Coronasode Special: Quarantinology with Various Ologists
Ologies Podcast
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Oh heeey, it's that friend who started their term paper the night before it was due, Alie Ward, with a last-minute, too ambitious, extra credit episode of *Ologies*. What am I doing?? Why did I decide on a Sunday to make an episode with five different ologists to air one day later? Am I okay? Not really. But also, yes. We're going to be okay. Probably. That's why we made this episode. We just damn needed it.

But first I need to say thank you to patrons at Patreon.com/Ologies. That costs $1 a month to join that club. Also, thanks, if you have ever left a review for the show. I have read it with my teary, oftentimes bleary eyes and I pick a glistening, just-birthed one each week as proof. Such as this one from Aileen, who said:

> *Dear Alie Dad, thanks for accompanying me on my road trip from Seattle to California and back, and for making me guffaw until I cry, and also reflect on what makes me feel horny about life!!! Ur kid, Aileen*

Aileen, happy to horn you up about snails, and condors, and mud, as your oddly paternal internet friend. That's what I'm here for.

Okay, quarantinology. [*nonsensical garbling of surprise*] It's a word. Not shockingly, it has gained popularity in the last, like, 16 months. Today is June 14th, 2021. I live in California. On June 15th, in a few hours, the mask mandates are lifted. So what does this mean? What can we expect? What's going on? How safe are we? Is the pandemic over? That's not what the news says. Can I play croquet with my college roommates on a lawn? Can I hug my uncle? Will I ever eat pudding from the same spoon as a stranger again? I hope not. But I'm here to help. I'm going to do that by letting people smarter than me talk to you with their mouths.

In this episode, we're going to talk to married history buffs, researchers, and authors Geoff Manaugh and Nicola Twilley, who you also know as the host of the incredible podcast *Gastropod*. These two are releasing a new book. It's called *Until Proven Safe: The History and Future of Quarantine*, which, sidenote, Mary Roach calls "Flawlessly executed." Life goals to have Mary Roach say that about you. Ah!

Anyway, their book, *Until Proven Safe*, is available for pre-order. It'll be delivered in July. It's all about why human beings quarantine. Fascinating. There's a link in the show notes. So, I sat down to talk to them. They dish on the history of quarantines, why they are and sometimes are not fully effective, the cultural shifts that happen in the wake of a pandemic, and more. And also, I just had an incredible chat with them. I had to pare down a lot of this and I will release the full version to patrons because it deserves to be heard.

After the break, we'll check in with your favorite Vaccine Infodemiologist, Jessica Malaty Rivera, plus Manhattan-based physician Mike Natter, who worked on the front lines amid New York City's surging 2020 caseload. And then finally we're going to check in with Thanatologist, grief counselor, and founder of the School of American Thanatology, Cole Imperi, who will address why you feel so fucking weird, and how to process it, and move forward, and honor the incredibly jacked year that everyone just had.

So, I'm an absolute maniac for shelving my in-process wasps episode and texting experts from my orthodontist's chair this afternoon and asking them to send some thoughts via voice memo, and

then trying to put this all together over a 7pm espresso. But I could not be more passionate and committed to getting you all the ologists that you need when you need them. So get ready to hear about covid versus plague quarantines, medieval cities, forbidden scarves, sneaky sailors, moon cooties, the efficacy of vaccines, variants, herd immunity, vax girl summers, the headspace of healthcare workers right now, and no matter where you are or what you've been through, how to reflect, and process, and honor the last year. So let's all take a deep breath, [*breathes in deeply*] be thankful for that breath, as we examine the history, and the present, and the future of Quarantinology.

Geoff Manaugh: I am Geoff Manaugh and my pronouns are he/him.

Nicola Twilley: We actually both have quite difficult names to pronounce, so that's good. I'm Nicola Twilley, although I go by Nicky, and I am she/her.

Alie Ward: Can you tell me a little bit about what you were doing when you decided, "Let's write a book about quarantines"?

Geoff: Yeah, I can say that the origins of the project itself actually came quite a while back. In 2009 we were down in Australia together. I had a teaching gig in Sydney doing an architecture workshop for about six weeks. And at one point, we had a local friend who took us out on a picnic and we noticed that there was this really interesting complex of buildings out near where we had gone, which was a pretty remote peninsula on the other side of the bay from Sydney itself.

And you know, these buildings, they were on stilts. They had really nice wraparound porches, and it was called Q Station. And what it actually was, was an old quarantine station that had been turned into a kind of spa hotel. And the cool aspect of that, I thought, was that the very things that made quarantine at one point… sites like that so good for quarantine, which is that they're far away from the city, they give everybody fresh air, they don't risk people just wandering into town. They're separated by a bay, they're also out on a peninsula so they're even separated from the land that they're connected to. Those same things that made it good for quarantine made it good for a spa hotel, a way to get away from the world and to get away from Sydney.

So I think, ironically, the initial interest in the topic was actually, in retrospect, a little embarrassing in the sense that we were like, "What was quarantine? Why did we stop quarantining people? Why are facilities like this no longer being used for medical reasons and now they can be turned into hotels?" Or they can be torn down entirely, or they're just left in ruins… Because you know, when you look around at quarantine, you tend to see that it really does look like a leftover business from the past.

And we realized almost immediately, as soon as we started looking into quarantine, that in reality, you know, it is obviously still taking place at scales all around us. It's taking place with animals traveling overseas. It's happening in agriculture. And that was really what, I think, gave us the idea to pursue it as a research project. And then the idea of writing a book together, I'd say, came later.

Nicky: Yeah, I think we both realized there was just something in there for both of us. I write a lot about food and agriculture. I have a podcast about that. So the fact that quarantine is so important in terms of food and agriculture appealed to me. And then I write a lot about science, and then we realized, "Oh, quarantine is used in…" NASA are experts on quarantine

because it's constantly being used in terms of space exploration. And then we… The more we dug, the more there was there. And it rapidly expanded into a book.

Alie: How far back did you go when you thought, "Hm, quarantine. Let's look into the history."?

Nicky: I think that's where we started, and you know, as a concept… I think one of the things about quarantine that's so interesting is it seems really intuitive. You have this person or thing that you think potentially might be infected with a disease. You don't know yet, but you're worried, and you have reason to be worried, so you decide to, kind of, put them somewhere safe until you can be sure that they're either healthy or they're sick. That just seems like, "Oh, that's such an obvious thing to do. Why wouldn't that have happened for all of human history?" But of course not. It actually had to be invented.

If you think the disease is an act of God, for example, then you're not going to think that putting someone in a separate room is going to do anything because you don't have a concept of infection. So, it did have to be invented. And as soon as we, sort of, thought that through, we wanted to know where it began.

Alie: Yeah, where did it begin?

Geoff: Historically, it began in the Adriatic Sea, which is interesting because the Adriatic is really, kind of, the first sea that you would encounter as you're leaving the Near East, what is now the Middle East, and approaching Europe. So, as merchants were bringing goods back from Turkey, from what was once known as the Levant, and bringing those into the European economy, it was the Adriatic where people realized that they were encountering mysterious diseases that they hadn't had before and that those diseases appeared to be breaking out at the same time as the ships were arriving.

