? How did they decide whether or not a medical treatment would be useful for them? And how did they, if at all, discern between quacks and what doctors were doing— or even if they cared. So that became the foundation for the research into "Hearing Happiness."

Krys Boyd 07:38

Something that plays into this is the fact that in the 19th century in the United States, there started to be this quest to determine a sort of normal standard kind of human body. How did those efforts cause people to assume that anyone who fell outside of those parameters was somehow abnormal or broken or not OK?

Jaipreet Virdi 08:07

That's a great question. I mean, we know that eugenics emerged in the late 19th century and tremendously influenced the early 20th century United States. But within this idea about controlling body is really about conforming people into the normal standard, something that could be quantified and measured through scientific medicine. When we measure something, we also come up with variables that are very biased, and they came with a twisted idea about what we consider that we want to be normal, what we consider to be something that measurable, at the same time they were trying to map out the anatomy of the human ear, and explain the physiological content of it. We had increased movement toward using the audiometer to measure deafness, especially in children. So what we consider elite in the 19th century, late 19th century, to be normal, really had to do with pushing forward it kind of social norms about respectability, that were very closely tied to the idea of certain tropes, and those can often fall into the category of being white middle class, Anglo Saxon. And I think everybody who didn't fit in that cultural norm would consider to be other or abnormal and in some cases that very much included deaf people.

Krys Boyd 10:04

Some people have been made to feel like they're not fulfilling some obligation to the rest of society if they don't try to fix their deafness or don't try to accommodate their behaviors so that it appears they're

not deaf. You write about, early in your life, feeling as if you might need to try to pass as a hearing person. Will you talk about that?

Jaipreet Virdi 10:28

Absolutely. So most of my childhood education while in high school was like a regular school, but it had a Deaf and Hard of Hearing class, and even though this was an older school, which means that we were educated to use speech, I was never really formally taught sign language. And none of my classmates actually used that language as well. But everybody out in the school-- my teachers were hearing, you know, my family were hearing, everybody else who I interacted with on a day to day basis were hearing-- and you got this feeling, like the sense of failure. That you're not good enough. That you are, quote, unquote, in a special class, for on the spectrum students who need assistance to get through life. So I remember having this feeling that I had this kind of, I still had this kind of condition that needed to be fixed. And if I did work hard enough at it, then eventually I will be perfect, or at the very least, I will become better than I was at that time. The one of the things I used to do was, I used to blindfold myself and listen, I would watch television in a blindfold and to try to see if I could hear the conversation. Or I would hear a conversation while, I don't know, shopping or something like that, with my mom and just close my eyes and just try to make sense of the sounds around me, thinking that I could train myself to improve my hearing. And that, you know, it's very much just internalized ableism. I was growing up with this feeling that I'm not good enough. And that had to get between my ears, between my brain to recognize sound and build up on that, like the same way we would do with weightlifting to strengthen a muscle.

Krys Boyd 00:00

I want to talk about some of the cures that had been prescribed for deafness over time. You remind us that early remedies didn't seem to make a distinction between temporary hearing loss from an ear infection or a wax buildup or something not very serious and permanent deafness.

Jaipreet Virdi 00:21

Yes. So people were aware that there were some cases in which children will be born deaf. But in terms of any kind of progressive or sudden deafness it was very hard, until the mid-19th century, to diagnose whether it was something that was a consequence of a disease like syphilis or the mumps or even the flu, or whether it was something structural, or like you have a wax buildup or a blockage in the Eustachian tube. So essentially, the remedy didn't really differentiate between any kind of like any, like born deaf or deaf in old age. And what's really interesting is when you think about how people were respond to this now, this idea that if you go and you try a deafness cure, and you were born deaf, and cure fails to treat you, but it helps somebody who lost their hearing from syphillis, then you tend to think about it as not that something wrong with the cure, but that something is wrong with your own body. So I found that is really interesting. And how people were continuously trying cure after cure after cure until they finally came to the realization they were deaf.

Krys Boyd 01:51

By the middle of the 19th century, cures and devices to amplify hearing were mass marketed to people what kinds of promises did ads for these products make to people?

