

Getting Curious with Jonathan Van Ness & Dr. Kolina Koltai

JVN [00:00:00] Welcome to Getting Curious. I'm Jonathan Van Ness, and every week I sit down for a gorgeous conversation with a brilliant expert to learn all about something that makes me curious. On today's episode, I'm joined by Dr. Kolina Koltai, where I ask her: What do we do about all this vaccine misinformation?! Welcome to Getting Curious, this is Jonathan Van Ness. I am so excited for this guest, I'm so excited for this topic, even though it is, like, one of the more upsetting things of our time. But we're going to kind of put an interesting spin on it, as we so often do. Welcome to the show, Kolina Koltai, who is a postdoctoral fellow at the Center for an Informed Public at the University of Washington. She researches how people make decisions and form opinions based on what they see on social networking sites and in digital communities. You guys, if you need to, like, pause that, rewind it and listen to it again, maybe you should, because essentially Kolina is saving the world and researching how to do so. So welcome to the show, Kolina. How are you?

KOLINA KOLTAI [00:01:05] I am so excited to be here. Thank you for having me. And what a wonderful intro. I'm going to use that for all my other future intros.

JVN [00:01:13] I mean, you really should. And also just so people know, Kolina is already aware: you have the coolest hair. You've got this, like, dusty rose gold bleach and tone. People can't see it because they're obviously listening, but, like, oh, my gosh, I'm slow clapping for the color. I just had to put it out there, ok?

KOLINA KOLTAI [00:01:29] Thank you.

JVN [00:01:29] I had all of a sudden, just, like, several people in my life that I realized were choosing not to be vaccinated. And the reason for their choosing to not be vaccinated in literally every case came from rumors that they had seen online or someone had told them around dangers from the vaccine. I just assumed that, I was chomping at the bit to get that fucker. When I got the vaccine, I was like, "This is the first time in my life that HIV has ever, like, scored me a win," because I was able to get the vaccine in, like, March, a little early because I'm HIV positive. It didn't ever occur to me that people were going to, like, not want to take the vaccine because it seemed like such a clear way out of this mess. And I really love that you research how people make decisions based on opinions that they have seen on social media and social networking sites. I think that's so important for us to understand how people come to these conclusions.

KOLINA KOLTAI [00:02:22] You actually point out, like, already in this description, something that's actually really telling about the sort of widespread vaccine hesitancy that we've been seeing here, which is that there's a lot of different reasons why, and in reality, a

lot of us know someone. Even prior to the Covid-19 pandemic, I'd have so many colleagues, fellow academics, people at conferences, just in my day-to-day who would say, like, either they had vaccine hesitancy or they have a loved one, you know, someone trying to talk about their sister who didn't want to vaccinate their kid for the MMR vaccine. I never blame anyone. If someone is experiencing vaccine hesitancy, particularly over the past years, so many people, even people who got vaccinated, some people had the reaction, like, "Should I?" Just experiencing some hesitancy, I don't think it's inherently a bad thing. And I want that to be a reminder to everyone that we talk to in the show is that it's, it's never, never demonize anyone for experiencing some vaccine hesitancy. It's a very real emotion we all have.

JVN [00:03:16] OK, so can I ask something about that really quick?

KOLINA KOLTAI [00:03:19] Oh yeah, sure.

JVN [00:03:21] I was, like, really trying to come from, like, this place of compassion for, like, a hot minute, from, like, you know, I was. And then all of a sudden, like, in July, I lost my shit. So, how did you find that compassion? Is it just, like, practice or is it just, like, we really need to just... I find compassion for people for all sorts of shit? I can do it for this, right?

KOLINA KOLTAI [00:03:48] Yeah. Well, you know, even prior to this, I, for a lot of my work, I spent hours and hours at anti-vaccination conferences, doing interviews. I'd attend protests and really talk to the people there. And I think at the core, everyone there wanted the best for their kids, particularly when we talk about childhood vaccines, right. Everyone, genuinely, was just, like, "I want the best for my child. I want to protect them. I want them to be safe." It was never anything malicious. And if you realize that's actually the core of what people on both sides want, they want people to be safe and healthy. And then I realized we can start building that bridge from there, because at the moment we really just completely lose it. And I can say that even for myself, there are some times where I get so frustrated, it's like, "Why won't these people get vaccinated?" I feel that myself.

And I just have to take a moment and think about, you know, it is a really difficult world out there, particularly with how much how much of our lives are online and how much content we get online and how it could be really difficult sometimes to pass through it, like, what do we trust and not trust? And sometimes we want to just say, "You know what, I can't tell. So I'm just not going to risk it." And that happens with a lot of people. So as long as we can think that because there are people who are saying, well, there are people who I've known that I've talked to or, like, I've given these guest lectures to students and they have let me know afterwards that they were able to convince their loved ones to get vaccinated. So it's not a lost cause. I think we can continue to build that bridge and kind of build that

empathy to continue to reach out to those-, our, our loved ones who are not vaccinating, because if we completely cut them off, there is no way that they're going to vaccinate.

JVN [00:05:20] Yeah, I, yeah. I definitely think, like, can't cut off. I also feel, like, some of the people who did come out of the woodwork, I just didn't see it coming that they would be particularly, like, experiencing vaccine hesitancy. So what are some of the common types and examples of vaccine misinformation that people might run into?

KOLINA KOLTAI [00:05:38] Vaccine misinformation really spans a wide gamut. And sometimes I use the term "vaccine-opposed content," because vaccine misinformation can sometimes have a really big gray area, like, what is sometimes considered exactly misinformation? And I want to be clear, because there are-, sometimes things are called "misinformation" and some things are "disinformation." So specifically, I want to say that misinformation is often incorrect or misleading information that is *inadvertently* shared to the, to influence public opinion or obscure the truth. Whereas disinformation is something that's *deliberately* shared. It is false information deliberately and often covertly spread to influence public opinion or obscure the truth.

So when it comes to vaccine misinformation, there's different ways that misinformation can manifest or look like. There's different techniques that could be applicable to even other contexts. And then there's something I call vaccine misinformation narratives, stories that relate to maybe larger stories that convince people to have more doubt, to sort of become more vaccine hesitant. So as an example of the type of misinformation you might see, you might see sometimes manipulated images or something decontextualized, so you might see a quote taken out of, like, a larger context or a bit of data without sort of, like, "Where did the data come from?"

