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Designing Our World: Accessibility In Tech

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LISTEN

Jaroslaw Gniatkowski, who is blind, holds the steering wheel with headphones on to hear commands from a computer with information about course and rudder position.

WOJTEK RADWANSKI/AFP via Getty Images

Can someone who is blind easily use Instagram? And can someone who is deaf use YouTube? Every day thousands of new mobile apps are released, social media platforms develop new features, and more tech is integrated into our lives. But is this new technology being designed for everyone?

It's usually a toss-up. Not only are some companies losing a portion of the population, but they may be losing out on opportunities for innovation. Often, accessibility design like voice to text and Siri becomes the next big thing in technology.

But do companies design these features with those intentions in mind? What's needed to make technology more accessible to everyone?

We talk about the state of tech accessibility today, and what companies can do to design their products with everyone in mind.

TRANSCRIPT

Celeste Headlee: This is 1A, I'm Celeste Headlee. All this week, we're exploring why things in our world are the way they are. Who makes the things, the technology, the clothing, the advertising that we use every day. We're calling it "Designing our World" because even the things we take for granted are actually done by design and that includes the apps, screens, website and technology that are making up more and more of our lives nowadays while most of us are stuck at home. Every day thousands of new mobile apps are released, social media platforms develop new features and more technologies integrated into our everyday lives especially now that social distancing has forced us indoors and kept us there. But is all this new technology being designed with everyone in mind? Can someone who's blind easily use Instagram or can someone who's hard of hearing use YouTube? Big tech has historically had a haphazard approach to accessibility.

Celeste Headlee: Sometimes brands do think about those who can't use their products quite so easily, but a lot of the time they don't. And that means not only are some companies missing out on a big portion of the population and a lot of potential customers, but they may also be losing out on innovation. Often accessibility design like voice-to-text and Siri becomes the next big thing. But do companies think like that on a regular basis? And how much of our technology today is actually accessible to everyone. Here to talk about it we have Jennison Asuncion, he's the head of accessibility engineering evangelism at LinkedIn and co founder of global accessibility awareness day. Jennison, welcome.

Jennison Asuncion: Good morning.

Celeste Headlee: Molly Burke is a YouTuber, motivational speaker and accessibility advocate for the blind. Molly, welcome to you.

Molly Burke: Thanks.

Celeste Headlee: And Jutta Treviranus is the director of the inclusive design research center at Ontario College of Art and Design University. It's great to have you all here today. Molly, tech companies have been talking about accessibility for a very long time. Do you think the need to make tech accessible has become more urgent since the pandemic began?

Molly Burke: You know, I think it's interesting. I was chatting with some of my blind friends about what they've been finding the most difficult during these times. And of course everybody's coming up with new apps to do new things and connect in different ways. And it's hard enough for all of us to learn new technology constantly. But when you're trying to learn that with a program like voiceover, um, it's that much more challenging, especially when you're then running into random bugs where it's not accessible. So I think this has definitely opened some people's eyes to just more ways in which different apps and technologies aren't accessible.

Celeste Headlee: Jennison, what does it mean if I say that my tech is accessible? What does that mean?

Jennison Asuncion: Sure. There are four underlying principles when we talk about accessibility to experience digital experiences. And I use the word digital experiences because it's web, it's mobile apps like Molly just talked about. So, can an experience be perceivable? So is there, are there, transcripts for, for videos, for people who are deaf, is there sufficient contrast for people, uh, who are colorblind, uh, can the experience be operated other than using a mouse? So can I use my keyboard to do the same things that someone would be, accomplishing with a mouse? Um, is the experience understandable? Are the instructions that are there, are they written in plain language? Are there error messages, are those types of things, understandable? So I can recover from making a mistake. And finally, is the experience robust? Can, can the experience that's been designed meet and be used by not only today's technology, today's screen readers or other assistive technologies, but the stuff that's gonna come out in the years to come.

Celeste Headlee: So I am not a person with a disability and I wondered if you could help me understand this a little better. Can you give me an example of maybe an app I use that has missed the mark and made the platform unusable for someone who does have a disability? Jennison, go ahead. Sorry. Go ahead.