Jaipreet Virdi 02:05

Most of the acoustic aids in the 19th century were not as mass produced until the 20th century because the market for it, so to speak, was still very restricted, but one type of acoustic aid that emerged various kinds of ear trumpets. First they were only available for the wealthy and fashionable, those who wanted to either disguise their hearing loss or make some kind of statement. So, for example, for wealthy people be made out of gold or silver, more beautifully decorated. And then you have at a slower rate of production, very basic aids being advertised for the poor and working class people. But with the emergence of the widening market for patent medicine, you also start to have things like artificial eardrums, which are just tiny, like teeny tiny little devices that were made up all kinds of materials from metal to cotton to rubber that you would wear inside your ear, kind of like, like an ear plug. But the idea was that these were much more superior than these large trumpets because they were hidden but as I talked about in the book, they were totally useless because they didn't really help anybody unless they had an eardrum preparation, which is what an artificial eardrum, quote, unquote, is supposed to be for.

Krys Boyd 03:52

You have the opportunity to try an old-fashioned ear trumpet. How did that work for you? What was the experience like?

Jaipreet Virdi 04:00

That was quite a surreal experience, mostly because I had to beg the museum creator to let me try it out. You know, the backstory to that is when I talked to other colleagues of mine about investigating ear trumpets housed in museum collections they always to, like, teasingly encouraged me to try it out because being profoundly deaf, with like 98 percent hearing loss, you know, I could imagine myself in the 19th century, wondering, oh, if this was my only option, and how would that work for me? Well, I went to the museum curator to finally let me try out the trumpet. I took out my hearing aid and I held the trumpet near my ear, not in my because there was like hygiene issues here. But what I found interesting was my own reaction when I finally heard a sound. So I had my friend and my friend and my friend was just talking while she was talking, I am kind of using my arms to kind of move the trumpet around my body, so raise the trumpet more closer and tighter to my body. And as I'm doing the movement, I'm straining, I'm trying to listen to sound. And when I heard a faint sound I got so excited. And you know, I know on an everyday basis, this is not a very useful device to me. I could barely hear. I had to like strain to hear. But just that joy of being able to hear a teeny tiny bit was enough for me to imagine what it must have been like for people with partial hearing loss who struggled and strained to hear and then got the trumpet. And suddenly, it helped amplify sound enough and they could manage a conversation. So it was quite an exciting experience and it actually led me to start my own personal collection of hearing aid artifacts, just so I could continue doing these experiments where I was trying out old ear trumpets and seeing how well I could deal with them.

Krys Boyd 06:08

Where do you find those things? Are they sold on eBay? Do you look at estate sales?

Jaipreet Virdi 06:14

Yes. I look on eBay, I shop at antique stores, I browse, you know, goodwill, some of them are just lucky buying some of them I go after on eBay and just try to bid. But I try to have different models so I could get a better sense of how the design of the ear trumpets did improve or hinder the amplification.

Krys Boyd 06:38

There were also very strange efforts at curing deafness. Can you explain the airplane cure this? This is the craziest thing in your book?

Jaipreet Viridi 06:49

It absolutely is. I mean, you know, I really wanted that story in the book. And I didn't care where it belonged because it's just an insane story that in the 1920s-- so after the First World War-- you have all these pilots who were just sitting around and some of them are working as crop dusters, some of them are just being daredevil pilots. And in the newspapers, when I'm researching deafness cures, I kept coming up with this airplane cure. And at first I thought I thought it was abnormal, very local trend kind but it turned out to be a very popular fad. So the idea behind these airplane cures is you would take a plane and you would just go up in the air and then you would fall under, after, I don't know 30,000 feet high or something, then you will you would do a series of loops and dives and other kinds of stunts because the basic idea was that something happened to the ear during those maneuvers, and people would land and suddenly they could hear again. And it was this miracle. And it was also this miracle of 20th century technology, like aircraft technology, that all you have to do is like put them up in a plane, go up in the air, do a series of loops and dives, and then come down to the earth and you're suddenly cured. But they were dangerous! I mean, first of all, the airplane technology wasn't the greatest so you have plane crashes. And you would think one plane crash would be enough to deter people from this deafness cure. But no, they just kept doing it. And they kept doing it in secret as well, even after all these authorities kept saying, this is dangerous, this not safe, we can replicate the same changes in air pressure in a laboratory, we don't need you to risk your life to go up in this airplane. But, I mean, we can read this story in many different ways. We can read it as the desperation on the part of either parents of deaf children or deaf adults themselves wanting a cure. We can also look at this kind of trust in technology and the idea of progress. Well, all the way that we have been trying to cure deafness didn't work, so maybe the new thing with this new modern technology can help us.