So a really common type of misinformation you might see is something using data from VAERS, which is the Vaccine Adverse (Event) Reporting System, which was a system that was set up from the CDC even prior to the pandemic that allowed anyone to report a vaccine injury or suspected one. You didn't have to be a healthcare professional. You didn't have any sort of time limit on it. You could have been, like, "Well, you know, I got a flu shot a few years ago, and I kind of felt sick afterwards, so let me go and report that." So if you go into VAERS, you'll see people write things like, "I got a vaccine and then I got hit by a car," or "I got electrocuted" or "I developed superpowers," and people trolling the system. So while it is a database set up to, as a signaling system as, like, if there's reports coming in and be like, "Hey, there's something funky going on here." But since it's gotten more and more popular, there are people who flood the system, and we cannot necessarily trust all the data that's put into VAERS.

But you'll see, sometimes, vaccine misinformation, like, "Here is this CDC data set saying here are the, like, hundreds or thousands of injuries that are reported," and then you have decontextualization. So an injury could be, like, "Well, I was a little sore in my arm." And we could obviously think that, like, you know, having a little arm soreness, or a little bit of redness at an injection site is a pretty minor risk when it comes to a vaccine. But now you see this very large number, like, "Oh, thousands of people have reported an injury," well, thousands of people might have had some arm soreness. When I got vaccinated, my arm was definitely sore for a few days, but I think that's a reasonable risk. But you see how suddenly you take a bit of information and obscure it and then it becomes misinformation, even though there's some bit of truth to it because you're missing the larger context of where that comes from.

JVN [00:08:27] Is that part of the CDC?

KOLINA KOLTAI [00:08:29] Yes.

JVN [00:08:30] So that's why a lot of these sites can say "This is CDC information," because it came from VAERS, which is part of the CDC, but literally anyone, it's like Wikipedia, like, any motherfucker can go on there and say anything. And that wasn't doctors or health care professionals. It wasn't a vetted, proven injury, or even if that had a proven instance, it's just, like, literally anyone can go on there. Is this a very common way that people start these vaccine narratives, from VAERS?

KOLINA KOLTAI [00:08:56] It's something we see consistently time and time again. It's definitely, I would say, one of the really big chunks of it, just even educating someone on VAERS, and explaining what it is, could actually help sort of dispel, like, "Oh, you know, I didn't know that anyone can go and report it, or that there's actually a lot of false reports in there." And I think what happens often, depending on how sort of deep people get into the anti-vaccination community, is that they can sort of explain a lot of different things away. But I think the bigger thing is we have to talk about, like, a larger narrative, because there's going to be almost an endless supply of misinformation, an endless supply of rumors or, like, "Here's a story I heard of this one woman getting sick, or this one person, this injury," and you could try to debunk that. But there are thousands and thousands of bits of misinformation. So we got to really think about this on a large scale as a narrative. Why do people not trust that the vaccine is safe? Or why do they think it's not necessary? Why do they think Covid is not a bigger threat? And those are the way that I think about structuring how we think about misinformation, particularly around vaccines.

JVN [00:09:58] Which I think is also so interesting because, like, you literally work in a place that is for the informed public at the University of Washington. And your doctorate is from the University of Texas in Austin, I believe. And it's in public-, what again?

KOLINA KOLTAI [00:10:16] So my, I'm in information studies. So my Ph.D. is in information studies.

JVN [00:10:21] Yes. It's like the fiercest fucking, like, oh, my God, that is so cool. So you literally, you're an expert at how people get information, I can't stand it. It's so cool. Information studies. It's the coolest. So how does, how does, like, these examples of misinformation differ from, like, anti-vaccine sentiment?

KOLINA KOLTAI [00:10:39] Yes. So the way that I think about sentiment is sort of people's opinion, like, "How do you feel about the vaccine?" And this could also change depending on the vaccine. Some people are absolutely against vaccines. There's a group of people who are even called "vaccine abolitionists" that think, like, "Every single vaccine is out to, you know, kill you or injure you. We have to get rid of every single one." And then you can imagine that, like, on the very extreme side, like, "Every single vaccine is good, we need every single vaccine." And, you know, you can imagine, like, there's a lot of people in between. And so your sentiment on vaccines and which vaccines can really vary, it seems like some people think, "Well, I do think that they're good and they probably work, but maybe not for me, maybe I don't need it."

And maybe that's how some people feel about flu. Right? Like, "Oh, it doesn't really work every year. Maybe I don't need it. I'm not at risk, but it's really good for, like, someone who has a kid or someone who's older." You can imagine a lot of people fit into that bucket and versus someone who's like, "You know, I'm going to, like, wait and choose on this vaccine." Maybe, "Do I really need, say, the HPV vaccine? Is that for me?" And so there's a wide range of the way people feel about a vaccine. And so that is a range. And I think the way that misinformation plays into that is misinformation can move you somewhere on the spectrum of how you feel about vaccines. And it could be about one vaccine or it could be about all vaccines.

JVN [00:12:54] So what's it like when we encounter vaccine misinformation? Like, where might we, we see vaccine misinformation, like, what platforms and sites?

KOLINA KOLTAI [00:12:05] So, I have two answers to this, because I think a lot of this has changed during the pandemic. So if we're talking about, like, over the past year and a half, you can see vaccine misinformation literally everywhere. I don't think it's just limited to social media sites and social networking sites, even though that's where I spend a good

chunk of my time. I think you can even see this on, like, your local news. You can hear this, like, going down to your local bodega, you know, in your community, in your family WhatsApp group. You know, the only way to completely shield yourself is, like, probably being a hermit in a cave. And the reason why is because vaccines and Covid, it's, like, the number one topic over the past two years. And so just naturally, you're going to get exposed. Even if you think about digital communities, you imagine even having, being in a dog-centered Facebook group and someone, now, people are talking about vaccines and Covid because of, like, "Are you wearing a mask at the dog park?" Are you, "Oh, are people getting vaccinated?" Things like that.

So even other areas that normally had zero vaccine conversation, it just becomes a part of our lives. You know, you read a news article and you read the comments and you get exposed to vaccine misinformation there. And I say one thing that's particularly interesting when we think about vaccine misinformation, just like other bits of misinformation, is it often creates a really emotional response in us. Right. And vaccine misinformation, just like other misinformation, begets its power when it's spread from one person to another. If it just stays with one person, never goes anywhere, that's a very sort of unsuccessful bit of misinformation. But when it's shocking or causes an emotional response, you're, like, "Oh, I must tell other people this." That's when it spreads. Right. And oftentimes this is with the intention of, you know, needing other people to know this. Right. Like, "This is a thing that people must know. I need to tell my friends, my family, my loved ones, people within my network." And when it comes to vaccine misinformation, think about, like, "Oh, vaccines that we've always been told are safe. Here's evidence of why it's not safe," and that's shocking. That causes an emotional response. "Here is a case of someone who thinks they have a vaccine injury. Oh, my gosh, that's shocking." And so that spreads like wildfire both online and digital and physical communities.

