Rackeb Tesfaye

Hello, everyone.

Alyssa Favreau

Hello and welcome to the fourth episode of audio distancing, the broad science minisode series about communicating inclusive science in the time of COVID-19.

Rackeb Tesfaye

We're your hosts, Alyssa Favreau, I'm not Alyssa Favreau, we've established this before on the podcast.

Alyssa Favreau

I'm Alyssa Favreau.

Rackeb Tesfaye

And I'm Rackeb Tesfaye.

Alyssa Favreau

Rackeb, you were late this morning,

Rackeb Tesfaye

Mmm... drag me under the bus, why don't you.

Alyssa Favreau

This is a call out.

Rackeb Tesfaye

It's more of a call in actually. It took me a little longer this morning to feel like a human and I decided to drink an entire French press. So I still don't think I feel like human but I'm here.

Alyssa Favreau

Did you have a late night?

Rackeb Tesfaye

Yeah, so I recently had to put some parental locks on my social media because it was getting to be a little too overwhelming and I was doing some constant scrolling. But then I had a moment of weakness yesterday and I think I consumed the entire internet. And it nearly destroyed me.

Alyssa Favreau

Oh no.

Rackeb Tesfaye

Yeah.

Alyssa Favreau

So now you're tired.

Rackeb Tesfaye

Yeah, exactly. I'm tired because I'm carrying the weight of information of the world in my head.

Alyssa Favreau

Did you find that to be productive?

Rackeb Tesfaye

Thank you therapist.

Alyssa Favreau

That's interesting though, because I've actually been finding it really helpful to be on social media. I mean, in limited amounts, for sure—that overload is definitely real—but it's become my way of staying in touch with people. So I found that to be really good for me. Also, I've gotten really into bird Instagram, and that's a very wholesome corner of the internet.

Rackeb Tesfaye

Until it's not.

Yeah, no for real. I saw a picture of it Kingfisher with a smaller bird in its mouth, and that shit is gruesome.

This is why I've banned myself. But no social media has been a way to hold on to some semblance of normal life, I totally agree, and to have that human connection. But it has also been a main source of getting information about COVID-19 specifically for folks around the world.

It's a great way to amplify a message and get information to a large number of people, for sure. But that does cut both ways.

So there's a huge opportunity to reach people who would never otherwise have engaged with scientific research, the scientific process, but as we've seen on social media, even before this pandemic, information can very easily be manipulated to suit some dangerous agendas and line influencers' pockets.

So we wanted to know, how does a science communicator alone in the unexplored wilds of social media navigate this landscape to engage audiences with entertaining and vital information, while using the language of social media to combat misinformation that's intrinsic to those platforms.

Mm hmm. So to get some of those answers, we turned to the first name you think of when the topic of science and social media comes up: Dr. Samantha Yammine, also known to thousands of her followers as Science Sam. Let's take a listen.

Samantha Yammine

My name is Samantha Yammine, I'm a neuroscientist and digital media producer at science and media. And I go by the pronouns she and her.

Alyssa Favreau

And to start us off. Can you tell us a bit more about your science communication work and what originally made you gravitate towards social media? Specifically Instagram?

Samantha Yammine

Absolutely. So I didn't really ever plan to be a science communicator. I mostly just did it because I guess I had things that I wanted to share. I got Instagram after my best friend Michelle had been telling me to do it for a year, because I'd been sending her all of these Snapchats from the lab and she was like "Sam just get an Instagram." I don't know if she was frustrated with them or what. And so I was on my way to a week-long science policy event called Science Outside the Lab North. And I was I was on my way to that, and I was like, "You know what, I should probably share things a little more broadly since I want to influence science policy. And the best way to do that is probably by sharing things with the masses." And so that's how it all started. And it just kind of evolved into its own beast over time.

Alyssa Favreau

And what are some of the pros that you found about either Instagram specifically, or just kind of social media communication more generally?