So, as Nicky was describing, there was kind of some deductive reasoning, which was that, "Okay, let's take the next ship that arrives from the same destination," or whatever you want to call it, that would come to a city like Dubrovnik or a city like Venice, and "Let's just hold it, let's delay it, let's put a buffer around it and see if the disease still arrives." And it was that kind of deductive reasoning that I think led to the spatial logic and even the temporal logic of quarantine. So, there's some debate amongst historians about whether or not Dubrovnik or Venice is really first in line as far as the invention of quarantine.

Aside: What is a Dubrovnik? Well, I had to ask the internet, and Werkepedia was like, "It's historically known as Ragusa, you shit-for-brains." And I'm like, "Listen, Google. How was I supposed to know that this historical Croatian seaport with a history dating back to the 17th century is known for its global position in the maritime trade and for its medieval architecture and beautiful stone buildings with russet terracotta roof tiles perched on cliffs above the azure Adriatic waters? How was I supposed to know that?" But now I know what a Dubrovnik is as well as a Ragusa.

Geoff: But I think that from what we've seen, and the historians we've discussed with, and the actual archival evidence, it really does look like Dubrovnik was the first place where a quarantine order was officially given in the 14th century. And it was about delaying the arrival of ships, and fumigating goods, and keeping the sailors and the merchants themselves out of Dubrovnik so that they couldn't infect the people who lived there.

Nicky: And it's really… The timing is because this is when the Black Death arrived in Europe for the first time. Before that, Europe, historians think, had been for centuries relatively free of new infectious diseases. And then the Black Death gets started. A lot of mystery still about where that started and how it spread, but historians think it started in China and spread

toward Europe that way. And by the 1340s it had arrived in, you know, some of these trading ports that were doing business with the East.

Dubrovnik, at the time, was a huge trading port. It was one of the first places you'd stop on the way into Europe with your ship full of valuable goods. And the people who lived in Dubrovnik at the time, they wanted to have their cake and eat it. They didn't want to stop trade because that's how they made their money, but they didn't want to die of the plague. So, quarantine was this attempt to say, "We just park you here initially on an island offshore, and later in purpose-built facilities, and we wait and see, and then if you're not sick, cool. We can still do trade and make money. And if you are sick, we kept out the plague."

Alie: How long was their quarantine? How long did you have to wait and see if the Black Death would consume a ship full of people before you could say, like, "Okay, we're cool. Bring on the grains."?

Nicky: 30 days at first, in Dubrovnik, but they quickly switched it to 40, and that was not for the kind of reasons we decide a quarantine length today. Nowadays, the quarantine length is exactly as long as we need to know… you know, according to how long the disease takes to be diagnosed or show symptoms. Back then, you know, there was much less of that. There wasn't a germ theory of disease or anything, so 40 was chosen because of its religious significance.

Alie: Really?

Nicky: Yeah, it was sort of… I mean, you know, 40 days and nights of rain. The 40 days of Lent before Christ's ascension, and so on. It's a period that was seen as a period of purification or transformation. In Hebrew thought, it's the length of a generation. So it had this symbolic sense that you would know for sure at the end of that period.

Alie: Ah-ha! And then, what about pre-ship migrations? Are period huts a type of quarantine?

Nicky: That's a really good question. Throughout the research of this, people were like "What about leper colonies?" You might be the first person, Alie, to ask us about period huts. So, good job, you. Typhoid Mary, people say, "Was that quarantine?" No. If you know the person is diseased, or just having their period, then you know. There is no uncertainty. You're not waiting to find out. What that is, is isolation.

And this is what makes quarantine so interesting and so easily abused as well, is that you have to not know. There just has to be doubt, and suspicion, and uncertainty, and fear.

Alie: Got it. Okay.

Geoff: And I think that quarantine is so metaphorically powerful precisely because, you know, the idea is that there might be something inside you that is dangerous to others but we don't know yet, *you* don't even know yet, and so you need the space and time that quarantine gives in order to see if this thing will come out. It becomes mythological. It even sounds like the plot of a horror movie.

Think about John Carpenter's *The Thing* where there's people hanging out at an Antarctic base waiting to see if there's something hidden in them. And I think that quarantine really has that exciting aspect to it that lends that poetic, religious, or mythological note that Nicky was talking about, and also made it so exciting to explore as a topic.

Aside: So, Geoff and Nicky make the excellent point that isolation connotes a confirmed case, but quarantine is really more of a "Shrug. Let's hope this wasn't necessary. Thanks for doing it anyway."

As someone who tends to think that more is more when it comes to effort, it can be hard to understand just how important doing *less* has been for the greater good of humanity and has been for centuries.

Alie: Any idea, going through old notes, or letters, or manuscripts, what were people doing while they were quarantined in the past before there was, like, *Angry Birds* and Twitter?

Geoff: Yeah, that's funny. Such a good question. You would see sailors who would come on a very long journey through the Mediterranean, or for that matter all the way around the world, across the Atlantic or even the Pacific, but now they're not able to get off the ship. They're being held in quarantine. They can actually see the land. They can see the city that they've sailed to. But they just have to sit on deck for 40 days just waiting to see if something happens to one of the crew members or if one of them has this disease. So, boredom is a very, very prominent note that you see throughout history.

Eventually, this led to some things where, you know, richer… the captains of the ships themselves, who could afford it, or who were simply treated better, were able to stay in larger quarantine facilities, maybe even get off the ship and come into land and stay in one of these lazarettos or like that quarantine station that I mentioned in Sydney. And if you could afford it or if you were simply treated better – maybe because of race, maybe because of gender – you're given more resources to get you through the period of quarantine. So, that was definitely something that we've looked at because that's yet another way in which quarantine can become unequally distributed, so to speak.

Just very briefly, another thing we found too was quarantine erotica. People actually getting…

Alie: [*bursts in giggles*] I'm so sorry! I never thought those two words would be mushed together in just a sloppy, sexy Moon Pie. Like, WHAT?! [*laughs*]

Geoff: But you know, you're trapped in this building with strangers. You're forbidden maybe to be near them or to touch them. And all of that is just leading up to a kind of erotic frisson that turns into stories. And you know, you see that in the golden age of quarantine literature, in the 1800s, I guess you could say. Even during Covid-19, there was the rise of online erotica for people who were fantasizing about being trapped in an airport hotel with other people on the same flights, and the next thing you know they're bumping into each other in more ways than one.

Alie: [*cackles mischievously*] But wait, go back. There was a golden age of quarantine erotica? No one told me about this!

Nicky: Oh yeah. I know. And I studied English literature for my undergrad and we did not focus on this and I feel shortchanged, frankly. But yeah, in the 1800s there was this, kind of, mass… They were these pulpy, syrupy short stories and novellas. One of them is called *Love in the Lazarette*. It was sort of, you know, this tinge of the exotic because you were traveling overseas and you didn't know who was who, were they sick, were they not? And you're bored, you have all this time on your hands. You're mingling with others.

Aside: Of course I looked this up. And I had my eyes open quite wide to titles like *Love in Lockdown* and *Quaranteen: Step-Sibling Love In The Time Of The Coronavirus: A Story Of*

Taboo Romance, as well as the novel *Covid-69: An Erotic Coronavirus Quarantine Story*. And though I haven't read the last one, let's hope that *Covid-69* isn't a futuristic romp set in the 2069 covid resurgence. Let's hope it's just about good-old pandemic knob-slobbin'.

