**Jeongyoon Han:** Nate.

**Nate Hegyi:** Jeongyoon.

**Jeongyoon Han:** I'm going to tell you the start of a redemption arc.

**Nate Hegyi:** Just the start?

**Jeongyoon Han:** For now.

**Erica Walker:** And it doesn't have a happy ending either.

<<music begins>>

**Jeongyoon Han:** So this is Erica Walker. She says that in a former life…

*Erica Walker: I was a fit. I am a failed architecture student, among other things.*

**Jeongyoon Han: And most recently…**

*Erica Walker: Yeah, I was an artist. Like I, I made furniture and I was a bookbinder as well. So I bound books.*

**Jeongyoon Han: And she was living in a great spot in Brookline, Massachusetts.**

*Erica Walker: Up until that point. I just remember my life was very peaceful. I mean, I had upstairs neighbors, they would be you know, you would hear them on occasion, but nothing like what happened when –*

**Jeongyoon Han: This is where things go downhill, because soon enough, she got upstairs neighbors. A couple with kids.**

*Erica Walker: And from the first day they moved in, I just heard this. Doo doo doo doo doo doo doo doo. And it would last, like, 24 hours a day.*

**Nate Hegyi: I could see how that would be a little annoying.**

<<music continues>>

**Jeongyoon Han: Yeah, it was to her because the kids would thump and patter around as early as 6 a.m. on most days. So she tried talking to the neighbors about it, but it didn't work.**

*Erica Walker: But then I was like, I'm just going to take them to small claims court. So I got like a little recorder. I started collecting like my saliva samples because I read somewhere that, you know, you can test your like, stress response. And I wanted to send them off to a lab. I was going to build, like this elaborate case and get them evicted.*

*Jeongyoon Han: Oh, my God.*

*Erica Walker: I know. It's like, ridiculous.*

*Jeongyoon Han****:*** *No, but I mean. I feel like that says a lot about how much it constantly impacted you.*

*Erica Walker: It literally ruined my life. Like I just had no. Like, you never knew when it was going to happen. You never knew how long it was going to last. And it was like this type of sound that just got in your bones.*

<<music fades>>

**Nate Hegyi: I can see how that would be annoying, but like going all the way to small claims court, that's kind of I don't know, that's kind of that's kind of wild.**

**Jeongyoon Han: Okay, maybe for some this might be an overreaction, but people go to great lengths to control their soundscapes. We buy noise canceling headphones or white noise generators.**

<<sound of white noise generator>>

**Nate Hegyi: There are those ASMR videos that people are into.**

*ASMR YouTube video: Let's get started by taking some deep breaths.*

**Jeongyoon Han: I'm hooked on those ten-hour-long YouTube compilations of rain sounds.**

<<sound of rainfall>>

**Nate Hegyi: It's weird that some noises can be, like, totally infuriating. But then there's others that are just really soothing.**

**Jeongyoon Han: Or sometimes even the same noises are both — like people who love fireworks until it's, like, 11 p.m. on July 8th and someone down the street is still popping them off.**

<<fireworks sound effect>>

*Erica Walker: It was so constant. Um, it — I just felt helpless, like I couldn't do anything. And like, all of the tools that I thought I could turn to, to get relief, there was nothing.*

<<music swells and fades>>

<<fireworks, footsteps sound effects>>

**Jeongyoon Han: And here’s the thing… the world has been literally getting louder during the past few centuries. And because of humans, the National Park Service estimates that noise pollution doubles or triples every 30 years.**

**Nate Hegyi: Wow.**

**Jeongyoon Han: Even firetruck sirens have actually gotten louder. Estimates from 1912 show they were 96dB loud from 11ft away.**

 **In 1974, it was at 114.**

**And a journalist in 2019 recorded them at 123 decibels at a 10-foot distance.**

<<fire siren sound effect>>

**Jeongyoon Han: There's more cars. Airplanes, engines. Bulldozers.**

<<cars, airplanes, bulldozer sound effects>>

<<music>>

**Jeongyoon Han: So. Today we've got an episode all about sound.**

**Nate Hegyi: This is, of course, Outside/In. I'm Nate Hegyi here with Jeongyoon Han, who will be our guide today as we explore three different sonic landscapes.**