Jennison Asuncion: No problem. I would say a lot of, uh, a lot of restaurants, for example, will put up a menu that, uh, they've taken an image of the menu and they've uploaded that image. And so when I go up there where you can see the image, um, my screen reader cannot necessarily perceive it so I might just hear the word image. And unfortunately then I'm left out of knowing, you know, what's the, you know, what's on the menu. So I might actually just bail out of that restaurant website and opt not to go to that restaurant. uh, since I can't know what they're serving.

Celeste Headlee: Jutta, you actually helped create guidelines for tech accessibility with the World Wide Web Consortium. What kind of things did you consider when you were, when you were creating those guidelines?

Jutta Treviranus: Well, we recognized fairly early on when the web was just emerging that the web and digital tools offer us a whole new way of designing more inclusively. If you prior to that, um, say if you were designing a door, you'd need to anticipate everyone's needs ahead of time, and so you need to needed to design it so it was one size fits all and you're always going to leave someone out, someone you haven't thought of or a change in the world or people's situations like we're experiencing now. But if you, uh, design the web, then you can make it flexible and adaptable. So it's possible to respond to different situations. And you can actually, in a system, in this one design offer, one size fits one, in a shared space and so that was a large part of what we wanted to achieve when we created the web accessibility guidelines: A way to know that everybody can't necessarily see something in a very small font or with no contrast or everyone can't necessarily hear an audio file or a video file. So we needed to make it work for the unique needs of every individual but in a system that we all share.

Celeste Headlee: That's okay. I was just going to say 508 compliance, um, requires through the federal government that all tech communications are accessible for everyone, but for private companies or nonprofits, are there legal rules about making things accessible?

Jutta Treviranus: Uh, yes. Well, there are and there aren't. It varies all across the world. I'm, of course in Canada, and we have a different set of requirements, but the web content accessibility guidelines is a set of guidelines that's been adopted by many countries and have been embedded in legislation. So 508 is our rules about what can be purchased if you're using federal money or money that comes from, a federal source or a government source. And so most companies are also, trading with the government or hope to supply to the government so it applies there as well. But there are different sets of legislation, that require accessibility, whether it's in a school system or whether it's um, for a particular, um, area or domain that you're creating the technology for. But the, the thing that should motivate companies is, um, they should be thinking about accessibility out of what we call enlightened self interest, a sense that it's good for the company. It's [the] smart and profitable thing to do in order to survive and thrive.

Celeste Headlee: That makes sense. And Molly, that probably is music to your ears on your YouTube channel you spend time educating people about the realities of being blind. You have this online shopping series that was popular. You show how you navigate websites and try to shop. And in one video we see the very real frustrations you experience when you're trying to design custom shoes online. So let's take a listen to a bit of that.

Molly Burke: "So it's saying like double tap to activate, but it's not telling me what it's asking me to activate. So I don't know what the button is it's asking me to press, I can scroll through the colors but I can't, it's not telling me what any of them are. So if I was to design these shoes like sure I could try to do this, but it would literally be like a complete guessing game. It wouldn't actually like mean anything. But it's kind of, you know, disappointing that Vans aren't accessible. 'Cause I was hoping to get a backpack and a pair of shoes. Great, so I can buy them. Perfect. But I can't do anything else."

Celeste Headlee: Molly, what was the response to this video?

Molly Burke: You know what's been fascinating, I've done this kind of series for a number of companies, different websites and the amount of Fortune 500 companies who have emailed me being like, "Hey, could you check if our site is accessible for us?" And I'm like, are you kidding? You're reaching out to a blind YouTuber—

Celeste Headlee: Charge them consultation fees, Molly.

Molly Burke: —to tell you for the first time to see if your website's accessible. You know, there are people who do this full time who can consult. Um, and so that, that was a really interesting, unexpected turn of events. For sure.

Celeste Headlee: Yeah. Um, we're talking more about tech accessibility design. You heard Molly Burke, a YouTuber and accessibility advocate for the blind. Jennison Asuncion is head of accessibility engineering evangelism at LinkedIn and Jutta Treviranus is director of the inclusive design research center at Ontario College of Art and Design University. I'm Celeste Headlee. You're listening to 1A from WAMU and NPR. Tweet us your thoughts at 1A.