Samantha Yammine

I wasn't strategic in choosing Instagram in the onset, on purpose. However, I think that because I was guided towards Instagram from a friend who's not in science, I think that actually ended up being a strategy to listen to her. Because Instagram is a platform where you find a lot of the younger demographic, especially like a millennial type of demographic, it definitely also skewed slightly more to people who identify as women. And that ended up being an asset, because I was noticing as I started playing with this platform that there weren't a lot of people communicating science in a way that was geared towards a younger kind of audience. There's a lot of like beauty related pseudoscience on Instagram and a lot of like, really fun stuff directly targeting young women. And there was no real science being communicated in that way. And so I found Instagram to be really cool because it lets you reach an audience that doesn't really have fun content being created for them. And so you get to really address the gap in science communication. I've been in rooms where people are actually pitching science to the top science TV networks and they specifically say we need content with a male appeal, and on Instagram, you can reach that audience that isn't getting stuff made for them. And it's such a rich platform where you can do video, you can do writing, people can have interactive polls in their stories and you can go live, or you can DM. It's such a rich tool. There's so many different ways to package science information. So that's why it's been a major pro for me is that you can communicate with people who aren't getting communication otherwise, and you can do it in so many different ways. And they can choose how they want to consume that content and what level of depth and you can provide it. It's been so rewarding in that sense.

Rackeb Tesfaye

And through your years you've created this incredible following of folks who otherwise as you mentioned, would not have been as engaged with science, in the process in which you explained. And so, given we're living in these very strange times, and unseen times, in a crisis such as COVID-19, how has your work—in reaching those audiences—how's your work changed?

Samantha Yammine

Originally I was kind of sharing science and sharing the process of science, trying to make research a little more transparent. I was doing my PhD so I was showing stuff that I was doing in the lab, and then as I left the lab after graduating, it started becoming more about just the general science of every day, looking at the color of a leaf changing in the fall: "That's interesting, what's the science of it?" Really random kind of science like that, trying to get people excited about the everyday elements of science we interact with. But as this pandemic came along, I started realizing there was a big need for sharing credible information about the pandemic, in a non-fearmongering kind of way. A lot of people were scared and messaging me and not sure what to think or what to do or who to trust. I found tons of messages in my inbox and I just felt compelled to address them. I wasn't planning on becoming a COVID-19 communicator. I am not an infectious disease specialist. It wasn't something I was going to do. But because there was clearly such a need with how many people were reaching out, I started trying to cover the topics that people were asking me, and it just kind of happened. I really wasn't planning on only posting about COVID for three months, or four months, I don't know, what his time right now.

Rackeb Tesfaye

Who knows? That is a topical question at this point.

Samantha Yammine

I have counted probably over 1000 stories I've posted on Instagram related to COVID and I can't tally more than that, because its' so much.

Rackeb Tesfaye

Wow so that is a lot of content and you're creating it in an environment where misinformation and changing information... it's a second-to-second reality. And so what are some of the drawbacks that you're experiencing in regards to using social media as a platform to communicate about COVID-19.

Samantha Yammine

There's a lot of great information happening direct from public health officials on Twitter, but they're not posting that same content on Instagram. Which is really frustrating, because all of the pseudoscience people are, so it's really, really unopposed. And then the challenge becomes, if you want to counter and be that counterbalance to the misinformation and pseudoscience on on any platform, but especially on a platform like Instagram, where it's largely in a post, it's hard to address it without further amplifying it. Sometimes in trying to address pseudoscience, we add fuel to its fire. We reshare things we disagree with a lot more enthusiastically than we reshare things we agree with. And so my challenge has been how do I share something I don't agree with, oppose it, and give that important opposition without making more people drawn to that pseudoscience. So I really try to ask people first before I do any mythbusting, "Have you actually heard this? Have you actually been wondering?" And if the majority of people say yes, then I'll talk about it. If the majority of people haven't heard of it, I don't talk about it because I don't want to give more airtime to the misinformation that already has such high virality.

Rackeb Tesfaye

You're saying very similar things to what we were chatting with Liz [Neeley] about [in a previous Audio Distancing episode], with regards to not adding fuel and not amplifying the misinformation. And some strategies that we've been seeing, you know, not retweeting things, taking a screenshot of it, or to focus on the facts and to not kind of give room to restating all the things that aren't true, but to really focus on "What do we know at this time?" What can we say with, I wouldn't say certainty, but what can we say that we're comfortable with at this point.

Samantha Yammine

It's hard to do. I think we do need to counter as scientists, we need to be part of the discussion, because when we don't oppose things, it's almost like we're dismissing people who believe some misinformation. And that's been the real challenge is also balancing that, I find I’m often spending more time responding to misinformation rather than driving the conversation that I know public health officials want to be having.

Alyssa Favreau

And kind of in a similar vein, you've also been vocal about the issue of preprints. That is to say research papers that are made available to the public before having been peer reviewed by the scientific community. So on the one hand, it's dangerous when unverified claims are reported in the media as fact. But on the other the situation is changing so rapidly that the traditional publishing model can't really keep up. So how do you think we can best use preprints without leading to more misinformation?