JVN [00:14:14] I know that for me with some of the people who I found out were anti-vax, I was finding a lot of articles that spoke to someone who is really anti-vax, and then got Covid, and died. And I would, like, send them that. Or someone who, like, a lot of the things that were, like, you know, people begging you to get vaxxed, like, you know, after the fact, like, when people were like realizing like, "Oh, maybe this wasn't a lie." So I was wanting to send that to some of the people who were refusing to do it. And I guess the other thing that came up for me is that, like, it also elicits an emotional response in me, wanting to tell my network of people to get vaxxed, and to share with them the information that I find. But the information that I find doesn't seem like it's coming from fake places because I'm using, like, you know, like, Newsweek and, like, just, like, reputable sources of information that aren't from, like, Newsmax and OAN network and all these, like, crazy ultra right-wing places. So, but, couldn't someone who is kind of vaccine hesitant

and anti-vax say that, like, I am being emotional and I am, like, wanting to share misinformation if they have already decided that vaccines aren't safe?

KOLINA KOLTAI [00:15:22] Yeah. They can definitely say that, right, you know, they could be like, "Oh, you are reacting to propaganda," like, that, "You know, the fear that, worry that Covid is worse than it is." Right. So there's, there's a lot there. And I think, you know, there, those sort of multiple different types of actors who are involved in this. There are people who are absolutely sort of, like, disinformation producers, people who know that they're putting out disinformation about vaccines for whatever purpose, usually to, like, encourage people not to vaccinate or maybe even for some financial gain, right?

JVN [00:15:53] So what's, so what's that, about, like, in your studies? Like, why with people who are purposely spreading disinformation, like, have you been able to study, like, why the fuck are they doing that? Like, because they get off on chaos? Or maybe there's, like, a financial gain because, like, more people will be sick or something or they have stock in Ivermectin or whatever? What is it?

KOLINA KOLTAI [00:16:12] I mean, yeah, like, a little bit of all of the above. Like, you know, there are people who also, like, you know, while pushing, you know, misinformation, disinformation, they're like, "Buy my product. Right here is a holistic treatment that's going to protect you from Covid, or boost your immune system." You know, there are definitely people who do that.

JVN [00:16:29] Oh shit, girl! That's all over the place in the yoga community now, because now the yoga community has just, like, changed so much. There's, like, all these, like, Trump-ass, fucking, anti-vax fuckers in, like, the yoga community, which I never really saw coming because, like, I was the part of that community for so long. And it really is, like, really polarized now. But yeah, they'll be, like, "Here is this tangerine oil, because that's going to boost, and, like, elderberry syrup, and that's going to boost your-" which, I mean, that can and it probably does help in certain ways. But bitch, do the East and the West. It's not gotta be either or, honey, let's do everything. But yes, fuck that is so true. Keep going. I'm obsessed. Keep telling me everything. I'm sorry!

KOLINA KOLTAI [00:17:05] No, no, that's true. I mean, that is, like, you know, and you see people who even are part of, like, even, like, some of these these, like, Instagrammers who are part of, like, MLM schemes, you know, like, "Oh, here is my Doterra product," or "Here is all these other options that you can do." And by then, they're, like, but they're also pushing misinformation at the same time. Right. And that also brings in viewers and brings in clicks. So there's that. There's also people who have built whole careers out of it. Right. From books and TV shows. There's people from a law aspect, you can buy, like, "If you buy

a one hundred dollar or a thousand dollar package, we'll give you all the documents you need and help you get a vaccine exemption." There are lawyers who are, like, "I'll argue for you," even though they know there's not a case that's worth winning.

JVN [00:17:44] And even, like, Joe Rogan, like, and even, like, it, like, for a podcast of an anti-vaxxer, because if you know that you can, like, get people to react off of fear and, like, latch onto a narrative and become more, like, radicalized in that community, they're going to want to listen to your podcast every day. They're going to want to follow your Instagram. And we know that, like, the more followers you have, the more clicks you get, like, the more money people are going to pay you to, like, to have on your shit, like, that's how it works. So really, like, that is actually a really sinister side that, like, it really didn't even occur to me, like, that it's really, like, radicalizing folks to ultimately take their fucking money and put them at serious risk of, like, dying or killing someone that they love. Like, that is such a deep, twisted moment that I didn't see coming. So, OK. Facebook, it is a thing, especially for, well, it's just a thing. I don't, it's a thing, it's just, a lot of stuff goes on, on there. So how does this misinformation and disinformation circulate on social media platforms? And do you find that, that, like, someone will get information from, like, a really radicalized source and then they can almost, like, switch it around and make it seem not so radicalized and then just, like, share it on Facebook?

KOLINA KOLTAI [00:19:95] Yes. So there are a few different ways that information flows. And it's not just about Facebook, but I think the important thing is even thinking about how content travels from platform to platform. Right. So, you know, you'll see something happen on TikTok and that video can get spread across multiple platforms. Or you'll see something being shared on something like Telegram, which is a, you know, social networking site and connection tool that has little to no moderation. Right. So you'll see sometimes really extreme content being there and then shared onto Facebook and then vice versa. There's a lot of different sort of pathways in which content can start and spread across multiple platforms. So I think that's an important thing to know.

There's also these small, like, digital communities. So sometimes we call these, like, "small world networks," where you have sort of, like, a close knit area. So, you know, someone within your sort of small world here shares a bit of content that they saw somewhere else. And now that spreads there and that can then spread outwards. And I think in particular you'll see a lot of people who are major proponents of the anti-vaccination movement, people who are major thought leaders who are famous, who have a lot of followers. They'll say something that sort of winks at, right. They'll say, like, "Oh," they'll suggest that the vaccine is unsafe. They never say oftentimes, like, explicitly, "This vaccine is going to kill you." Right. They say, like, "Oh, isn't this interesting?" Or they give the wink or they're not like, "Oh, you know, good thing that, you know, you don't do this, or isn't this, like,

suspicious?" And then followers can take that content and that add, like, a more extreme take to it. Right.