[SEGMENT BREAK]

Celeste Headlee: This is 1A, I'm Celeste Headlee. We're talking about the state of tech accessibility today with Molly Burke, a YouTuber and accessibility advocate for the blind, Jennison Asuncion is the head of accessibility engineering evangelism at LinkedIn. I just like saying that title, Jennison. And Jutta Treviranus is director of the inclusive design research center at Ontario College of Art and Design University. And we would love to hear from you as well of course, share what you know about accessibility in tech. We have a tweet from Kindy who says accessibility considerations must also include users with intellectual and cognitive challenges, dyslexia and other reading challenges and dysgraphia and other writing challenges. So what about you? What are the issues you've seen or experienced when trying to access certain platforms? You can comment on our Facebook page. Tweet us at 1A or email us. It's 1A@wamu.org.

Jennison Asuncion: I'm wondering if I could just, um, follow on to what Molly was talking about.

Celeste Headlee: Sure. And before the break, Molly said that companies have come to her to ask her to consult and tell them if their, their platform is tech accessible. Is that what you want it to respond to?

Jennison Asuncion: Yeah, I just, what I wanted to say is one of the neatest things for me, uh, I working, having worked in accessibility for over 10 years now is uh, meeting the average designer or engineer who has never thought beforehand that someone with a disability or impairment might possibly be wanting to use what they're designing or building. And I think that's at the core of the issue is there is still a level of, of unknowingness there's like a mystique around disability and, and such. And what needs to really happen if we're going to move things forward around accessibility is to start teaching it in the design and engineering schools out there. Mainstream it, make it something comfortable for people to talk about and make it something that people understand so that when they're going into the workplace, um, they are designing beyond what they might think the users are. I always say when I'm talking to designers and engineers that you are going to have people interacting with your experience that either are not looking at the screen or are not using a mouse. Um, so there's still a lot of that out there. Uh, you know, as much as Jutta and myself and Molly, do our own advocacy and evangelism out there, there's a lot of people who just find it surprising and not necessarily in a bad way. They're just surprised that people with disabilities would want to use that.

Celeste Headlee: Molly have, have you seen any of the companies that you have made videos about, about their platform? Have you seen changes since your videos were made?

Molly Burke: Um, you know, one of the frustrating things is companies have reached out to acknowledge to me that I am correct. They are not accessible. And then that's it. And it's like, they're like, yes, you're right. Our app isn't usable for you. Thank you. And I'm like, okay, so you're aware you're losing me and my community as a customer base and you're just going to like admit that and move on. And that's what's kind of been really surprising for me and yeah, it's very frustrating. It's very surprising. And it's what continues to let me shamelessly call companies out and call brands out because as somebody with 3 million followers online, um, being the largest blind creator in the social media space, I feel like I have an opportunity to make a difference and to, you know, to raise that awareness to people who would have never thought of it before. Um, and that's really how we create change is by first creating the awareness, having the conversation and being a real human, being a real face, a sister, a daughter, a friend, a role model that people can care about, because I think people feel like, you know, when they, when they're not affected by something or they don't know anybody who is, they don't have to care about it. Because there's already so many issues in the world to care about. But once they follow me and they

like me and they connect to me for some reason, which is of course why they've chosen to follow me and engage with my content, they have to care about the issues that my community is facing.

Celeste Headlee: Jutta, you wanted to jump in here?

Jutta Treviranus: Yeah. I wanted to just add to both what Molly and Jennison were saying and that is that not only do we need to, to teach people about, uh, accessibility and inclusive design right at the beginning, but we also need to make our tools and processes as inclusive as possible because what we need is we need as many designers and developers that have the experience of disability themselves. A nd to Molly's point, uh, I think one of the misconceptions or sort of the missteps of the web accessibility movement was to see people with disabilities primarily as consumers of accessible content, not also producers. We need to make sure that people that have experience of disability are also the producers of the content, the tools, our development systems. It's sort of like a virtuous cycle. The more we make things accessible, especially the, the ways of designing the tech, the more accessible things there will be.