Krys Boyd 09:28

It's one thing for a deaf person or a person who is hard of hearing to seek out some kind of treatment, it's another thing for one to be imposed on them. And some of these treatments were not only useless but downright dangerous. Will you talk about some of the some of the people who tried surgical cures that really had no basis in science?

Jaipreet Viridi 09:53

Yeah, one of the most popular 20 Century surgical cures was this Curtis Muncie cure. He was an osteopath who was based in New York and he had a very prominent office overlooking Central Park. And his promotion was essentially, he would use nothing but his own fingers inserted up the nose and just click the Eustachian tube in place. And what it does is regulate your air pressure. So, Muncie's theory was that all deafness was caused by damage in the Eustachian tube and his fingers surgery could essentially just fix these things back in place. Now, he charged a lot of money. So there is

documentation of desperate parents sending their children, some of them as young as six years old, to New York to try this miraculous finger surgery and spending upwards of \$3,000, and this is like the 1920s. So, I don't know how much it translates to today's currency but I'm imagining quite a lot, and, you know, putting all these hopes on this one man to cure their deafness only to find out that it was ineffective, it was useless. And then you have medical experts calling out the fraud in Curtis Muncie's practice that finger surgery doesn't really do anything for deafness. So I think this is really interesting, because it shows how, again, whenever a new type of treatment is advocated, especially when it presented under scientific medicine, there is this basis of trust that is in there, and you have this responsibility to at least try it out, see if it works or not.

Krys Boyd 12:01

You reproduce a lot of ads in the book that were run in newspapers and magazines to sell different products that were marketed to deaf and hard of hearing people. And I'm struck by how many of them really focused on the fact that it ought to be embarrassing to be deaf or hard of hearing, they really want to make people feel ashamed of the fact that they don't hear like everyone else.

Jaipreet Virdi 12:30

Absolutely, I mean, a lot of the marketing of any kind of deafness cure or hearing aid or assistive devices, were rooted in this idea of normalcy. That's what you're selling. You're selling normalcy. You're selling this idea of a good citizen, who by all means is able-bodied, even if you have to pretend to pass the able body. And a lot of these companies and advertisers were playing up on this implicit idea that deaf people want to be normal, and normal means hearing. So if the product could sell that sense of normalcy, hopefully they could capitalize on it. But at the same time, all these ads are doing are further propagating the stigma of deafness, that the problem is one that should be fixed. It is not something that we should be proud of or claim as an identity. But it is something that like any medical condition should eventually be fixed and your body could be restored to a sense of normal. So you see, on one hand, you see the advertiser basically reflecting a social mirror in that deaf people should be good citizens by participating in hearing society, even if it, even if it meant they had to pass as hearing. But then you also see the advertisements, at the same time, pushing the stigma of deaf people, that they should be embarrassed by the hearing that they should use every means possible to conceal it.

Krys Boyd 14:13

In World War Two, there was a campaign to convince deaf men to seek out hearing aids and other devices so that they could join the war effort. That seems like so much pressure.

Jaipreet Virdi 14:29

Absolutely. I mean, it's fascinating history here as well, because war production meant that many hearing aid companies had to stop manufacturing hearing aid and turn their batteries over to the war effort. So even the even American citizens could not access batteries because there was a battery shortage at that time so they were hoarding the batteries that they needed for their own hearing aids. But hearing aid companies after they got a contract with the Department of Defense to produce hearing aid for soldiers who were injured in the war and who needed hearing aids in order to go back to front and fight, you have this increased idea amongst hearing aid companies that, well, if we're already making hearing aids for our soldiers to continue fighting, then why don't we also market to our deaf

people who are at the home front? So maybe we can also sell in two different markets. And what the archives show is that this special, patriotic hearing aid that was produced in the middle of the war often priced a lot cheaper than it was at pre- or post-war, because what they really wanted to do was convince the American government that it was worthwhile to continue doing the manufacturing rather than putting everything into war production. And in order to do that, you have to have a patriotic message, so the method became, hey, people don't you want to be a good patriot and contribute to the war effort? Well, if you're deaf, you don't have to stay at home, you can go get a hearing aid and you can work in the airplane hangar. You can work in a factory, you know, you can do your part for the country. But what I'm learning is that there were many deaf people who complained that the hearing aids that they were being sold as this need to participate in the war effort. Were not as good as the ones given to soldiers.