You'll see even sometimes as silly as, like, those magnet videos? I don't know if you've ever seen them. Like, you get vaccinated here and, like, maybe someone making a joke video or someone, their arm's a little sticky. And then suddenly someone collects all those videos together and that gets, like, packaged out and sent out to all these people. And then we even think about this globally. This is not something that's just isolated here to the U.S. and you lose a lot of contextualization. There's videos we saw early on, people saying getting vaccinated in a completely different country and then you get that shown here. And so they have some things like, some of these vaccines, I'm going to highlight this. You put this and these have the needle and the needle retracts in. But if you just look at it and don't realize the needle's retracting and it looks like it's fake or the needle itself has been broken off the arm, which is not true. Right. But then you'll see the same footage being repackaged with different languages in different contexts and saying, "Look, you can't trust it, it's a fake vaccine," or "They're breaking off the needle," and all these different things. "Maybe that's the microchip." And all this from just one, like, footage of someone with, like, a shaky camera.

And so it's, it becomes this really tough cycle because it's not just, like, one where that information is flowing online. Particularly, we think about it globally. We think about across platforms and think about it. The different networks are in, like, even something as, like, America's Frontline Doctors. Right. So they have their website, their platform. And then you'll see, I've had doctors forward me emails that some of their colleagues have sent them. I'll see their content on every single social networking site. We'll see like phrases and sort of like bits of information they put out being repackaged by another, like, influencer on things being shared, so there are so many different ways of vaccine misinformation and disinformation flows online, it becomes almost an endless challenge to try to combat it, because there's so many different ways that we see it, it manifests. It's not just, like, "Here is the one person who is spreading everything," and we could just take that or that one person's content.

JVN [00:22:25] Hmm. OK, yes. What about, like, political groups, religious and faith-based groups and, like, groups that target women. How do those affiliated groups, like, experience misinformation and how will it target them specifically?

KOLINA KOLTAI [00:22:43] That's a really great question. I'm really glad that people are paying more attention about the way that misinformation can target different communities. You know, at the beginning of our talk, you mentioned, like, some people are worried about the infertility issue. Some people are worried about the risk. There might be some

people who are worried, more worried about whether or not they can trust the government or a pharmaceutical company. There's so many different reasons why people might be hesitant. Right. And so you think about maybe a particular reason might resonate with one person, but not another. So we know, for example, for women, women who make up a large portion of the vaccine-opposed movement, even prior to the Covid-19 pandemic; they're often the ones making health care decisions for the family. They're the ones, you know, making sometimes the appointments to get the kids vaccinated. And, you know, another component is that it's like, you know, your women's health and your fertility. And so we got to think about how this group's experience with health care then comes into this line.

You know, women across the board have had experiences, like, well, maybe their symptoms have been ignored. And you think about the way that they might have felt mistreated, ignored, you know, throughout their, their lives. And so you can see how misinformation around vaccines can really target that community. It's, like, well, you know, "We know that health care doesn't treat you. They often ignore your choice. If you feel like your kid is having this issue, well, you're just maybe being a bad mother, you're not doing things right," and you really target that community. Right. You hear the historical mistreatment of women and you use that towards them. You could use this towards other communities of color who have, like, a long historical and current modern day mistreatment, particularly we often talk about, like, the Black community here in the US. Right. We think about everything from Tuskegee, but it's not just Tuskegee, right. It is still today. You know, oftentimes Black people's pains are ignored when they go into health care or they're often ignored or sent home.

JVN [00:24:28] And it's, like, Black mothers have, like, a three times higher mortality rate. I think I think that's the statistic. But the health care system has consistently dismissed the experience of Black and brown women and women as a whole. I mean, the medical, but I mean, first and foremost, Black and brown women, women of color. But also the medical system as a whole is, like, a patriarchal system that excluded women for the first multiple hundreds of years of its existence because it was thought that, like, only white men could be doctors for hundreds of years. So that is obviously a legit thing. Then there's other, like, religious groups that are just, like, vaccine opposed because, like, they just don't believe in, like, modern medicine intervention of any kind. Right.

KOLINA KOLTAI [00:25:15] You can find people within any religion, I find, that are advocating for vaccines and people who are against vaccines. Right. And sometimes you can, what you could do, when it comes to a particular religious group, you see this from a variety, so it's not one religion that does this that has, like, a growing vaccine-hesitant population, is that you can use religious text and the values and the ideology of the

religion to argue why vaccines are not safe. And so, you know, people who are religious figures in these communities really are key and central in maybe helping promote vaccine acceptance and vaccine uptake. Right. But if you have your religious figure that you trust and you revere, as you know, as a person who is a trusted source of information, they're saying like, "Do not get this vaccine because it's risky," or because it has anything from, "It's the mark of the beast," or, "You know, we can't trust the government because they've ignored us for so long."

And then suddenly you're like, "Oh, I understand that, because that's similar to my values." But, you know, we've seen, even say, like, you know, religious leaders in churches who are saying, like, "You know what, we're going to have a vaccination drive." Right. Or, "We're going to have this be really central." And so it's not just the religion itself, but it can use the religion as a way to pull people into that misinformation. Right. I've heard many people saying along the lines of, you know, "Oh, God will protect me. Right. God will, like, why do I need a vaccine if you know God to protect me from everything, God made me perfect." Well, the other flip is you could say, well, you know, "God blessed us with a vaccine. Right. Gave us the abilities and the tools and the knowledge. And made us work together to have a vaccine to help save us and protect us."

Since we do have a lot of religious protections in this country, sometimes people even lie and say that they truly believe that religion and use it as a guise to get, like, say, a religious exemption. And that's another component to it. Right. Maybe people don't genuinely hold that sort of religious ideology, but they're like, "Oh, I know that my religious beliefs aren't going to be protected. So I'm just going to say that, you know, X, Y, Z," because I'm actually, I'm really scared about the vaccine. It's not about the religion. So there's a lot of different dimensions about that.

JVN [00:27:14] OK, so now, I feel like this other thing that we're seeing is it's really, like, political issue to it, too, the intersection of, like, you know, your political affiliations, which is interesting because every major Republican has been pretty open about their, that they have gotten the vaccine, whether it was Trump, McConnell, a lot of people have been very open about their willingness to get a vaccine. But then also we know that, like, I think the last statistic I heard was that, like, a quarter of the Republican conference had not been vaccinated in the federal House. So, the fuck is that all about? I mean, their messiah, Trump said to do it. And then in Alabama, they booed his ass off the stage when he said "Get vaccinated." And he's, like, "Oh, I didn't mean it." Why is there there seems to be such a political bend, even though some Republicans have said, like, you know, "It's safe, it's effective, you should get it."

