**Rackeb Tesfaye:**

Hello, everyone.

**Alyssa Favreau:**

Hello and welcome to week nine of Audio Distancing, the Broad Science minisode series about communicating inclusive science in the time of COVID19.

**Rackeb Tesfaye:**

We're your hosts, I'm Rackeb Tesfaye.

**Alyssa Favreau:**

and I'm Alyssa Favreau.

**Rackeb Tesfaye:**

And we are in day 989 of the pandemic. So welcome everyone.

**Alyssa Favreau:**

You might be reading the wrong script there.

**Rackeb Tesfaye:**

I'm sorry. We figured we would just record all of our intros for Audio Distancing in one sitting, and we're now at 989, seems about accurate.

**Alyssa Favreau:**

Oh my god. I hope we're not still producing during a state of pandemic for that long. Knock on wood. We need to think more positive than that.

**Rackeb Tesfaye:**

Yeah, this is true. It just, you know, it feels like we're constantly walking with a dark cloud over our heads, with very little good news or sun around, you know,?

**Alyssa Favreau:**

Really grasping at those good news straws. Believing things that we know kind of aren't real, but we're in a pandemic, so like whatever. I chose to believe that dolphins were in Venice for a hot second. I knew it probably wasn't true, but I wanted it to be true. So I did not bother fact checking that.

**Rackeb Tesfaye:**

Yes. And I just wanted to thank you for sharing that Alyssa, especially given one of your many jobs and talents is as a fact checker.

**Alyssa Favreau:**

Yeah. I'm not proud of this, but I wanted there to be dolphins. And so I did not care.

**Rackeb Tesfaye:**

Dolphins in Venice. Disney, what are you waiting for?

**Alyssa Favreau:**

I know, it's perfect.

**Rackeb Tesfaye:**

And you know, kind of like in the earlier stages of the pandemic, around a month we like to call April.

**Alyssa Favreau:**

Don't know her.

**Rackeb Tesfaye:**

If you all remember that. April. We did cling on to one seemingly good piece of news: That the pandemic lock down or shelter in place was in fact helping mend our environment.

**Alyssa Favreau:**

Yeah, so in April researchers reported that carbon emissions were down 17% from the previous year. It had many people celebrating this small victory, amidst all the darkness of COVID19.

**Rackeb Tesfaye:**

But flash forward to June and carbon emissions were only approximately 5% lower than the previous year. And as travel begins to pick up, jobs reopen, and big companies try to resume operations at a large scale. What does this mean for our environment?

**Alyssa Favreau:**

So we want to talk about the climate, specifically in the context of COVID19. Because there's a lot to say. When looking at how we deal with and talk about an immediate, pressing crisis like coronavirus, there's a lot that's there that can teach us about our longterm continuing crises as well.

**Rackeb Tesfaye:**

We'll be focusing our next few episodes on the environment. And our first expert is Beth Gardiner, a London-based journalist who focuses on climate, health, and sustainability.

**Alyssa Favreau:**

She is also the author of the book Choked: Life and Breath in the Age of Air Pollution, one of the Guardian's best books of 2019.

**Rackeb Tesfaye:**

We chatted with Beth to understand what it has been like to cover the environment during COVID19, and what this pandemic is teaching us about the future of the climate crisis.

**Rackeb Tesfaye:**

Beth, thank you so much for chatting with us. Something that has struck us is this prevailing narrative, this prevailing media narrative, about the pandemic, that COVID is good for the environment. To many, some good news amidst the chaos of the pandemic. And this has turned out to be quite misleading in many ways. But why do you think it's been such a popular narrative?

**Beth Gardiner:**

Yeah, I mean it's really struck me too. And I just lost count, especially in the first two months or so of the lockdowns. How many people I heard saying to me, "Oh, well this pandemic is horrible, but at least it's good for the environment." I had editors coming to me and asking, "Can you write a story about how great the air quality has been during these lockdowns?" And it just immediately drove me crazy because I feel like it's so specious and so misguided. I live in London, which is a very polluted city, largely because of traffic pollution and diesel. So it just stands to reason that when you take all those cars and buses and vans off the roads and people are not going anywhere that the air quality will improve. Like, duh, that's where it's coming from. So it doesn't really tell me anything that I didn't already know to see that that pollution has gone away, but it also completely stands to reason that as soon as people start moving again, as soon as they get in their cars or as soon as factories get fired up, it will be right back. Nothing has changed. The same is true for carbon emissions. We saw really big drops in global carbon emissions during the most intense weeks of big lockdowns. And it's bouncing right back already. We're seeing as places opening up that air pollution is bouncing back already.