Krys Boyd 26:48

In the modern world, cochlear implants are sort of the new treatment that is talked about as a "miracle cure" for deafness. And they do work for some people, they don't work for everyone, and not everyone wants cochlear implants who would qualify for them medically. But talk about what are called the "switch on" videos, which is where a person who has been deaf, often a child, has the device turned on for the first time. You write that hearing people love these videos, which I suppose implies that deaf people don't love them quite as much. Will you talk about how they make you feel?

Jaipreet Virdi 27:26

So the hearing for the first time videos, they tug at your heart strings, they show the miracle of modern technology where essentially you turn on a switch and the person has become "normal" again. And we've seen variations of it, you know. You see a tiny baby at an audiologist's appears looking at the mother or the mother says, "I love you," and you see the baby's eyes and then everybody's like, "Oh!" But they leave out so much. They don't go through struggle before this moment. They don't capture the diagnosis. They don't show, at least in the U.S., the battle over if it will be covered by insurance. And after this, they don't show the long struggle in trying to make sense of the sound or the therapy for speech and for understanding, and all of that is left out in these videos for cochlear implant. It is not there. You think you just switch it on and you have a normal sound, but it doesn't show how they work, what the cochlear implant does, and how it allows the person to become more familiar with sound in order to communicate and participate in their environment. And that requires learning. Now, of course, the younger you are, when you're paired with a cochlear implant, the easier this kind of training will be. These videos leave out, for example, the complication that might arise in where sometimes the cochlear implant fails to work or present other kinds of health issues, including severe migraines and auditory processing disorders. Again, for some people, they're not a miracle cure. I can tell you that my hearing loss is profound enough that I qualify for a cochlear implant. But I was told that when I was 35 years old, that I could be fitted for a cochlear implant. So after over 30 years, wearing a hearing aid, you know, it didn't seem like brain surgery was the best fit for me. But in the videos, they make you feel like it's problematic that don't take that path because it's in front of you, why wouldn't you want it?

Krys Boyd 29:42

Have you had people ask you, Jai, why don't you just get a cochlear implant? And how do you respond to a question like that?

Jaipreet Virdi 29:49

Sometimes if I'm in a bad mood I say, "why don't you go get brain surgery?" Because that's what they're essentially asking me. I mean, it's not like something that I can just be like, I can take on and off like a pair of glasses, this is brain surgery. So I have to remind people, that's what you're telling me. You're telling me, why don't you go get brain surgery. I hear it in their tone, "Jai, why don't you want to stop to be fixed?" And I think that has a deeper implication here, further propagating the stigma of deafness. Why do I always need to be improving myself through technology and medicine?

Krys Boyd 30:35

What are some of the ways that the world that we all inhabit could be changed so that it works better for people who hear very well, people who are hard of hearing and people who are deaf?

Jaipreet Virdi 30:48

We can think of hearing a spectrum. So there's some people who have hearing and some people who are completely deaf but between these two, you have all kinds of degrees of hearing. If we look at hearing as a spectrum, then what we also can recognize is that there is a variety of human experiences and that means there can be different forms of communication. I always go back to how it was so hard to submit ability requests before COVID. You know, asking for sign language interpreters for videoconferencing. But then suddenly, with COVID and many of us working from home, it suddenly seemed that is all possible. Well, why is it only possible if you have an able body person requesting this? And I think we also need to shift away from discourses about hearing technology as being essentially medical. I had this tremendous, lively conversation on Twitter with other people who use hearing aid or have cochlear implants. And the conversation was sparked by me watching Lady Gaga perform at the inauguration. And she had these really beautiful gold earbuds that I know it's for music, so they can hear the music, but they were so glamorous, and I couldn't help but wonder, why can't we have hearing aids like that? Why can we have them as fashionable devices? The history of hearing devices has been the creation of products that appealed to different classes, different styles. Over time they became more and more medicalized. They became boring. So I think if we shift our understanding about what hearing means, and hopefully that could also inspire us to think beyond medical technology.

Krys Boyd 32:47

Your book made me think about the pressure on deaf people to fix themselves or change themselves, and how that often seems to come from family members who have their hearing. And I wonder if it's a failure of imagination on the part of hearing people to be able to understand that you can be deaf and still be okay, still live a happy life, still function in the world, despite some things that will be more challenging for you than for a hearing person.