Celeste Headlee: We got an email from Debra who says, I've been visually impaired since birth and it's rare to hear anyone in mass media talking about my experience. I'm fortunate enough to be able to read most print, but in the past few years, the trend in graphic design, in print and online has been limiting my accessibility. Nowadays, thin, wispy, low contrast fonts and low contrast print are considered elegant, but I can't read them easily. My mobility and my ability to shop have always been limited, but now my ability to read w ebsites is being taken away and I'm heartbroken and furious. Jennison, why is it so difficult to make these platforms accessible?

Jennison Asuncion: So I don't, I don't know if it's necessarily that it's difficult to make things accessible. I just think in the main people don't think about it. Uh, it's the last thing, you know, people will say,

Celeste Headlee: Sorry, but I want to interrupt you, Jennison, because Molly just said that these tech companies are acknowledging that their platforms are not accessible and then saying, oh, well.

Jennison Asuncion: Right. So, yeah. And, and I can't, obviously I can't speak for those companies and know why they've opted not to listen to Molly and her sound advice. But what I would say is it's all about prioritizing. And sometimes when it comes down to it, accessibility unfortunately becomes, there's tradeoffs between accessibility and security and privacy and those things, those conversations happen. And brands and companies, if they opt to take that risk, and what ends up happening is things like what Molly does which is educate, through her experiences and showing, what is the impact of you ignoring accessibility? Well, here it is and, and I'm showing you.

Celeste Headlee: In some cases—

Jutta Treviranus: Sorry, this is Jutta.

Celeste Headlee: Go ahead.

Jutta Treviranus: And, what we've actually shown is that if you wish to survive as a company, it actually costs less because if you only design for the average, then what happens is you will have more need for help. There will be new situations that will arise that will cause you to have to retrofit or add things or patch things on. And so the cost of whatever you're creating, whatever system or service or app or gadget you're creating will continuously have to be hacked or um, patched and it will become very, very brittle and it'll end, um, the, the existence of it or the utility of it will end. But if you design for the entire range of needs right from the beginning, it may take a little bit more time, it may cost a little bit more right at the beginning, but you have a resilient system that is, that can address, it's more generous. It can stretch to the situations that might arise, the way that your customer base changes. Uh, so the, that myth of cost is something that, really, the companies that have that enlightened self–interest have started to recognize. The other myth is that within a digital age, we have to always use economies of scale that, um, that the quick wins are the way to get ahead as a company and to m ake profit. But what has been shown by economists and various other people is that designing a system that can, uh, reach out to the largest set of customers, it will also make you dynamically resilient. So that as the situation changes, as things, like right now the whole world has changed and it's no longer normal. The design—

Celeste Headlee: Well, it's different. That's for sure.

Celeste Headlee: I'm really glad Jutta, sorry to interrupt you, but I'm glad you brought up the question of affordability. We actually had a comment from a listener, Michael in Lakewood, Ohio, who called into to respond to this, this issue of affordability and the gap between the cost of accessibility tech and others.

Michael from Lakewood, Ohio: "The people who might most benefit from Alexa can't afford it. There's still a lot of people who don't have access to home internet or indeed even a home computer."

Celeste Headlee: Molly, do you find issues with affordability for accessible tech?

Molly Burke: Absolutely. When you look at just my community alone from Canada, where I'm from, the statistics are that 80% of my community is unemployed. And so if 80% of the blind community is unemployed and living below the poverty line, to think about them being able to afford a smartphone that has voiceover, to be able to afford things like, a home pod with Siri or any of these technologies, it's very expensive for the average consumer, let alone somebody unemployed and below [the] poverty line. So definitely there is that issue there as well. But, um, we have seen that, like was just mentioned, in terms of the actual back end of creating accessible tech. It doesn't actually cost more in the long run, which I think is kind of a longstanding myth and a longstanding excuse for people to not create accessibly.

Celeste Headlee: I'm Celeste Headlee, you're listening to 1A.