But I think that there is actually some lasting sort of lesson to take from this. Obviously this pandemic is terrible. A deadly, terrifying illness is not the way to improve air quality or fight climate change. It's horrible on every level. But I have heard a lot of people saying, "The one bright spot in that was that the air was better and that I could walk down the street without having to worry about getting hit by a car or go for a bike ride with my kid." And if there are ways in which that experience helps to increase political pressure for more lasting changes, which will actually bring non-temporary improvements to air quality, or reductions in carbon emissions, then that is all to the good.

But I actually think that there's another possibility, another path we may be heading down while, while our heads are sort of wrapped up with all of this "COVID is good for the environment" business, which is that I think there's every possibility, particularly in the US, that we could be heading for a very dirty recovery. Because what we've seen while people around the world have been kind of locked up in their houses, is that polluting industries like the big oil and gas companies and the car companies, and the power industry, these industries have been very busy, lobbying very hard and often quite successfully for bail outs and regulatory rollbacks, and all kinds of special favours and exemptions and loopholes that will allow them to continue polluting. That will potentially extend the life of fossil fuel companies that had been kind of experiencing this long term decline prior to the pandemic. I think that's very dangerous and I think we really need to pay attention to that possibility.

**Alyssa Favreau:**

China was the first country hit, and then the first to reopen, and as someone who's been reporting on this from a climate perspective, what do you think we can learn from China as a case study for what's to come?

**Beth Gardiner:**

Well, I think it's a cautionary tale in a lot of ways. It was, as you said, the first place to shut down and very quickly we started seeing from satellite imagery and other data that that brought a big reduction in air pollution. But we also saw as soon as they started to open up that air pollution was bouncing back very quickly. In some cases, exceeding pre-COVID levels, even before full activity has resumed. You know one thing that's an issue is how are people going to get around if we are all a little bit nervous about public transportation, about getting back on trains and buses? That's a big issue, and it's a real issue from a viral perspective. But it raises the possibility of huge increases in car ownership and in traffic.

In China in particular there has historically sometimes been a pattern of the government throwing a lot of money into the dirtiest industries, the very coal-intensive industries like steel and cement making to try to get a quick economic hit, a stimulus hit, in a way that is very damaging not only for the health of people who breathe the air there, but globally for our carbon emissions. Because we know that China plays such a big role right now in global CO2. I think there's a real kind of push and pull going on right now within the Chinese government and maybe between the national government and the provincial authorities over whether this is going to be a dirty recovery or clean one. And that has huge consequences, like I said, not only for the health of Chinese people, but for the health of our global climate.

**Rackeb Tesfaye:**

And so, as you mentioned, the possibility of our carbon emissions or activity levels going back to pre-COVID or even exceeding the times of pre-COVID is a reality that we probably will be facing. But in terms of, and just going back again to what you've said about fear of taking public transportation or [the] increase in car ownership, something that we're starting to hear dialogues about [is] folks being afraid to engage with certain activities and therefore, potentially engaging in other activities that would, increase pollution. And can you maybe talk about how that might differ from the narrative of, "we had this period of time where we were able to actually walk around in clean air and able to experience what a society where there is less pollution [could be like]"? How those competing narratives might create this tension or repercussions for how we move forward with climate action?

**Beth Gardiner:**

Yeah. I think what we saw during the pandemic was a lot of behavioural change. People did things differently, right? They didn't go places. They weren't getting in their cars, they weren't getting on planes. These things definitely had an impact in terms of reducing pollution, reducing carbon emissions.

But what we did not see during that period was systems change. I spoke to one scientist who's been tracking global carbon emissions and saw them go down and saw them come right back up. And she said, "Nothing has really changed." We still have the same cars. We have the same roads. We have the same power plants and obviously behavioural change is an important component of dealing with and pushing back against climate change. We want to see people obviously getting out of their cars and walking or biking instead, but we need system change too.