Alie: And did you have to study any baby booms that happened after quarantines, or do we find a dip because people are isolated and too scared and depressed to get it on?

Nicky: Excellent question. What they're predicting after Covid-19 is a dip. We did not study this historically. I mean, historically, you have to remember as well, during the Black Death, a third to half of the people in your town might've died, so it was altogether a next-level disease. And I think you might frantically try to reproduce after that, but not maybe during.

Aside: Okay, so maybe you're not emerging from a cocoon of immunity with a fresh development deal or a new human being. You still did a good. I think.

Alie: And how much do they find that quarantine does save lives? Obviously, if I had to guess, scientifically, I would guess a shitload. But did you have to look at any historical data from past or more recent quarantines?

Nicky: This is a really good question. And actually, when the guy at the CDC who is the head of the Division of Global Migration and Quarantine started out in the job, he actually wondered exactly the same thing. Like, "Do we actually know that quarantine works? Like for sure? Scientifically?" So he studied the 1918 flu specifically.

It's hard to study older quarantines because the records just don't exist to get you that level of quantitative accuracy that you'd be looking for. But for the 1918 flu, he was able to see that, actually, yes, quarantine… even when it's leaky – and it is always a little bit leaky – the cities that did best were the ones that quarantined earliest and longest. And you could just see that again and again in the evidence. So yes, the answer is yes. They seem unfair. They often are unfair. They're almost always leaky. And yet, they save lives.

Alie: I wonder… When do you think they'll get data on this recent pandemic? Are those numbers they're going to be crunching for decades, do you think?

Nicky: You're starting to see it already. You're starting to see, almost daily, papers coming out that say, actually, "Travel bans help save lives," or "Places the enforced lockdowns earlier saved lives," or "School closings saved lives." They're even doing the analysis and showing that actually it wasn't as economically damaging as everyone warned, and in fact, in the long run, will have saved more money by saving lives than cost. So, already the evidence is coming out, I think. You know, it's a place-by-place thing because quarantine was a patchwork, always, but you can find that data already.

Aside: Just a quick aside. There was a recent article in *The Guardian* titled "The world's economic recovery from Covid-19 looks likely to be uneven." That was the title. There you go. And the author, Nouriel Roubini, essentially goes on to detail that:

> *In the US, a decline in new infections, high vaccination rates, increased consumer and business confidence, and the far-reaching effects of fiscal and monetary expansion will drive a robust recovery this year.*

But it also continues to say that:

> *The outlook is more fragile for many emerging and developing economies, where high population density, weaker healthcare systems, and lower vaccination rates will continue to allow the virus to spread.*

Also noting that incomes from tourism dried up in some countries. But one thing is certain, people are taking notes.

Geoff: I think as well, as we saw with the flu of 1918, I mean, the data is going to be mined for decades to come. I think people will still be writing papers and crunching the numbers on Covid-19… there'll be grad students writing theses about this in 2050 trying to figure out what did and did not work.

But you know, it is really difficult, I think, to quantify exactly… you know, if we're talking about lives saved in the sense that getting numbers on things that didn't happen is a bit tough. And I think that level, what I think is so, frankly, kind of cool about quarantine – although I hesitate to hear myself calling quarantine cool, but in any case – is just that it's so simple. It's, "Just stay in this one space. Don't interact with other people or other things for a certain amount of time, and after that point, if you've been proven safe, you can come out again and we can go from there." So, it's a pretty remarkable and remarkably effective tool for what it's asking you to do, which is simply to be spatially separate.

Aside: So quarantine is like a game of freeze tag. Maybe it seemed fun at first until holding still started to really ache, and then those aches just became a new normal as we watched a frenzy continue around us. But what about all the folks who lost jobs or took on new essential jobs that put them at the most risk? Nicky and Geoff share some global perspective from their research.

Nicky: Marty Citron and others thinking about this are like, "Okay, if you're going to make that sacrifice," which is a *sacrifice*, "and you're making it for the public good, then the public kind of owes you a duty of care and you should, for example, not have to worry about losing your job, or losing your income, or feeding your family. And if you make that sacrifice you should be ensured treatment and access to vaccines when we have them, and so on."

And it's, like, this idea that there's a sort of bill of rights for the quarantined that I think is really being… That's one of the things that has, sort of, made some of the lockdowns of Covid-19 seem so unequal, because those rights weren't being thought through. People were being told to give something up for the public good.

I think one of the things we ended up concluding is that if you don't have a public, you can't have public health, and that quarantine really relies on that sense of being part of a community. In Venice, where the first quarantine hospitals were built, those quarantine hospitals were one of the five institutions in the city where notaries had to ask, "Would you like to leave money to this in your will?" It was one of the public goods. It was one of the things that was seen as being, you know, an institution that everyone was responsible for and that was protecting everyone.

And I think if you are living in a place and time where we don't have that sense that everyone is responsible and everyone is also being protected by these institutions, then it's never going to work.

Alie: What about historically? When you were writing this book, obviously you did not expect a major global pandemic to happen when you started writing the book. But I'm really curious to hear about some of the records that you had to pore through and if there were any records that really stuck in your mind, or really surprised you, or emotionally stuck with you?

Nicky: Oh yeah. I mean, going through our materials and then watching covid unfold was like… It felt like déjà vu every day. For example, in Dubrovnik, they're the first to have passed quarantine regulations. Well, they also passed a regulation saying that only people who, basically, weren't essential workers could leave the cities. So essential workers, laundresses, and gravediggers, and so on. People who were in these risky jobs were required to stay in the city and the nobility could flee.

So, you saw those kinds of details of gravediggers being hanged for breaking quarantine regulations and nobles running off to the countryside to stay in a villa and tell stories. That's been there since the beginning. So, those kinds of stories… Yeah. And then seeing that play out during covid, it was like, "Oh gosh. Have we learned nothing?"

Aside: And after more than a year of essential workers being literally the lowest-paid sector in the nation with some pretty high risks, one University of California San Francisco study found that of Californians aged 18-65, the highest occupational death rates were among cooks. So, as things open up again and you start to see "Help Wanted" signs in restaurant windows and fast-food hubs, it might take on a different meaning to you.

Geoff: I think also, there were just so many haunting details that came from some of the research that we did. One of the things we learned about was in Split, which is a city in Croatia, where an individual who was working at the lazaretto, I think he was a guard at the lazaretto, noticed that in the cargo bay where they had been storing cargo taken from ships, he saw a really beautiful scarf one day and decided he would take it home from the lazaretto, the quarantine station, and give it to his wife as a present.

[*clip of Oh No song from TikTok: "Oh no…"*]

But the scarf had the fleas that transmit the bacterium that causes bubonic plague.

[*"Oh no…"*]

So not only did he give his wife the plague, but it led to an outbreak that swept through the city of Split.

[*"Oh no, no, no, no, no."*]

Another example that sounds like a John Carpenter film… I apologize for mentioning John Carpenter more than once in a single interview, but in any case… There was a great story from Boston where the pilot of a ship was being held in quarantine on an island offshore from Boston, and when the water froze over, he just walked into town. And I mean, luckily didn't bring the plague with him. But it's those kinds of little, tiny details that feel like the beginning of a film, or the beginning of "This is how the outbreak starts" that really stuck, at least with me, in the sense of just how dramatic and strange they are.