But I do think it's, like, I don't watch Fox News a lot. But when I do see clips of it and when I have seen aspects of vaccine misinformation, but I think it's safe to say that Fox is disinformation because there is a knowledge from the upper echelons of Fox that they would know that this is misinformation and they know exactly what they're doing to increase their bottom line and viewership and to increase the mistrust that is going to make people want to tune into these shows every night. Which kind of leads back to your first thing of, like, well, why are people wanting to just dispute basic facts? Why are people wanting to, like, why, what is the larger reason for this symptom of vaccine hesitancy, vaccine misinformation? And I think the political affiliation here is a really large part of it. Is that new?

KOLINA KOLTAI [00:28:55] Well, it's something that's definitely changed over the past, like, five, six years. Right. So even if you look at reports from Pew Research Center from, like, 2015, 2017, and you look at the portion of the population, whether you're right-leaning or left-leaning is actually that vaccine hesitancy is actually pretty much the same, like, eighty seven point eighty eight percent, right. Most people went in thinking that vaccines are good. So for a large chunk of time, it was considered non-partisan. Right. My two, my two cents on this is that a lot of this actually started changing in 2016. And there was a particular quote from a woman I interviewed, and it still sticks with me because it's such a great example of this, where she was talking about, you know, I was interviewing her about her pain, about vaccines, for my work, and we're talking about the election and Trump, at that time for 2016.

And she was like, "You know, I cannot stand the man. I think it's terrible. He's such a misogynist," railed about how terrible it was. "But thank God for him because he is going to save us from vaccines." Right. And I was just, like, whoa, there's a lot to unpack there. And I think, you know, regardless of now, whether or not he's vaccinated or not, because he is vaccinated, you may think, like, "Well, he was the president," you know, or, "He was, did he really get a vaccine or is he just saying this to appease everyone?" Right. "Do we even trust whether or not he got vaccinated?" And I think there has been a push leading up to the pandemic of greater amounts of conservatives, people within the GOP, people who are more conservative-leaning, becoming more and more vaccine, hesitant because it got more and more politicized.

And I know that's, like, everyone talks about that, even though science in itself has always been political. It's not like vaccines were never a political topic because we mandate vaccines. Right. You, I had to get vaccinated to go to any school here. A lot of people do that. To be able to travel we need vaccines. You know, vaccines, vaccine mandates are not a new thing here. But, you know, we, we require it. If you're a health care worker, we require vaccines. But over the past five years, leading up to this most recent election in the

pandemic, we saw more and more people within the GOP supporting bills that are, like, "parents' right to choose," "parents' right to opt out." So we saw that there is this alignment that happened all across the country that people who were within sort of these conservative bases were supporting leaders and supporting this right of, like, "I want to be able to choose." Right. And you're wrapping this up into these ideas of freedom.

I don't think we should force anyone to vaccinate, I want them to choose to get the vaccine. Like, I chose to get the vaccine, right. But if we portray it as, like, the government is mandating or forcing it, that is a really great way to get a lot of people to, like, not want to do that. Right. Like, we talk about, like, seatbelts. We do seatbelts for safety. Like, when we sit next to our friend, in the car, they're not wearing their seatbelt, we're like, "No, put your seatbelt on in case we get into an accident." Right. We don't say, "Put the seatbelt on in case we get pulled over because I don't want to get a ticket, or I don't want to get in trouble or, you know, *government*." Right. We have lost the framing, the way that we think about this. And so tying vaccines to something, like, as a threat of freedom appealed to a large swath of the population. The damage has been done. Right. You're adding conflicting messaging leading up to the vaccination. Right. You had people who were saying like, "Oh, is the vaccine safe? Or maybe it's not safe. Do we trust Pfizer? Do we not? Which vaccine is...? Oh, is it effective?" And a lot of this mixed messaging decreases our certainty on whether something is safe, right?

JVN [00:32:23] It's, like, when it comes to, like, politicians and thought leaders, we do have to ask ourselves, what do they have to gain for promoting misinformation? What does someone have to gain for promoting to get the vaccine? For most people that are promoting to get the vaccine? It's about community health. It's about protecting your health, protecting your family's health for people that are very opposed to vaccines. It's very, it's fear-based. "The government's overreaching. There is not good science to back this vaccine up." But it's very, like, fear based. And a lot of it does track itself back to misinformation, because for those of us that are wanting people to get vaccinated, I mean, the trials of this most recent coronavirus vaccine, there was 30,000 people plus in these trials. I mean, it was a quicker trial because of the emergency order.

However, the research for these mRNA vaccines started in 2004, which is something we've also talked about on this podcast. It was a response to, like, MERS and SARS, which is also not been a narrative that I think the government has really done a great job of talking about, because the funding for the research on these types of vaccines, which are a different type of vaccine, these are the first successful mRNA vaccines. This research has been, like, 15 years plus in the making. It's not like they did it in nine months. And it was for that reason that those 15 years of research led to them being able to find a successful vaccine and that whole operation warp speed thing. But, you know, people don't talk

about that, but that's reality. You can find these, you can find this funding. You can find this. You agree? Yes, I'm right about that, right?

KOLINA KOLTAI [00:34:02] Yes. Yes. No, no, no. Yes. And it's interesting because you still will see people say, like, "Oh, it wasn't tested or it came out too quickly." And, you know, people realize it's a lot of the bureaucracy that was cut out. Right. You know, if you look at a chart of like, you know, there's normally a large portion of time because they had to argue for funding. You have to argue for a variety of things. And so vaccine development can take a really long time. And people were like, "Oh, our ideas, like, something. It's evolved quickly. It must be shoddily built a car really quickly," or, like, "Oh, is that, like, good." So we realized we actually, you know, got rid of the bureaucracy. We wanted to get something out quicker because it's a public good, which really is absolutely, in a sense, a miracle that we're able to get a vaccine so quickly. Right. Thank goodness we were able to get one. And so there is, it's interesting that, you know, you'll even see people say, like, "Well, I don't know what's in it." Right.

And I think this is where it comes to this larger idea. Right. There's a lot of sort of like talking points and bits of, like, misinformation we can debunk. But then it's like, well, if you don't know what's in it, like, with a list of ingredients to help you and they might say, yes, but like, it's not just about that. It's because they need it, they need someone to actually sometimes talk out their fears and their worries. I'm not an immunologist. Right. I don't physically develop the vaccines, my background's not in biology. So me reading a list of ingredients in a vaccine is actually not very helpful. And I think where it comes down to is risk, and the different ways that, you know, misinformation plays to those risks and those fears and those worries. And that we can even, we could even talk about, like, large conspiratorial stuff. There's, like, larger and like very, very big conspiratorial stuff about, like, depopulation and how vaccines are related to depopulation. But that's a whole other thing.

JVN [00:35:42] Oh, yeah! Do people say that? Do people say that it's, like, linked to, like, that?