So you're starting to see a little bit of that in some cities that are now kind of trying to learn something from the experience of cleaner air and quieter roads, and saying, "Okay, going forward, if people are going to be scared to get back on trains or subways or whatever, can we expand bike lanes? Can we make walking easier? Are there other steps we can do?" And that's great. That is trying to take a lesson and make this change more permanent. I do have some concerns about whether it's going to be enough, because if you have all these people not getting back onto public transportation, even a big expansion in cycling infrastructure and new lanes and stuff like that might not be enough to actually take up that slack. So you could still see [a] big growth in traffic. But there are other systems too, that are less visible to us, like the energy system. Where's our electricity coming from? Our industrial systems, how are things being made and shipped around the world? Those are not subject to people's individual choices, right? You and I can't control necessarily where the power's coming from when you turn on the light switch or plug in your laptop. We need our countries and our governments to be really pushing for, politically, big systems change and moving us to clean energy. Until that happens, then I think these changes are not in a big way really going to be lasting. And the benefits won't last either.

**Alyssa Favreau:**

I think you're very right when you say that the drop in activity that's been the focus of a lot of reporting has really stayed on the individual level. I know mostly what I've heard is that people are staying home and consuming less, and that's a good thing. But since we do know that taking things individual-by-individual only gets us so far, and larger government intervention is needed, I'm wondering what your take [is] on Madrid's journey towards enacting the clean air zone only to have it suspended by new government.

**Beth Gardiner:**

Certainly there are important things that cities can do, whether it's New York or Montreal or Madrid or London or. else. But so many of the challenges that we face are so much bigger than one individual place. I think what's played out in Madrid is that you really have a Europe-wide air quality problem, which is being driven by issues around diesel and a failure to enforce regulations. This is why we've seen companies like Volkswagen get away even years now after their cheating came to light in that big Dieselgate scandal. We're seeing VW and all these other big car companies continue to sell cars that are emitting many times over the legal limit of nitrogen dioxide, which is a dangerous pollutant.

But instead of addressing it at the national level and at the Europe-wide level— which is really where the problem originates, it's a problem of enforcement—you've seen Europe kind of try this patchwork approach, where every individual city is supposed to solve its own air quality problem. A city, a mayor, can't enforce regulations on a huge multinational company like VW. It takes a national government, a Prime Minister, a President, whatever, to do that.

I think, to be honest, that when you talk about action like that at the city level, it's vulnerable in the same way that action at the individual level is vulnerable. You end up with all this finger pointing and blaming and reversals because there's not a larger national strategy. It's not that politically contentious to enforce regulations so that companies like Volkswagen have to follow the law, but it is politically contentious, if you're a mayor, to start imposing new kinds of tolls and fees and restrictions. And in the same way [as] for individuals, unfortunately a lot of times you see the discussion of climate change devolving into a lot of blame, where we blame each other, or we blame ourselves. With this whole idea of the personal carbon footprint, that was that notion was invented and propagated by BP, a huge oil and gas company. Because that industry wants us all to blame ourselves and blame each other, rather than look at where the blame really belongs, which is these huge companies that are profiting from continuing to pollute.

**Rackeb Tesfaye:**

Exactly. And so talking about the accountability at the corporate level, which is always a fun discussion to have, the problems...

**Beth Gardiner:**

And so important.

**Rackeb Tesfaye:**

So important. But the problem for making meaningful progress is critically analyzing the relationship between governments and high polluting corporations. And these companies have huge leverage and power, and I think we're seeing that really clearly during this pandemic. What has COVID19 highlighted about this relationship, during your coverage, and do you believe anything has changed in regards to this relationship?

**Beth Gardiner:**

We're talking about some of the richest and most powerful corporations in human history. Whether it's ExxonMobil or Saudi Aramco, these companies are tremendously powerful. And we know that for many decades now they have understood that action on climate change, any kind of serious climate policy, poses an existential threat to their ability to continue profiting by selling fossil fuels. And they have mobilized against that by pulling out all the stops and propagating, in a very, very sophisticated way, climate denial, climate science denial. Which has been very successful, particularly in the United States and even in the UK where I am, at really slowing and preventing any kind of serious action.

I think what we've seen during the pandemic is that those companies have just taken it to the next level. If you look at the United States, Washington is really a place where this has been playing out in a very big way. Obviously the United States has a huge problem with campaign finance and tremendous political influence given to the wealthiest voices. Politicians listen when these big polluting companies talk because they want the dollars and they've been very successful at getting them during the pandemic.