Samantha Yammine

Yeah, I want to be super, super clear. I love preprints. And what preprint servers do for helping us move away from the really archaic and slow traditional form of peer review. I think the way that peer review currently happens, where it takes sometimes months just to get feedback from three of your peers, it's just not realistic anymore. It's not the way we should be going. I think this idea of having a completely open peer review period is amazing. And so I love what the folks at bioRxiv and MetaArchive, these preprint servers, are doing to challenge—all the time and especially amplified in the context of a pandemic—the way we report on those preprints. And the really cool thing about the preprint servers is they allow you to upload multiple drafts. So let's say you open Version 1, which it's a pretty polished draft, everyone on your team and everyone who worked on that paper has looked it over, but it hasn't been peer reviewed in any way. So you upload Version 1, and the media has been communicating on that version. Meanwhile, if you wait like a week, Version 1 will have a lot of changes as the peers online start to give feedback, the authors will quickly revise it. I wouldn't be so upset if the media were reporting on Version 2 or Version 3, that comes out just a few weeks later. Like that's the whole point of the preprint servers. They allow a really quick and broad peer review. But we got to wait for that second version. So I think we are the solution. We can point fingers to the media, we can point fingers to people. That's a waste of time. It's really on us to make sure that our Version 1 is fair, and that we're not overselling our research. And that's hard in a publish or perish climate. But we need to make sure that we are clearly stating the scope and limitations of our work early on in the paper. And I've been advocating for the preprint servers to make that mandatory. To have a whole section that is really plain language, clearly telling people the scope and limitations of this work. The servers themselves have a disclaimer saying that this shouldn't be reported on in the media because it's not peer reviewed yet. So consensus isn't formed on it yet. They have that disclaimer. The point is, it's being done anyway. And so it's kind of like the abstinence argument. You can tell them not to do it, they're still doing it. So you might as well empower them to do it safely. So give them the clear summary of the scope and limitations in plain language because it's going to get reported on it anyway. And it's time we stop ignoring that fact.

Alyssa Favreau

It brings to mind the news story about the overstated risks of jogging in virus transmission and watching the whole lifecycle of that story happen was, I think, really illuminating.

Samantha Yammine

And that wasn't even as a study. If I see one more damn computer simulation making the rounds. I think the thing that people are forgetting is a scientific study is very narrow in its scope. It is looking at the details and is looking for the exceptions. Okay, we're looking to find the odd cases, we're fascinated in the nuance of the world. And that's beautiful. But we're in a public health crisis, and health is about the averages, about the population level. And so it is interesting to know how a single droplet might get carried away through a gas cloud further than six feet. That's fascinating. Cool. But at the end of the day, I need to know, medically is this relevant? Is this relevant at scale, you know, [of a] public health crisis. And for that, we turn to epidemiology and we turn to case tracing. Scientists are contributing to the misinformation by over focusing on the small details that are not relevant to public health. I'm just so frustrated with scientists not being responsible in how they communicate and also over hyping the details that are not relevant to the big story right now, or that are less relevant. It's still important but doesn't need to be getting that much news coverage and we're driving that so we need to really point the fingers to ourselves.

Rackeb Tesfaye

Mm hmm. And also adding to the burden of decision making for folks who are already at their maximum in terms of cognitive load, in terms of making binary decisions about their safety. What has your experience been with posts that you might have put up that had information for that very second and then changed or no longer became what was being suggested? And so then you would have to reupdate your audience. How has that been for you in terms of how your audience has reacted to that, that trust that you form with an audience?

Samantha Yammine

I will say, I think there's a lot of areas where I could improve but one thing I'm really, really proud of myself for, again being a one person show, is I haven't had to take back or make any drastic corrections. Because I've been so, so evidence-driven, not really just trusting reporting, but going to the primary sources, the primary papers, myself and then checking in with what experts in those fields say using Twitter. But I haven't really had to change huge things. I have sort of regretted the way some of my language, especially with how I talked about masks initially, I was a little bit dismissive. And that was the flavor of the week, to have a really firm stance on masks in the beginning, and then it's kind of changed. So I was just upfront and I kind of called myself out for that. Just said, "You know, I regret how I talked about this before. Here's what I probably should have said and here's why." And I think people really appreciate that. And I think that's really important, too, when you're online. Knowing that the people who can admit that they made a mistake are the people who can take criticism and go with it and will share it openly. Those are the people you trust. People who are defensive and get mad and block you because you have a respectful, sound disagreement, those are people you don't want to trust at all. And if they're not taking time to respond to comments, even if they have huge followings, it's still a part of the game to respond to at least a few comments. And if they're responding to nothing, you really should think whether they're an individual that you want to be spending your social currency on, your likes and your time and your views.