KOLINA KOLTAI [00:35:48] Well, you know, so, if, so again, big gamut of, like, someone was like, "Oh, I'm not sure," to someone who's, like, "All vaccines are bad." The-, like, there is always a conspiratorial component to this. Right. So if you think that vaccines are out to cause infertility, which is an old narrative, like all the narratives we've seen about vaccines are ones that they've always been there. They're not unique to cope. Right. Any vaccine that there's been, like, linked to, like, "Oh, it's going to make women infertile. So therefore, as a depopulation thing, X, Y, Z..." And that is an old conspiracy theory, like, keeping whatever person, elite in power and sort of trying to control a population. Now, I

think that most people who are vaccine hesitant today don't necessarily think it's a depopulation measure, but we can see how we can even link this idea of, like, "Oh, is it going to hurt, affect my fertility, affect my development," like, related to a classic conspiratorial idea. And so there's all these sort of, like, veins even that connect that way.

JVN [00:36:49] So how can we ultimately help listeners identify misinformation? Like, we take ten deep breaths, we meditate, then you want to, like, do I have to wait for the vaccine hesitant person to come to me, or can I, like, find out that they're vaccine hesitant and be, like, "Honey, I heard so-and-so told me that you're not doing it. Can I, can you tell me about what some information you got is?" And, like, or if someone does bring you something, like, or if someone is just listening to this wink, wink, nudge, nudge, I hope some of the people that I've been low-key referencing is listening to this episode. How can we empower people to identify misinformation that they encounter?

KOLINA KOLTAI [00:37:29] Yeah, I would say there's a lot of different wonderful ways to do that, both as an individual for yourself as you go through your day-to-day life, but also for loved ones. Right. So for yourself, I'd say the big thing to do is always take a moment to pause. I was just at a recent, we were just at a meeting yesterday with a bunch of my coworkers, and someone there who wasn't in academia mentioned that, like, one of the best things he's learned from us over the past year is that like to take a pause, to take a moment. If something makes you feel, have an emotional response like, "Oh, my gosh, this is shocking," maybe that's a moment to think about, "Let me do a little more research." Right. So there's really great debugging methods to search, say, you know, look for better coverage or other organizations. "What else is being said about this?"

They even doing, if there's an image that's, like, really shocking, doing a reverse Google image search on that. Right. Is this an old image that's being repackaged? Is it something potentially misleading? If you see a quote, like, "Oh, my gosh, I can't believe, you know," like, if someone took a quote saying, you know, "Vaccines are," if I said, "Vaccines are bad." You're like, "Oh, on this podcast, Kolina Koltai says vaccines are bad." I'm, like, "No, no, no, no. You're missing the context in which I said, 'Vaccines are bad.'" Right? So it's always important to do a little bit more work. Like, I know it's a touchy phrase now, but do a little bit of research and get to the source. Where is this coming from? So I think for us, you know, our instinct is, like, we see something and we share and the platforms are really, really easily designed for us to see something, to like it, to share it.

And I think once you get really good at being able to do something like that, that's a really great technique to help your loved ones. Right. I will say there's going to be a variety of different reasons why maybe your loved one, person in your life, is vaccine hesitant, and you're not going to be able to convince every single person out there. We know that.

There's a lot of people who are really, really deep in that misinformation. And it's going to take a long time. But there are sometimes people who just need to be able to talk about it. Right. So it's like, "Hey, you know, why are you hesitant? What are your worries? Like, well, let's, let's talk about that. Let's go try to find some sources. Let's debunk together. Let's try to, like, wade through this," and you can take your, you know, your newfound debunking skills and walk through your loved one through it, you know, never judging, saying, like, "Oh, I think you're wrong for having this fear," and trying to maintain that open line of communication. Right. And really emphasizing that you care about them. Right.

I think particularly if it's a family member or a close friend, say, like, "I care about you. I want you to be safe. I want you to be healthy. You know, I myself got vaccinated. All these people I know got vaccinated. You know, I do think that, you know, this is going to be the best thing. I want the best for you. I worry about you." And leveraging sort of that connection, I think could be really impactful. You know, I've heard students leveraging, being able to leverage their parents that way. Like, "I care about your health," you know, and I think the hard part is that, like, sometimes people are going to have a loved one that they're not able to reach. And that's the hardest part, right? That no matter how much debunking they do with them, no matter how much they emphasize their, their care for them and how much they want them to be safe, there, there is a really strong portion, like, even, like, prior to the pandemic, if someone was there any vaccine hesitant prior to the pandemic, they're going to be an incredibly hard person to reach. But I think for a lot of people who are out there are still really uneasy. They're not sure about the risk. And being able to talk about it with someone who is supportive of them, who loves them, has that empathy, has that compassion and is able to help guide them through the process of debunking, even if it's talking to a trusted doctor. That could be really helpful. And something that I've heard really has helped a lot of people.

JVN [00:40:56] So if there's someone who is just really taking this misinformation as fact, they are really, really, like, just not having it, because it almost reminds me of that whole, like, voting thing of, like, "Do you try to go for the swing voters or do you just really double down on your base?" So it's like, if someone is still kind of in the middle, it sounds like, you know, we can help them debunk, we can help them with our skills, like, trying to, you know, keep it open, keep it communicative, keep it compassionate, loving, and just, you can always come back and try if you feel like there's some wiggle room. But if someone is just, like, hardcore vaccine hesitant, hardcore anti-vax, not going to be having it and you can see that they're not going to be having it, is it even worth it to. Is it even worth it? Or you just go to people who you think you have more of a chance with?

KOLINA KOLTAI [00:41:45] I think you do have to pick and choose your battles. Right, I think even prior to the pandemic. I don't think you can convince every single person to

vaccinate. You know, as long as you've had vaccines, we've had people against vaccines. What are these, like, really long standing anti-science sort of phenomenons and movements that's been going on for a very, very long time.

JVN [00:42:04] It's been going on since the smallpox vaccine, since the 16 and 17 hundreds, hasn't it? Doesn't go back to the first vaccine, which was for smallpox?

KOLINA KOLTAI [00:42:12] So I've been researching this topic since, like, 2015, so I've been thinking about this for a long time. You know, we talk about herd immunity. If you have a small portion of the population who is not vaccinating, that's usually fine because, you know, vaccines are, can be pretty effective. So we get a large portion of people vaccinated. There's an acceptable amount. And so the biggest concern for a lot of people was, like, "Let's just get the most people vaccinated." Right. And I've often been pushing, like, well, there is-, actually here's my fun fact, which is not that fun, and more like fact. Is that in all my research I have done, there is absolutely not a single intervention or measure out there to convince someone who is strongly against vaccines to vaccinate. There's nothing that's been consistently proven. There is this work to try to get the most people, the people who are like in that middle of that vaccine sort of hesitant spectrum.