When Nicky and I started going into everything from high-level isolation facilities in London where they work with Ebola patients, to even underground in New Mexico, to a facility where they're storing nuclear waste and it has to be buried for at least 10,000 years, you begin to see that actually *The Andromeda Strain* has a weird, kind of, fictional realism that was interesting to note.

Even the movie, *Quarantine*, which is a horror movie that came out in, I think, 2008, I think is also interesting because the name of the film is just *Quarantine*, as if the word itself… You instantly know this is a horror movie. Just saying that word, "quarantine," is going to make people scared.

Aside: So if living through the last year and a half and witnessing the continued infection and mortality rates feels exhausting, that's because we've been living in a real-life horror film. We lived through it, so cut yourself a little slack for not cleaning every closet or developing those weird vertical abs that only Ken dolls have and also writing *King Lear* and other masterpieces.

But what else is real but feels like a movie?

Nicky: The fact that I think I've said to the most number of people is that when the Apollo astronauts first came back to the Earth, the CDC had said that they would not let them back in if they did not go into quarantine because, you know, no one knew there wasn't some weird germ on the Moon that was going to kill us all.

[*clip of Isaac Mizrahi and Shawn Killinger from QVC debacle:*]

Isaac: Google the Moon, okay?
Shawn: I guarantee someone's googling right now because I knew it was not a planet.
Isaac: The Moon is such a planet. I can't even stand it!
Shawn: The Moon is not a planet!
Isaac: What else is it if it's not a planet??
Shawn: It's not! I believe it's a star, or… it's something.
Isaac: It's a moon!

So, the CDC literally put the Lunar Receiving Lab in Texas under federal quarantine for potential extraterrestrial infection. It's the only time, I think, there's been a quarantine for extraterrestrial infection on Earth. I mean, they really took it seriously. There was a plan. If the astronauts had developed some curious, inexplicable disease, there was actually a plan to just bury the entire Lunar Receiving Lab and all the people in it under, you know, concrete and dirt, just to save the Earth. So, they were taking this very seriously.

And I think nowadays we kind of, "Oh, the Moon's just a rock," and imagining that danger is sort of, "Oh ha-ha, weren't they silly?" But you know, if we're going to bring stuff back from Mars, it's going to be the same type of precautions that we need to take. So, it's a really interesting fact to be thinking about right now and I think it, kind of, blows people's minds.

Alie: The idea of space critters coming in. You don't know! Who knows what's going to be on there? Maybe the whole Earth will turn to cheese. Maybe there's a weird fromage bacterium. Who knows!

Can I ask you some listener questions from patrons?

Geoff: Please do.

Nicky: Please!

Alie: Ooh! Okay. All right, here's the deal. We're getting into a phase where a lot of restrictions, at least in North America and the United States, are lifting. But that's not global. So, a lot of listeners wanted to know: How do we know if it's time to lift isolation and quarantines in a certain region?

Nicky: Okay, so I think as with all things quarantine, there's always a level of uncertainty, and that's one of the uncomfortable things about it. But in the book, we do spend a lot of time talking to the people who figure out… you know, the disease modelers, the epidemiologists who try to forecast spread and come up with, you know, the appropriate response based on what they think is going to happen. So, what they would say is, scientifically, what you're looking at is that 'R number', the reproduction number. Are more people passing this along? If that R number is above 1, you're looking at its spread. The higher it is, the worse the spread, etc. So, you can make decisions based on that.

So, they say with relative confidence that once that R number is under control and there's a certain level of immunity, either through vaccination or exposure in the population, then yeah, it is safe. We do look at the limitations of modeling in our book. You know, we're not at the point where we can predict the future accurately. All we can make are guesses that are more or less educated. So, I think also people should operate according to their own comfort level.

Alie: That makes sense.

Geoff: I think that's one of the things, you know, that's so interesting with covid, that it really hits the sweet spot of a disease that requires quarantine, because you can be infectious even if you don't have symptoms. So, you have to maintain separation from other people because you can be spreading something that you yourself don't even know you have.

Nicky: The other thing I'd say is, this uncertainty about, "Am I safe? Am I not?" it's at the heart of quarantine and also it's just what people cannot stand and makes them anxious, understandably. And they want science to provide certainty, and I think if there's one thing that is really interesting about this is that, actually, science needs to do a little bit of a better job of communicating that it's just our best working theory at this point in time.

Alie: Megan Younce asked: Will everything ever feel back to normal? And Lisa Taylor said: And when? I need validation.

Any idea how long, based on things that happened in the past, people can… Let's say with the flu of 1918, when do people start to shrug off that kind of anxiety?

Nicky: That's another really great question. There are a couple of things I'd say. One is, in some sense, people will move on really quickly. And this is actually one of the problems with quarantine, because we never take the time to take the lessons that we learned and implement them for next time because we're so busy celebrating being done with it.

So, part of the thesis of our book is, "Hi, we have this amazing moment right now to make sure that, really, almost for the first time in history, we learn from quarantine and we get ready to do it differently next time because there *will be* a next time." There's just a lot of bacteria and viruses out there and they reproduce and mutate quicker than we do.

So that, I would say… I would say we're going to bounce back really quickly and that might actually be a bad thing if we don't take the time to learn lessons. And the other thing I'd say is, even though we're going to bounce back really quickly, a lot of things will have changed and they will form the new normal. This is something we found… You know, the first passports, which are a thing that we just take for granted now – you can't travel without one overseas, you can't cross an international water without one – that came about as a way to move around during the Black Death and skip quarantine by showing a health passport.

So, these kind of bureaucratic ways of controlling movement, monitoring health, surveilling the population, they kind of get baked in as the new normal and people take them for granted. So, in some ways it will never be the same and then in some ways it shouldn't be.

Geoff: I think that what has actually been really interesting, and quite ominous in fact, over the last two months, is that at one point everybody thought India was doing really well and that covid had, kind of, bypassed India and that, you know, everything from the architecture of Indian cities, with everything open to the air, was not allowing covid to build up inside homes and have people breathing it, and picking it up, and giving it to others. But then, now, as you know, as we record this podcast, India is going through a really huge spike in covid cases. It's one of the worst countries in the world right now.

And you know, the news can change really quickly because a country that appears to be starting off, maybe, very badly and is very hard-hit can actually get back on its feet and figure out what it did wrong. And vice versa; a country that appears to be, not immune, but sidestepping or avoiding all of the really negative stuff can really kind of get blindsided by a second wave, or by variants, or by several variants, or simply by bad politics. And so, that's been pretty eye-opening. As far as individual countries, I do think there's kind of a scientific playbook for how to deal with epidemics or respiratory illnesses.

Nicky: One of my old bosses is a professor of history, and she was like, "Well, I can say this because I'm a historian, but we are living in historic times." And I really do think we all went through, sort of, a major moment in history together and we should all cut each other some slack for whatever we're feeling.

Alie: Yes. Good call. Thank you so much for doing this, for being on. It's been really great to process the last year with a few experts, to be honest.