We've seen a lot of the rescue packages and loans and all these kinds of things get exploited. Even changes in the tax code that companies are using to rake in money, which really ostensibly was intended to save small businesses and people's paycheques and things like that. A lot of times the companies, these big polluters are not even using the money to save jobs.

So I guess on the other hand, what you're starting to see in other places, and even within the US on more of a state level, is talk about potentially a green recovery. Can there be a way in which we use this moment, we use this crisis, to accelerate the positive action that we know we need? If governments are going to be spending billions and billions on just keeping the economy afloat, why don't we spend that on clean energy, on wind and solar power and on giving people jobs doing insulation of homes and all that sort of thing. More sustainable agriculture instead of continuing to keep afloat this industry, which is not only sucking up tremendous amounts of money, but also really tanking our whole future.

**Alyssa Favreau:**

Oh that sounds like perfection and something that I would really like to see happen. In the meantime, though, what we have is a bit of a perfect storm, we have a lot of air pollution and that leads to respiratory illness and that exacerbates COVID19. And it seems like, from our perspective at least, the pandemic has really eclipsed discussion of climate crisis when really they should be going hand in hand. Do you think that there's a way of talking about something very immediate like COVID that also benefits a topic like climate, that's longer-term and perhaps more difficult to drum up interest about?

**Beth Gardiner:**

That's such a good question, and I agree with you that these are both crises that scientists have been warning us about for a long time, right? If you talk to epidemiologists and other public health people, they've been sort of screaming into the void about pandemic preparedness for years, if not decades. And I think you've seen that the countries that have been paying attention, places like South Korea or New Zealand or Germany, and that had better infrastructure in place, they're coping much better and they're seeing fewer cases and fewer deaths. Whereas countries that didn't listen to those warnings are really paying a terrible price right now in lives and health. So you can apply the same thing to climate change, except that there's no way for any country to get out of it on its own. We all need to be taking action, but we'll all suffer the consequences if other countries don't act. So certainly I think there's a lesson to be learned about listening to science and sort of understanding that really frightening, almost apocalyptic scenarios actually can come to pass. Maybe we'll learn that lesson and double down now on really trying to reduce carbon emissions. The other lesson that maybe we could take from this experience is that you can't separate the pandemic from these questions of racial and economic justice, that is true for air pollution, and it's true for climate change as well. You need to bring those aspects together, right from the start, if you want to have action that's going to be meaningful.

**Alyssa Favreau:**

Thanks so much to Beth Gardiner for speaking to us about so many different, but very interconnected topics. You can find Beth on Twitter @gardiner\_beth, and you can find a link to her book, Choked: Life and Breath in the Age of Air Pollution in our show notes.

**Rackeb Tesfaye:**

Before we let you go, we wanted to quickly expand about Madrid's clean air zone, or "Madrid Central" as it's known.

**Alyssa Favreau:**

Just to give some extra context, since we discussed it in the interview. It's a program that was introduced in November 2018 that made much of the city's core a non-driving space.

**Rackeb Tesfaye:**

And as a result, the city recorded the lowest pollution levels of the past nine years, with a staggering drop of 44% to the previous year.

**Alyssa Favreau:**

As mentioned in the interview, the program wasn't exactly given a particularly good chance to succeed once a right-wing government came into power earlier this year.

**Rackeb Tesfaye:**

Which again just goes to show that lasting change can't come if we're just making decisions individual-by-individual or even city-by-city. As Beth said, it really does have to be a system-wide push for cleaner air.

**Alyssa Favreau:**

Especially because people's exposure to polluted air is having such terrible, fatal consequences during this pandemic. Air pollution and climate change more broadly affect marginalized communities more, and COVID19 is only heightening those inequalities.

**Rackeb Tesfaye:**

Something we'll be discussing next week, but until then you can find us on Twitter @science\_broads, and anywhere podcasts can be listened to: iTowns... You can find it at iTowns. I heard that was the new thing that all the kids were listening to.

**Alyssa Favreau:**

Alright Grandma.

**Rackeb Tesfaye:**

But if you can't find iTowns, you can find iTunes, SoundCloud, Spotify, and maybe you can find Stitcher. I'm not exactly sure. And please like, subscribe, and review if you can.

**Alyssa Favreau:**

This episode was edited and mixed by the wonderful Ryan MacFarlane, who somehow makes us sound coherent, in partnership with CKUT 90.3 FM, as always.

**Rackeb Tesfaye:**

Please take care of yourselves and each other. We'll see you next week.