But if you already have really well-formed, absolute negative, "I do not trust the vaccine that is out to kill me" sort of ideology. That is a difficult person. And the hard part that's really a lot of people to grapple with is, is that population, that group of people, has gone from small to much bigger. And in certain parts of the country, that is a really large portion. And so the thing is, like, if you look at the public health literature, the literature wasn't aimed at, like, "Let's try to convince this really tough, hard to reach group of people," because they were so small. Right. But now they're larger. And it's, it's almost devastating to see this because for years I've talked about, "This is the risk, right." That there are more people out there than we possibly know about. The way that we measure vaccine hesitancy for years I think has been really inefficient.

And I, this is, this was my big worry that we were going to have a large portion of the population, people, become really susceptible to vaccine misinformation because I knew its power. I've, I've been to those conferences. Like, I've attended and was, like, "Oh, my gosh, maybe, maybe vaccines are dangerous." They hit you, the films and the content they put out is *extremely* powerful. And it made, some made me even doubt, like, whether or not vaccines are safe. And I have to like, have to ground myself, do more research, like, "Oh, wait, no, here's actually the reasons why." Like, that content is, I often joke that I couldn't convince anyone to not vaccinate because the techniques are so good. Right. And the hard part is, like, we wanted to stop people, like, we wanted to get people in this hesitant sect before they go really there.

And I think, you know, that we need to think about the spread of misinformation as a national issue. It is a national crisis, right. Is not just like, "Oh, it's because of social media." Social media certainly has exacerbated it, but it has been a longstanding problem because the anti-vaccination movement has been going, it's just like lighting more, it's like taking that petrol and dumping it onto the fire that was already there. And we need to really think about it's not just, like, attacking it from an issue of, like, social media platforms, that's certainly one component we need to think about this as a multi-pronged issue because it is a prevalent issue, and especially when we start thinking about the exportation of anti-vaccination ideology and content overseas. Because now, we even see countries that have had historically very high rates of vaccination beginning to decrease because of the exportation of American anti-vaccination-ism. And so that's a whole other issue.

JVN [00:45:29] So, so, these conferences, I imagine, would be very scary. I would imagine it would be like how I felt listening to Donald Trump accept the Republican nomination in 2016. Like, I was, like, "What world are you living in?" It's such a different reality, and it's so scary. So that seems really intense. Have you, do we have any reason to hope? Have you seen anyone come out of these hardcore anti-vax ideology, even though there's not a prescribed method of something that works for everyone to get them out? But have you had silver-lining experiences?

KOLINA KOLTAI [00:46:04] I would say that, you know, prior to, it's often having a loved one and having sort of, like, a personal, like, close connection to someone and realizing that, like, "Oh, this disease is terrible." So, like, I've heard, I've talked to parents, it's like, "Oh, you know, my kid ended up catching measles. And that made me realize, like, 'Oh this is actually a really scary thing.'" And made them switch their stance on vaccinations. I've talked to people who said, like, when they got too far in that, you know, they were really into the anti-vaccination thing. But then suddenly they started talking about chemtrails and they're, like, "Whoa, whoa, whoa, whoa. I know that chemtrails are not true." And it made them question the group they're in. And so, and I think that even some of that split even happened early on.

And some of the groups I used to follow who are now no longer on Facebook, but they started going really deep into the QAnon conspiracy and talking about sex trafficking and things like that. And they're like, "Whoa, whoa, whoa, whoa. This is making me question now the group that I'm in." So there was definitely sort of this splitting off, right. That happened. And so I don't think it is a complete, complete lost cause. It's just there's nothing that we know definitively that works if someone is really deep in there. But there are people who get to leave that space. And that's what I do think the more research needs to be focused on how do you reach someone who is really deep, just like when you

get to talk to someone who researches QAnon believers, is that you are really deep in it, and it's hard to pull someone out from that and switch it.

JVN [00:47:25] I mean, you have to, like, de-radicalize them. This is like de-radicalizing someone.

KOLINA KOLTAI [00:47:30] Yeah, absolutely. I mean, and something I've often talked about is that, like, we worry that, you know, luckily, the anti-vaccination movement hasn't been associated with violence, but we've been seeing more and more cases of, like, you know, clinics being attacked, people being attacked. More and more violent action happens. What you would see with radicalization happening. The same way, we have really extreme misogynistic movements like incels. Right, that doesn't mean, like, everyone, not every incel or every person who is in that community is going to be violent. But, you know, we see how that even happened, something like PizzaGate, right. And so you see that the power of the anti-vaccination movement, which could have a widespread appeal, regardless of what demographic it is, certainly people would, I like to say, who are more conservative, they're falling into those spaces. But, you know, there are people who are liberal who fall into those spaces, people who are young, people who are old. Right. There are people who have high education backgrounds. Having a high level degree does not make you immune to vaccine misinformation because it is just that powerful.

JVN [00:48:27] So when Covid started happening, did you, like, immediately pivot for, like, were you, like, "Oh, fuck, this is, like, what I've been talking about, like, this vaccine is going to come out fast." Like, did you start kind of pivoting to researching and anticipating, like, Covid vaccine misinformation, like, early on in Covid?

KOLINA KOLTAI [00:48:42] So funny enough, I was finishing up my dissertation at UT Austin, hook 'em horns, back in 2020. So I was finishing, I was on the job market and in my job market talks in January and February, I'm talking about Covid at that time, and saying, like, "Hey, health misinformation is already happening on Facebook," like, around Covid, even before a vaccine, before everything was shut down. I was talking about this. I first learned about Covid actually from anti-vax groups before I even saw it be reported on mainstream because they were worried that this is going to be another way to, like, force a vaccine. So they were worried about this in January of 2020. So by the time I defended my dissertation, which is like in April of 2020, I was, like, "Well this is going to be a really big thing." You know, normally you have to say, like, "Oh, what is the justification, what's the bigger impact of your work?" And that's, like, the section I had to spend, like, the least amount of time.

I literally did the dissertation on, like, the spread of, you know, anti-vaccination on Facebook, like, really the timing of that. And I mean, because I knew, and I knew in my heart I knew, that this was a bigger issue and that social media companies were not doing enough to combat it. But it was more than just a social media issue because it extended onto these larger issues about, like, how women and how people and people of color experience the system of healthcare. How people's trust in pharmaceutical companies, to think about the opioid crisis and people's distrust of what's happening with these large companies, think about trust in government. So this has been a long time brewing. This is like the perfect storm of everything you could imagine to have widespread vaccine hesitancy. And so I felt very early on at that point, even before I even knew when a vaccine would be coming out, that as soon as we were shutting down and before we had all these questions that I knew was going to be a big issue because I saw misinformation happening immediately on these spaces.