Nicky: Thank you. It's such a treat for us.

Geoff: Thanks for having us.

Aside: Let's continue to process, shall we? We shall. But first, just a quick breather and we will hear about a few sponsors of the show who make it possible to donate to a few different charities for this episode. First up is 500WomenScientists.org, which is a nonprofit dedicated to making science open, inclusive, and accessible. They're awesome.

We're also sending a donation to Covid.GiveIndia.org, which aims to stop the virus's spread and supports vulnerable families affected by Covid 19. They support healthcare infrastructure and they boost oxygen supply and ventilators to patients in India.

We'll be sending another donation as well to the School of American Thanatology, which seeks to provide inclusive and accessible education opportunities in and adjacent to the fields of thanatology, death work, and thanabotany, while also fostering research and writing opportunities for the community. The School of American Thanatology's autumn season starts Monday, September 7th. There's a link to them in the show notes. Those donations were made possible by sponsors.

[*Ad Break*]

On to a few more expert opinions, including an epidemiologist, a medical doctor, and someone who is here to calm your nerves and unscramble your brain; help you move forward. First up, we have your favorite Vaccine Infodemiologist.

Jessica Malaty Rivera: My name is Jessica Malaty Rivera.

Aside: … who I texted last night at 7pm and said, "HELLO IT'S ME. I LOVE YOU. CAN WE RECORD A MINI-SODE TOMORROW MAYBE?" And she made time for me this morning. I'm so grateful. She's a microbiologist who got her Master's in Emerging Infectious Diseases from Georgetown University School of Medicine. She's also an infectious disease epidemiologist with the COVID-19 Dispersed Volunteer Research Network, an expert contributor for all kinds of news outlets. And you may also know her work from *The Atlantic*'s COVID Tracking Project.

Alie: I'll start recording, just so that we have everything. You're back. You're joining us again. Busy year, of course, for you.

Jessica: Yeah.

Alie: How are you doing? We're in June now. A lot's changed. When we talked last time we thought it might be fall before anyone had vaccines that was a normal Joe.

Jessica: Yeah. I've actually loved how wrong I was about that prediction. [*laughs*] I err on the side of cautious optimism with a little sprinkle of pessimism, so I was just delighted to see how ahead of the curve we were when it came to that timing and the fact that most at least have had access to the vaccine in the United States. It's really remarkable.

Alie: Yeah. I got mine in April. When were you able to get yours?

Jessica: I got my first dose on March 16th, 2021. And the reason why I remember that was because it was also the one-year anniversary of the first person to get a dose in a trial in 2020. And I just, you know, of course cried my eyes out over that.

Alie: Did you do it on purpose or just got lucky that way? [*laughs*]

Jessica: It just happened that way! It just happened that way.

Alie: Now, I feel like the US is ahead of the curve, obviously, like you said, with vaccines. What's going on with the rest of the world and what does that mean for the way that we've seen curves rise, and fall, and come back?

Jessica: I think that's a really important question, and I think it's important for all of us to remember that we are still very much in a pandemic, and pandemics are exactly that. They're *pan*demics. They are global. And this disease is, kind of, burning through countries and disproportionately affecting communities at varying levels, and we can't call any victories yet until everybody has equitable access to a vaccine.

And I don't know if you saw today's news. I was really thrilled to see that Novavax's data came out really good and COVAX has committed to securing 1.1 billion doses, which also frees up the US to donate even more doses. So, we're getting there. But some of these estimates, Alie, are like 2023 for some countries to get fully vaccinated, and that's just not acceptable.

Alie: Yeah, oh my god. Is it a supply issue? Is it a pipeline problem? Is it distribution?

Jessica: All of the above. It's the fact that, you know, developing these vaccines, like actually producing them, is very labor-intensive and requires high skill and a skilled staff to do that, a skilled workforce. Not all the places in the world actually have that on an infrastructural level. It's the cold chain process too; making sure that there's enough refrigeration and sub-freezing temperatures for shipment and storage. It's cost.

It should not be costing people to get this vaccine, but that's because we in the United States had that majorly financed by Operation Warp Speed. We need things like COVAX to make sure that it is equitable and free for other people in other countries too.

Aside: COVAX, sidenote, is directed by Gavi, the Vaccine Alliance, the Coalition for Epidemic Preparedness Innovations, and the World Health Organization. Its mission is to provide equitable access to Covid-19 vaccines because this is very much a global humanitarian issue and we're trying really hard to outrun this thing. So, toot-toot! All aboard to vaccine town. Get in!

Now, before things get worse… I promise, this episode, it gets brighter and sunnier in a minute. I promise.

Alie: What about variants in the meantime as this ravages different countries?

Jessica: Yeah, variants are what keep me up at night, to be honest. I mean, I think that it's not something we need to be freaking out over. Variants are a very natural byproduct of viruses that mutate over time. I think we talked about this last time, but viruses need a host body to replicate, and as they replicate, they mutate, making little mistakes. And after an accumulation of mistakes, you have what we call a variant.

It's not surprising that we have multiple. It would not be surprising if we have more. But the best way to outsmart the variants is to prevent more bodies, more hosts, from being infected to allow more replication to happen. We do that by keeping risk low and we do that by getting vaccinated.

Now, that said, we have really encouraging data to show that the vaccines that are currently available are really effective at reducing illness if you're infected with the variants. It's not… We don't have all the data yet; we know that at least for the mRNA vaccines, Pfizer and Moderna, the most concerning variant right now, the Delta one, those two vaccines seem to be really effective. We don't have data yet on Johnson & Johnson for the Delta variant. But we're trying as fast as we can to get that data. But honestly, the best thing you can do is continue to keep your risk low and get vaccinated if you haven't already.

Alie: Any new vaccine data coming out that would be, perhaps, soothing to vaccine-hesitant folks?

Jessica: I mean, there's been recent data that's been very encouraging on maternal health. Recently they had data to show that there was no negative impact on the placenta from the vaccine, which I know a lot of people are still very concerned over very false claims about its negative impact on fertility. There have been, you know, hundreds of thousands of reports into V-safe, which is the CDC's data collection survey thing. You can sign up for it after you get vaccinated. They basically take some small data from you on how you're feeling, any symptoms, any adverse events. And so far there haven't been any safety signals on that end when it comes to pregnancy. Just really, really encouraging.

Now, when it comes to mRNA technology, I think if anything, it's just proving how fascinating it is and the fact that these manufacturers are working already on using this technology for research on HIV vaccines, and research for RSV, and research for other illnesses. And the RSV one is actually really interesting to me, as a parent. I've got two young kids and I've actually had a kid who was hospitalized for a number of days from an RSV infection. So, it can't come soon enough, right? We have decades and decades of

research that have prepared us for mRNA to be the new showstopper in vaccine technology and I am here for it.

Aside: That's right. mRNA vaccine technology is the Beyoncé album that she'd been working on for years that dropped at midnight on a Wednesday with no notice and will change our world for generations.

Oh, y'all have kids?

Alie: Speaking of little ones, when do all littles get jabs? What's the status on that?