Jaipreet Virdi 33:20

But one thing we have to keep in mind is that most often when a deaf child is born it always to hearing parents. And for the hearing parent, this deaf child might be the first time ever in which they are interacting with the challenges of deafness, or have questions about speech training or sign language. So sometimes it's really about learning, what it means to be deaf, and learning how to navigate between deaf community and deaf culture. So the more familiar we've become about hearing on a

spectrum, I would imagine it would be less challenging or less problematic to respond, to adapt. How do we, you know, engage all the experts to fix that— essentially, this idea of deafness is a problem that needs to be fixed?

Krys Boyd 34:15

I was also thinking about immigrant families and first generation American kids, often they share another culture, but the children are going to be much more American than the parents and the children have to come to terms with the fact that, as much as they love each other, their cultures are not quite the same. Do you see a parallel between hearing family members and deaf family members?

Jaipreet Virdi 34:41

Oh, absolutely. I mean, this is the cultural gap here and a lack of understanding in which you have to bridge that connection. I mean, you know, I'm an immigrant as well. So I often clash with my parents in terms of our cultural identity and comfort.

Krys Boyd 35:09

We should talk about how you and I are able to do this interview today. Ordinarily, I would just be talking to someone who hears my voice in their ears but that wouldn't work for you. Will you talk a little bit about the technology that's making this possible?

Jaipreet Virdi 35:23

Absolutely. So, clearly, I'm deaf. And as I mentioned, I don't hear on the telephone very well. So we've had to make a little bit of accommodation. One way we figured out is to use a video platform so I could communicate visually and on the video platform we also have closed captioning. So we are currently using Microsoft Teams and I also have an app on my iPad next to me to add close captioning. And you know, this conversation is only made possible, I will say, by the technology we currently have at our disposal.

Krys Boyd 36:04

What's interesting is that this is really nice for me, too. I often can't see my guests faces. I like being able to look at you through the video screen and get a sense of what your expressions are. So this thing that might be called an accommodation on your behalf is also a benefit to me as a hearing person.

Jaipreet Virdi 36:22

Absolutely. And I find that it makes both you and I more comfortable with having this conversation with each other because it's like we're in the same room and we kind of rely on our body language and facial expressions. It makes it more intimate, I would say.

Krys Boyd 36:44

We now all carry these powerful computers in our pockets that have technologies that make a lot of kinds of communication easier. What sort of future do you see for deaf and hard of hearing people that might be facilitated by our phones, or the phones of other people that they come in contact with?

Jaipreet Virdi 37:05

One thing I can possibly see, and it already something that I've been seeing more and more, is improved closed captioning on every platform. So, there's two struggles you're in where, for example, with social media, you know, you have all the crucial videos regarding COVID or government management and the videos are not closed captioning, which are, again, a barrier for a lot of people and not just to deaf people, people whose first language isn't always English. Better closed captioning helps with communication. But I can also see improvements in technology in which you can use your phone to take notes of the sound around you. So I can tell you, for example, I can hear water running. Sometimes I tend to leave the kitchen tap running and walk away because I don't see it. So having a phone that recognizes sound would be helpful. And well, you know, notifying you when somebody's at the door. There are programs that are trying to help with that. But again, they're not always mainstream and they're not always available for everyone. And I think those will really help, again, not just deaf and hard of hearing people, but everyone.

Krys Boyd 38:35

So it's clear that for a lot of history, deaf people have felt pressure to fix themselves or to use certain technologies or devices. There are also technologies and devices that some deaf people want. How can we get to a place where the choice is made by the deaf person and not by any kind of cultural pressure?

Jaipreet Virdi 38:57

That's a great question. I mean, for one thing, we have to make sure that the kind of technology is affordable to start. I mean, there are some wonderful prototypes in place, but they are just prototypes and be even if they were to be, like, produced by the market, they would be way too expensive. I'm thinking of hearing aids that have different styles, you know, so they'll come in different designs rather than just the behind the ear or the in the ear models. But even if people want them, they are they are not affordable or they're only in a prototype stage. But also, a lot of the new designs for hearing aids are very limited to a clientele that have a minor type of hearing loss to they're not really for everybody. Again, I'm profoundly deaf and there were only a few models on the market that I can be fitted for my type of hearing loss. And I think this is, again, a question about engineering and design. How do we create assistive devices that cover a range of hearing degrees or types of hearing loss. We might provide choices to people, you know, where you can decide when and what kind of design or style you want for them. But it's important to make these kinds of choices available so that deaf and hard of hearing people can just make the decision for themselves.