Alyssa Favreau

That idea of trust I think is super crucial. And you've made a really excellent point about celebrities and influencers being often a source of misinformation, and having very little accountability there. And the harm that that can do. And since we can't remove celebrities from the social media equation, do you think that there's a way to kind of create a bridge between scientific knowledge and people who have a lot of public trust to leverage?

Samantha Yammine

Yeah, so I don't know whether celebrities do, I know celebrities have big platforms for sure. And some of them are using them beautifully. If I can just give a shout out to Cardi B, she has honestly been a leader. I'm just so impressed with the way that she's been stepping up like she's just...

Rackeb Tesfaye

Talking about that census. My god.

Samantha Yammine

Yeah, go there. Yes, Cardi. So I mean, I do want to give a shout out to people who are using their platforms responsibly. The scary thing for me is less the big celebrities because again, I don't think anyone... You know I'll go to Jennifer Lopez for hair tips and dance motivation and she's a brilliant performer and creator and she has lots of wisdom to share. She's a fascinating and intelligent person, but I wouldn't say medical advice is something she's known for. I think most people feel the same, although I could be misstepping. And again, I'm a huge J.Lo fan so I say that with love. But I think we kind of know what general box to put people in. The struggle for me is more, let's say, the mid-size celebrity. So like the doctor who has a big Instagram following, or the doctor with a big Twitter following or the random doctor who makes a YouTube video that goes viral because it says something contentious. Those are the people who should know better but don't. Those are the people who I think we struggle with online more than the celebrities. But I don't have data, I'm just speculating.

Alyssa Favreau

So much of scicomm has had to adapt to this situation, especially since in-person communication is no longer possible, you can't put together a panel in quite the same ways. Where do you see this line of work going? For you specifically, and in general, do you see a fundamental change coming?

Samantha Yammine

I hope a lesson that we take away eventually is that there are some advantages to digital communication. You can make things a lot more accessible, you can reach large numbers, and you can have really meaningful multi-direction discussions. And I hope that people who maybe didn't realize that before, now that they've been forced to do stuff online, and seeing the value it can have, I hope that they take that lesson with them. And I hope that we start thinking of ways that we can make our events more accessible to people who can't come to an in-person event. And I hope that, you know, people who'd normally run in-person events are now doing stuff online. I hope they see how much effort it takes now that they're doing it. And in the future, they remember to include that budget line when they're applying for grants or doing their finances as an organization. I hope people realize, social media has great power but we need to allocate resources to do it well.

Rackeb Tesfaye

It speaks to what André Picard was saying earlier, which is we're facing a severe lack and shortage of reporters and resources. And as you were mentioning Samantha, we haven't seen the value being placed in trained and and effective science communicators. So that job is often left to those who are unpaid...

Samantha Yammine

What's frustrating is all of this stuff that I'm doing now are things that I was advocating other organizations to do, years ago.

Alyssa Favreau

Yeah. If nothing else, I think this crisis will have really shown where the gaps are that need to be filled.

Samantha Yammine

And I hope we remember that. Yeah.

Rackeb Tesfaye

Thanks again to our guest Samantha Yammine, who can be found on Instagram @science.sam, and on Twitter @heysciencesam.

You can find us on Twitter @science\_broads, on our website broadscience.org, or anywhere podcasts can be listened to: iTunes, SoundCloud, Spotify, Stitcher, we're on all of them.

Mm hmm. And if you can, like, subscribe, give us constructive feedback. Thank you very much.

I love constructive feedback.

Yeah. "Be more constructive with your feedback."

I was wondering at what point a Flight of the Conchords reference would make its way into this podcast.

I was just waiting for Steve to come in.

Alyssa Favreau

Steve

Rackeb Tesfaye

Bloody Steve. All right. Wow.

This episode was edited and mixed by Ryan McFarlane.

In partnership, as always, with CKUT 90.3 FM.

Alyssa Favreau

See you next week.

Rackeb Tesfaye

Bye.

Alyssa Favreau

I love that the last little "bye" is always kind of the same. This weird little trademark. Okay, I'm gonna stop recording all of these things.

Rackeb Tesfaye

Bye.