And I think that is, that's the tough part, also as a person who didn't have, like, I'm not in the position of power to be, like, "Oh, we got to shut this down and combat it right away." It would just feel like sometimes I bet a lot of people feel this way. You feel hopeless. I kept thinking, like, "There's nothing I can do to help the situation." I feel like I knew this was going to happen. And you sometimes feel that. But I think, you know, if I can let any listeners who do feel like it's seemingly hopeless, it's, like, continually talk to your loved ones, encourage people in your community to vaccinate. You know, we all can get better at debunking and getting better data literacy skills and, you know, pushing for the need of not just addressing the issue of vaccine misinformation but misinformation as a national issue. And I think, you know, everyone from our senior citizens to our kids who are starting to get online, we really need to think about this, because it's not just online. It's, you know, there are, there is, misinformation in the news all the time, both in the right-leaning and left-leaning sources. There is misinformation that happens in our churches that happen in our friend groups. You know, we need to address this as a, you know, as an epidemic.

JVN [00:51:48] Can you give us an example of misinformation in, like, left-leaning news?

KOLINA KOLTAI [00:51:52] You know, you might think, like, "Oh, everyone's out there just coughing on everyone, deliberately spreading." You might see, like, a video of someone doing this. But that doesn't mean, like, everyone in that state is doing it, or things are being manipulated, maybe worse than it really is. Right. And I think, you know, the inverse of someone saying, like, "Oh, that Covid is not dangerous." You might have people think, like, say, like, "If you get Covid, you're going to die." You know, in reality, for most people that if they get Covid, they're luckily not going to die. The whole point of the vaccine is to protect those who are going to be most susceptible to it, right.

JVN [00:52:23] Also, those headlines of, like, "Unvaccinated mother of four dies of Covid," that's going to get more clicks for People and Newsweek and whoever the fuck posts that, too, because, like, they love to highlight a devastating story because that makes you scared and then you click on it. Then the more clicks they can go to their advertisers and be, like, "I had fifty two million impressions this month," and then Bounty's, like, "Get my paper towels on there." So it's just, everybody kind of sucks, is what I'm hearing. But obviously some more than others, it's a really confusing world and there is a little misinformation on both sides. But you should still fucking get goddamn fucking vaccinated, because that's where the science says, right?

KOLINA KOLTAI [00:53:06] Yes. Yes. I would say that, like, I will say, there is more misinformation on one side than the other. I would like to make sure that, you know, we often talk about, like, "Oh, both sides." There are certainly misinformation, both on right-leaning and left-leaning sources. But as far as, like, which side since push out more vaccine hesitant type content definitely towards the more right leaning, to be clear. [CROSSTALK]

JVN [00:53:29] Yeah. Yeah. Like, no question. But all news can have some sort of misinformation if it increases their bottom line.

KOLINA KOLTAI [00:53:36] And that's just part of why it's a very scary world, it's scary for everyone, whether or not you are pro-vaccine or you're anti-vaccine. You know, we, I want my loved ones to be safe from Covid, even if because, you know, you hear the scary story, right? You know, you hear someone who is, like, in their 30s and healthy, who gets Covid and dies, and you would hate that to happen. But on the inside, they might say, like, "Oh, here's a story of someone who is, you know, 30 who got the vaccine and now they're injured." And so you're hearing stories on both sides. And, but, thing is, the reality is, that there are more stories of people who are getting Covid and dying than there are stories of people who are getting vaccinated and die. And the thing is, is, you know, we talk about extremes. We're missing a lot of that gray. Right.

You know, the fertility one is particularly an impactful one because there are things about where we have to think about the intersection with women's health. Right. And that for some women, yes, their cycles got disrupted when they got vaccinated. But the thing is, you think about, well, there are a lot of things that actually disrupt your cycles, and you think about your body having an immune response, so if you get sick, it can disrupt your cycle. So your body's having an immune response to the vaccine. It doesn't mean your fertility is being threatened. It means that your body's doing exactly what it's meant to do, which is like, "Oh, in a time of, like, 'Oh, I might be sick,' let me hold and, like, pause on maybe, like, releasing an egg this month," it doesn't mean that you're not able to get

pregnant. And I think sometimes people lose that nuance in that conversation. And that is hard to do to a large portion of the population en masse versus having that one-on-one.

And I think even though it takes a lot more time, it takes a lot more money, it takes a lot more energy, it maybe is worth having all those one-on-one conversations with the people who are still vaccine hesitant today. You know, and I still see people still getting, you know, hundreds of thousands of people vaccinated every single day. So I don't think it is, you know, hope is not all gone. We are still working towards getting more and more people vaccinated. It's not like there's no one getting vaccinated, these aren't all the, like, die hard holdouts. There are so many people out there, and you just keep pushing and we need to have a united front. You know, we need to have people on both sides. We need to have everyone in a community pitch together to say not only is misinformation a huge part of the issue in this, but that vaccines are safe, they are necessary and they are efficacious and they work. You know, that is what we need.

JVN [00:55:58] Yes! Kolina Koltai. I really feel very complete. I feel like I am so grateful for you. Again, you are a postdoctoral fellow at the Center for an Informed Public at the University of Washington. Where can people find you, where can people follow your work? Where can people stay up to date with, with your stuff. Are you big on Instagram? Are you big on Twitter?

KOLINA KOLTAI [00:56:18] I'm on Twitter, so I believe I am @KolinaKoltai. So just my name. Easy enough. I'm literally the only Kolina Koltai in the world. So if you Google it, you will find me. If people want to go check out the Center for the Informed Public website, we have resources there for teachers who want to learn how to be able to teach debunking to their own students. And there's a lot of wonderful ways that we can all get better at doing this.

JVN [00:56:39] I'm so grateful for you for taking your time and sharing your amazing mind and scholarship and work with us. Thank you so much for coming on the show and we appreciate you so much Kolina, and continue your amazing work. Thank you so much.

You've been listening to Getting Curious with me, Jonathan Van Ness. My guest this week was Dr. Kolina Koltai.

You'll find links to her work in the episode description of whatever you're listening to the show on.

Our theme music is "Freak" by Quiñ - thanks so much to her for letting us use it. If you enjoyed our show, honey, introduce a friend - show them how to find that gorgeous little

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