Jessica: So, they are working on an age de-escalation process. Right now, the Pfizer vaccine is available for ages 12-15 and we're going to see that very soon for Moderna as well. The next age group will be 9-12, and then 6-9, and then 2 years to 6 years, then 6 months to two years. And that will, kind of, happen incrementally as the data becomes available.

There have been some estimates… and I'm kind of cautiously optimistic, that we initially said Q1, Q2 of next year, but I've heard Dr. Fauci and others predict that it could be as soon as by the end of this year. So, I mean, I wouldn't be surprised if most, at least elementary, adolescent kids are vaccinated by the fall school year time, or at least before the holidays. For the youngest kiddos, I think I'm probably still expecting it in early 2022.

Alie: Okay. And until then, how are things going with herd immunity? At what point are things feeling safe to gather? I know a lot of us have been chasing covid restrictions and saying, "Okay, what are we at now? This state versus this state?" How is herd immunity working in terms of resuming, at least in the US, some kind of "normal" life?

Jessica: I feel like herd immunity kind of got a bad rap. It became this fixation with folks when it came to… It was almost equated as an on/off switch for the pandemic, like once you reach it, it's over. And I think the better image to think about it is, like, a dimmer switch that you are, kind of, slowly making the virus less and less bright in the community. But it's not a moment, right? It's not a moment that we can specifically predict. We think it's going to be when we're close to that 80% fully vaccinated range.

And the reason we say that is because we've never lived post-covid, right? We can say that with confidence about diseases like measles, for instance. When measles vaccination coverage dropped below 95%, we immediately started to see outbreaks. We see them in clusters of cases among kids in various parts of the country, in various parts of the world. So we know, because we've lived post-measles vaccination campaigns, what it takes to keep transmission extremely low or nonexistent. We don't know that yet for covid.

So because of that, I think this obsession with a number is getting people really… Giving them either false hope or just, kind of, false expectations on what it's going to look like to be either managing covid as a less disruptive, possibly endemic virus, or a virus that maybe we do fully eliminate from our population. I think that right now we're in the 50%-ish range for people who are fully vaccinated in the US. That's not enough, right? We have a long way to go to get to at least 80%.

But again, herd immunity is not a moment in time and it's also not something we can actually claim just for one country because we live in a very global world and people are traveling. People are going to different places now, and countries are opening up, and businesses are resuming their travel. So we have to think about this in a much, much bigger population.

Alie: That's a great point.

Aside: What will the summer bring? Will it be Vaxxed and Waxed Hot Girl? Hairy But Alive 2021? Masks Off, Thongs On? That could be sandals or butt bonnets; it's none of my business.

Jessica: You know, my Vax Girl Summer is going to be kind of a lot of the same. We do have travel planned. We are planning on seeing some family who we haven't seen in a very long time over the summer. We're planning on getting on a plane with the kiddos. I kind of wanted to wait until a little bit later in the year to do that, maybe giving them a chance to get vaccinated or see those numbers be a little bit higher, but thank god my kids are not at high risk of severe infection. They don't have any underlying conditions. It's not "No Risk…"

I mean, this all kind of goes down to people's risk tolerance, right? Everybody's risk tolerance is going to be very different based on your medical experience, any medical trauma, your risk tolerance in life in general. We're kind of taking it day by day. I don't think that there's one-size-fits-all for how people can have a good summer. I am encouraging people to, you know, celebrate the fact that these vaccines do actually change your life in the sense that you are at a very low risk of getting or spreading the virus once you're fully vaccinated. So it's not like nothing changes.

A lot of things can change. But I also recognize that I and many other people have little kids who are not eligible for vaccination yet. And a lot of people, too, have either kids who are medically fragile or people in their families or their bubbles that are immunocompromised, on immunosuppressors, that it doesn't make it a very easy answer to just say, "Okay, you can do this and it's fine and it's safe." A lot of people want me to just say, "Is it safe to do this?" And I just can't answer those questions all the time.

I think outdoors is awesome, especially if the weather is, you know, pleasant. Doing things outdoors, I'm like, really fine even being in mixed company with people who are unvaccinated because I know that my risk is really, really low to get it, especially outdoors. So, I kind of feel like it depends on the circumstances. I don't love the idea of, like, hundreds and hundreds of people in a closed room for a long period of time with mixed vaccination. But you know, again, that's risk tolerance and mine's just not there yet.

Alie: Right.

Aside: What abooooouttt… masks? What do we think?

Alie: I mean, mask fashion is going to be around for a while, right?

Jessica: Yeah, I don't think masks, for individuals, are going anywhere for a while. I mean, it's June 14th here in California. Tomorrow is the day that we're supposed to see mask mandates kind of eliminated and no longer needing to be enforced in private places. They will continue to be enforced in places of public transit, and major hubs like that, airports, etc. But you know, I think that it's one of the, kind of, big public health takeaways from this pandemic that a lot of people have this muscle memory of, "I don't feel comfortable in this space. I'm just going to put a mask on." Or, "I've got a tickle in my throat," or "I've got a cough." Let's be honest, a lot of respiratory viruses are back with a vengeance right now because they've just been waiting around.

And I know that for myself, if I'm going to be traveling during flu season, I'm bringing masks with me just in case. And I think for a lot of people that's going to be a takeaway from this pandemic that lasts for a lot longer. In places like airports, and train stations, and subways, etc., I think we'll probably see them enforced for a bit longer until we get higher rates of vaccination, until we see really, really low transmission. There is a concern that the

fall could bring another surge. We hope that's not the case, which is why we're trying to get as many people vaccinated now, but that said, I think that we're probably going to see a lot of places, in the near future, say that masks are optional or masks are not required at all.

Aside: Okay, so that's a lot of body talk. And really, where would we be without our lungs and our blood vessels? But what about the bucket of neurons trying to make sense of all of this?

Alie: Do you think that there has been, psychologically, like a mixed response to reopening?

Jessica: Absolutely, and I think we have to be very, very gentle with each other. I think the process of re-socializing ourselves… I mean, I'm seeing my kids be, like, really weird as they're starting to re-socialize and being like, "Oh gosh, they haven't been around other kids. This is stressful…" Adults are the same way, right? A lot of us have very different feelings about what it means to, like, hug again; what it means to be indoors at a restaurant again. And I think that we need to be patient, and kind, and gentle with each other because we're not all going to arrive there at the same time.

And you know, having those conversations with people that you love and people who are in your community, to be like, "Hey, what are you comfortable with? Let's pivot to make sure that we're all in the same boat," because I don't think that it's fair to just be like, "Restaurants are open! Let's all go indoors right now," and not everybody's there.

Alie: Yeah, definitely.

Aside: So, there is some risk still, even if you're vaccinated. But thank your basket of biscuits it's very rare.

Jessica: I mean, breakthrough infections are happening. They're happening at an extremely low rate. Like .1% of vaccinated cases. But you know, we need all that data to better prepare us for the next pandemic. And I mean *the next* pandemic. This isn't the last one. So, it's kind of put me back into full gear of pandemic preparedness, pandemic surveillance because we've now lived it, you know, and it's no longer something I fear will happen many, many years away. I mean not saying it's going to happen immediately, but it could, and I'm just doing everything that I can with a number of incredibly gifted researchers to help us be way more prepared to either prevent… not be as impacted by another virus again.