Celeste Headlee: Jennison, there's two different issues here and I want to make sure we're sort of parsing out the issues with affordability. There's the question of whether or not it costs a company more to make their tech accessible. But then there's this other issue that Molly just mentioned, which is that there's a large amount of people with disabilities who have lower incomes and they can't afford the tech that has been made accessible like a Google home or an Alexa. Are these issues related? Do you see them as part of the same problem?

Jennison Asuncion: Absolutely. And what I want to do is talk for a minute about, for those folks who are on that other end of the digital divide. One of the exciting things that has been happening over the last few years is that there are a growing number of free or inexpensive, assistive technologies, open source. There's a number of free screen readers out there now, which weren't available, you know, uh, five, 10 years ago. Um, so while, you know, someone might still need to purchase a computer, for example, whether it's, um, Microsoft Windows or, or an Apple computer, all of those are now bundled with assistive technologies on board. So once the person has the computer or the mobile device, they have access to assistive technologies. Whereas when I was growing up, you know, I would have to consider putting out money to pay for those technologies. Um, you know, but does that take away from the fact that not everyone can purchase a computer to begin with? Absolutely not. But I'd like to say that the trend of having, whether it's open source technology or technology that's already on board the devices has certainly helped open up, um, technology for many people with disabilities. Certainly not all. And, and you know, we're only talking about, you know, here in North America. Outside of North America if we're looking globally, I mean the, the, the uh, picture out there is, is even worse when we're thinking about unemployment rates of people with disabilities.

Celeste Headlee: We reached out to one tech accessibility consultant, Svetlana Kouznetsova, who happens to be deaf and asked what she'd like to add to the conversation. Here's 1A producer, Michelle Harven reading what she sent us.

Svetlana Kouznetsova: "Being deaf all my life, I've had to use various alternative solutions to effectively navigate communication and information barriers. As a consequence, I became a professional accessibility consultant and an international speaker educating people on how to increase their audience by providing optimal accommodations to disabled people, the world's largest minority. For over a decade, I've advised businesses on the benefits of accessibility and the return on investment they will receive from improving accessibility for their web, media and events. Good quality, same language captioning access is one of my several specialties. Over time it's been great to see increased interest from organizations in accessibility for their products and services. While they often don't know the best way to proceed, advising them on how to provide optimal accessible solutions to a larger audience is very rewarding for me. And everyone wins."

Celeste Headlee: Molly, is tech accessibility getting better?

Molly Burke: Oh, absolutely. I mean it is, it's come a long way. I lost the majority of my vision 12 years ago, taking me from being able to reach, read large print to, to needing a screen reader. And it has come so far in that time. The way I compare it for people is 12 years ago when I went blind, I would, you know, iPods were really big at the time and I would just spin the wheel and click because there was no way for me to pick what song I wanted to listen to. That's just 12 years ago. Now, 12 years later, I'm fully on a smartphone flipping through dating apps, emailing my friends, texting. So the fact that 12 years ago I couldn't pick what song I wanted to listen to on an iPod to now being able to fully run my own digital business, from my technology. It's incredible.

Celeste Headlee: Jennison, we have one quick question that maybe you can answer in about 30 seconds. John writes, our daughter did her undergraduate work in user experience. She focused on accessibility in her internship, particularly for the visually impaired, partially inspired by the entity she worked for having to adhere to the ADA. That's the Americans with Disabilities Act. Why isn't the ADA invoked more often?

Jennison Asuncion: So the ADA was a law and I'm also Canadian so I'm gonna preface it by saying that, but um, my understanding is that this law was put into effect the ADA in 1990 when the internet and technology was not where it is today. So there have been cases though in the last recent number of years where judges have interpreted the ADA to include the digital space. But not often enough. I did also want to say really quickly, cause we talk about the, the law and legislation and, and all that stuff and compliance, but there's also the, this idea and there's a movement around called structured negotiation

Celeste Headlee: And we're going to have to leave it there. Jennison Asuncion is the head of accessibility and engineering evangelism at LinkedIn. Jutta Treviarnus is at the Ontario College of Art and Design University and Molly Burke, YouTuber and motivational speaker. Thanks so much.

This transcript has been lightly edited for clarity.

GUESTS

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