I also want to leave people on a note of optimism. This is so much better than I expected, right? The fact that it is the middle of June and we're having this conversation knowing that at least 50% of the population has been fully vaccinated, this is wonderful. I think we're going to have a much better summer. I think we're going to have a much better fall. And I'm really hopeful that our holidays this year are going to be filled with so much more joy.

Alie: And togetherness and casseroles, perhaps.

Jessica: [*laughs*] Bring back the casseroles!

Alie: [*laughs*] Hot Casserole Winter!

Jessica: [*laughs*]

Aside: Now that we've covered the history and the present-day medical ins and outs of this pandemic, let's talk oceans. Let's talk about your emotions. Let's talk about the future. So, I hollered at my dear, dear friend who I met via *Ologies*, Cole Imperi, who is a triple-certified thanatologist, a thanabotanist, a death worker. She is President of the Historic Linden Grove Cemetery & Arboretum, and honestly, America's favorite grief counselor.

She took a break today from planting trees at the cemetery to run and record a message for you, and I love her so much.

Cole Imperi: Hi everyone. It's your favorite thanatologist, Cole Imperi. Still mohawked, but now with green hair. You see, I have changed a little. And so have you. So let's talk about that.

There's a word I developed as part of my research that might help you as you venture through post-pandemic life. The word is 'shadowloss'.

Aside: Shadowloss. Oooh, let's get into it!

Cole: So, in modern society, we are not great at honoring losses that don't involve a dead body, but shadowlosses are often the things that hugely impact us. A divorce might be a shadowloss. Or maybe you got ghosted as an adult and it left you reeling. Or getting fired unexpectedly. Those can all be shadowlosses.

Now, two people might both have gotten fired unexpectedly and one person was like, "That's the best thing that ever happened to me. It was great." But the other person maybe didn't see it coming and maybe that was a shadowloss for them. Those are all examples of shadowlosses. And if any of these things happened also against the backdrop of a pandemic, that is a double whammy.

How many of you had to cancel a wedding? Miss prom? Say a final goodbye through a YouTube live stream? Those can all be experienced as shadowlosses. You or somebody you know might also be experiencing this: At the start of the pandemic, perhaps that was a shadowloss for you. You lost, maybe, your job, or at least every semblance of what was your normal life. Gone. A shadowloss is a loss *in* life, not *of* life. And it's a word we use to define and claim an experience for ourselves. When a shadowloss happens, some*thing* dies. Not some*one*.

Shadowlosses can accompany what I call Big Deaths, which are the loss of a human or an animal that we love, but it is up to you to decide if the pandemic has been a shadowloss for you or not.

Aside: How do you know? Cole breaks it down.

Cole: We grieve both Big Deaths and shadowlosses. So if you have been a mess for months and months, or dealing with, like, you wake up and you're like, "Oh my gosh, get it together. What is wrong with you?" It might be grief. You might be grieving. And grief is not just an emotion. In fact, grief, the definition, in modern grief theory, grief is how we respond to loss. And the way *you* respond to loss is unique to you and unique to where you are in your life.

Our grief responses change as we get more practice with loss, and there are actually six categories of, like, symptoms in the grief response. You can have symptoms that are physical, behavioral, cognitive, emotional, social, and spiritual. When I'm grieving, I notice a physical symptom. I have the driest lips, always, when I am grieving. No chapstick can heal them. Also, when I'm grieving, my stutter… I have a stutter that always shows up on the letter 'd', which… there's something there. Being a thanatologist, I say the words 'dead' and 'death' and 'dying' a lot, but if I'm grieving… [*laughs*] it's really difficult.

Aside: So what if you feel like you should be joyous but you're feeling wonky? First off, Whew! Boy howdy. You are not alone, friends.

Cole: Now, things are "going back to normal." And for some reason you aren't happy about it, or you don't want the thing that you originally wanted so bad. And basically, you don't want to "go back to normal" and that is because you've changed.

All loss is change. Whether it's a Big Death or a shadowloss. And at this point, we're so far into the pandemic, it's actually not possible to go back to where we were before. And in fact, I don't think we want to. My friends in the emergency management field, they're so brilliant because, after a disaster, the goal is restoration, rebuilding, and reshaping. *Not* returning to normal. It's not possible to go back because, well, normal died.

Aside: Normal died. If you need a minute to scrawl that all over your binder or tattoo it on your face, go for it. Normal died this year. That is why we feel weird.

So, does she have any good news for us?

Cole: I do have some good news. There are three things that each of us get to see, kind of, grow and develop within ourselves after a loss. These are learned skills. So after a disaster, a trauma, a loss, what we see in people is the development of resiliency, empathy, and presence.

Ask yourself. Identify ways that you have been resilient this past year. How have you, like, fallen off the horse and then gotten back up? How have you done that? That is resiliency. These three qualities make us better people, and if we all are developing these three qualities more and more, the good news is that I think we will see a kinder, more caring society.

That said, we all have that one family member who is, like, hellbent against personal growth in all forms. I always try to have empathy for those folks, because sometimes, for some people, it's a lot safer to stay the same, even if you're unhappy, than to grow and change, than to be different from who you were.

Your life matters. Your life is precious. You have gone through stuff this year, and you have had to spend a lot of time with yourself in a way that you maybe haven't had to before. Maybe the last time you spent this much time alone was when you were a kid having to occupy yourself all weekend. You might have felt really intense and even scary emotions over this past year and a half. Things like feeling really scared, or despair, desperate, lonely. And I want to encourage you that now is a good time to grow.

That said, growth is not comfortable. But now is the time to stand up for yourself. Now is the time to take steps towards doing the things you always wanted to do. Listen: Take advantage of the extra empathy that is out there. Reach out, look inward, and jump in.

Aside: So at this very weird place in time, and space, and world history, it might feel like you have one eye on the future, like, "Should you drag a keg to the beach for Hot and Hairy Summer and celebrate being not dead?" while then keeping the other eye on news reports and variant graphs. What can we do?

Cole: The pandemic is still here, but it's also not, right? It's like mixed messaging everywhere. And the reality is, the pandemic is always going to be a part of your life moving forward. It will always be a reference point, much like when people are like, "Where were you on September 11th, 2001?" Same thing. The pandemic is a loss that is interwoven into the stories of each generation, each family, each person. It's a scar of sorts that we all will carry with us, always reminding us what we got through.

So for such an impactful thing, I'm going to recommend that we have a… we won't call it a funeral, but let's call it a funerary ritual. Something died. Your life as you knew it is gone. Whatever your shadowloss was for you. Humans have been having funerals, it's theorized, basically as long as we've been dying. And our brains really, really benefit from that ritual. So if you need it, let me be the one to give you permission to have a funeral for your shadowlosses as well as your Big Deaths. You can do that on your own, by yourself, and it still counts.

My favorite way to do this is to light, like, a 24-hour candle, pick some plants from outside, whatever works, even weeds, and then place a few objects or pictures representing what you're having a funeral for next to the candle. It kind of makes a little space of honor and it helps you validate your loss to yourself. It helps you stick up for yourself. Putting this another way, seeing is believing. Seeing is believing.

Another thing you can do is take stock of the things you did before the pandemic that helped you feel relaxed and the things you're doing now that help you feel relaxed.

Aside: Not feeling relaxed? There's a term for our cloudy, murky brain problems, my little doodlebugs!

Cole: There's something called allostatic overload, which is when we basically have so much stress built up and not enough ways to, like, get it out, that we end up getting sometimes very serious physical symptoms. Fatigue is probably the most common. So if you have had, kind of, unexplainable fatigue, you now have to sleep hard from 2-5pm every day, maybe look into this allostatic overload thing.

Before the pandemic, for a lot of people, things like going to the gym or trivia night at the pub every Thursday, those were actually stress relievers, ways to get the stress out. And a lot of the things that were forms of stress relief shut down during the pandemic. And many of us didn't replace those forms of stress release with anything. So that's something you can do for yourself right now, take stock of that and say, "How am I getting the stress out of myself?"

Aside: Remember when we replaced that stress relief with bread? I do. And Cole offers a way to talk to yourself that is so helpful, and maybe you'll use it for the rest of your life and share it with a stranger on an airport shuttle. Who knows?

Cole: Finally, everyone has had a different experience with the pandemic. Some of us had a lot of Big Deaths, some had none. Some had more shadowloss than can be counted. And if you're feeling like you made it through the pandemic unscathed or virtually untouched, that doesn't mean you didn't live through a pandemic. And if you *were* scathed and *were* touched, that doesn't mean you did anything wrong or somehow deserved it. The pandemic is a shared loss held by all of us. And I want to encourage you to stop asking "Why" questions and start asking "What" questions.

When it comes to loss, typically we start by asking why. Why did this happen? Why me? Why my family? But the problem with "Why" questions is that even though we might get an answer, it's not going to change anything. Why did my aunt die from covid? Because there was a global pandemic, and she got it, and she died. That's why. That doesn't make me feel any better.

"What" questions are special magic grief medicine. "What" questions can help us get through the loss. Instead of asking *why* the pandemic, *why* someone died, start asking *what*. What am I going to do now that I'm restarting? In what way can I honor my loved one who

died? What would feel good for me right now? What can I do to honor my loss? In what ways can I take better care of myself moving forward?

And that's what I'll leave you with. Ask "What" not "Why." Take stock of how you're getting the stress out of your body. And allow yourself the opportunity to have a funeral for all that you've lost, because all loss is change. Take good care of yourself. And hydrate. And thank you, Alie, for having me back. Bye, everybody.

Aside: Oh, Cole! Follow her everywhere. She's on Instagram @Imperi and @AmericanThanatologist. Links to her are in the show notes and on my website. Also, go find her October 2017 Thanatology episode, which has changed lives.

Okay, onto another ologist who is a dear friend. You love him so. Many of you were really touched by the coronasodes featuring the words and the voice of New York City doctor Mike Natter, who spent 2020 in the utter chaos of the front lines. And I wanted to check in with him, see how he's feeling, what he's expecting.

Mike: Hello, Dr. Ward.

Aside: I'm not a doctor. But that's fine. He is.

Mike: It's Dr. Mike Natter here. I've missed you. I hope you're well. So, in terms of where we are right now in the pandemic, I'm just so optimistic. I'm feeling just so much better and things are really, truly starting to turn that corner and things are getting back to that pre-pandemic life. And truly, and dearly, it's all thanks to the vaccine.

So many people have gotten vaccinated to the point where we've finally gotten a handle on the spread and what's going on with covid. It's allowed us to get back to our lives. And for me personally, I can't tell you how much better I feel. I feel more like myself. I feel less emotional, and sad, and depressed. I was not in a good way this past year after experiencing what I've experienced and seeing these horrible things. And for the first time in a long time, I feel hopeful and I feel good.

And I really want to pay my respects to the people who developed the vaccines and worked hard to administer them. All my healthcare brothers and sisters. It was really rough. And it was those people who got me through it, and also people like you, Alie, spreading scientific evidence-based information when we really needed it most.

So I thank you and I thank my healthcare family and those who developed the vaccine. And everyone who's been vaccinated, well done. And those who aren't, please consider it. And those that are on the fence that have questions, talk to your healthcare providers. Talk to people in your family. Talk to people who have gotten the injection. Understand there's a lot of misinformation out there and it's important to educate yourself with credible information. I'm really, really optimistic, and excited, and just really happy.

Love you guys. Can't wait to hug and kiss all my friends, and you guys. Let's do it.

So ask smart healthcare providers simple questions. If you're on the fence, consider the risks of not being vaccinated, both yourself and others. And to everyone out there listening to this, we've survived this far, and that's a lot.

Whether you were pipetting things to develop the shots, or administering oxygen to people on the brink, or crunching data, or just staying the fuck at home, thank you! And to everyone who still feels a little foggy, you're far from alone. You are very normal.

All of the ologists in this episode are incredible for being so flexible. Definitely look for Nicky and Geoff's book, *Until Proven Safe: The History and Future of Quarantine*. That is due out in July but you can pre-order it now at the link in the show notes. Amazing book. The uncut interview will be up later this week on the *Ologies* Patreon. Follow Jessica Malaty Rivera. She is awesome on Instagram; indispensable information. Dr. Mike Natter and Cole Imperi, links to their accounts are in the show notes. More links will be up at AlieWard.com/Ologies/Quarantinology.

We are @Ologies on Twitter and Instagram. I'm @AlieWard on both. Thank you to Erin Talbert who admins the *Ologies* Podcast Facebook group. Thank you to OlogiesMerch.com merch girls Boni Dutch and Shannon Feltus who host the podcast *You Are That*. Thanks, Noel Dilworth, for scheduling and all kinds of help. Susan Hale does those quizzes that you love. Emily White of The Wordary makes transcripts. She's awesome. Kelly Dwyer designed AlieWard.com. Caleb Patton bleeps episodes.

Soon-to-be spouse Jarrett Sleeper helped get this entire episode all together like the champ and the hunk that he is. [*to Jarrett*] Aren't cha? [*both giggling*] It's 1:09 in the morning! [*Jarrett in the background: "We're just getting started!"*] We're just getting started. We're going to get this up.

And of course, thanks to Steven Ray Morris, who has been an editor with us since the beginning. He hosts *The Purrrcast* and *See Jurassic Right*. And Nick Thorburn wrote the theme music. His band, Islands, has a brand-new album that came out last week. It's called Islomania. Perfect for summer.

If you stick around until the end of the episode, I tell you a secret. This week's secret is that Jarrett and I are getting married in three weeks and we don't yet have a venue. Or a dress. Or a florist. Or a caterer. Or rings. But we have a lot of faith, and optimism, and vaccines. So whatever happens, it's going to be perfect! It's just been a busy spring. We're going to figure it out.

Also, did I order a wedding band that has a glass eyeball in it that matches his, to be determined if it'll be too weird to wear? I did.

Okay. Stay safe. Hydrate. Sunscreen. It's okay if conversations are awkward. We're all feeling it. Okay, berbye.

Transcribed by Emily White at TheWordary.com

More links you may enjoy:

Donations were made to: #IndiaAgainstCoronaVirus, 500 Women Scientists, and The School of American Thanatology

Pre-order Geoff Manaugh and Nicola Twilley's book *Until Proven Safe: The History and Future of Quarantine*. More info at untilprovensafe.com

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