**Jeongyoon Han: Noise, silence and something in between.**

**Nate Hegyi: And what our quest for sonic satisfaction says about being human in this noisy, noisy world.**

*Jeongyoon Han: This is the first quiet park to be designated in all of Europe.*

*Nora Ma: I don't think it's that quiet.*

*Jeongyoon Han: You don't think it's that quiet?*

**Nate Hegyi: Stay tuned.**

*ASMR YouTube video: Breathe in through the nose. I'm going to push all of this oxygen, all this life force energy towards you.*

<<music ends>>

**Jeongyoon Han: All right. So we'll get back to Erica later in the show. But first, I wanted to really get at how noise and silence affect us. So I had to get in the thick of one end of it. And I brought producer Felix Poon with me on this journey.**

*Jeongyoon Han: What's the noisiest part of Boston, in your opinion?*

*Felix Poon: Probably [Boston] Logan [International] Airport. You just go to the tarmac.*

*Jeongyoon Han: [Laughs] Just stand – Stand there.*

**Jeongyoon Han: So Felix lives in Boston. And, you know, when you live in a city, you definitely get used to noise.**

*Felix Poon: But even where I live, Franklin Park, on like, a hot summer night, like a lot of people are blasting music. Or like there's a lot of these high school kids that have these mopeds and they're just like, revving them up.*

**Jeongyoon Han: So we walked through some street intersections and it wasn't like, gosh, like, “I can't hear myself thinking” kind of loud. But with – with all those cars honking at each other…**

*Jeongyoon Han: They’re beeping, but you know that everyone is eventually going to move… like you don’t need to beep. It’s just irritating.*

*Felix Poon: People love honking their horns, you know? They like being angry.*

*Jeongyoon Han: I don’t like being angry. I don’t like having to honk my horn.*

*Felix Poon: What? I can’t hear you, it’s too noisy!*

**Jeongyoon Han: So I wanted to know what’s actually happening biologically when we’re subjected to noisy soundscapes — so I had Rachel Buxton, a biodiversity conservationist and sound ecologist —**

<<music begins>>

*Rachel Buxton: Do you want me to start from the beginning of that idea?*

*Jeongyoon Han: Yeah. Yeah, that would be great.*

**Jeongyoon Han: Walk me through some of that. And FYI, the tape isn’t very good.**

**Nate: Kind of ironic for an episode about sound.**

**Jeongyoon Han: We had technical difficulties!**

*Rachel Buxton: There’s sort of three main ways that noise affects an animal and the first one is masking.*

**Nate Hegyi: Masking?**

**Jeongyoon Han: So masking is when a sound covers up another one. So say you’re a mouse living next to a busy highway, and it’s so loud you don’t hear the fox sneaking up behind you.**

*Rachel Buxton: You know, they’re listening for predators approaching, and if they can’t hear that, then, you know, maybe they’re more likely to be eaten by that predator.*

**Nate Hegyi: Okay, I get that now.**

**Jeongyoon Han: The next is distraction. Animals, us included, have limited attention spans to process the sights, smells, feelings and sounds around us.**

*Rachel Buxton: And if an animal is too busy paying attention to noise, then it has less time to do other things, like feed itself, or anything else that it needs to do.*

**Nate Hegyi: Or navigate a city. Like, every time I'm driving in a strange city, I always have to turn down the radio and it has to be completely quiet or else I get totally lost.**

**Jeongyoon Han: So the last one is when an animal thinks a sound is a threat: they hear something sketchy, so they run away from it.**

**Nate Hegyi: Yeah, absolutely. You hear something like an incoming train, for instance, you're going to get out of the way.**

**Jeongyoon Han: But – but maybe it’s actually just a noisy hiker bumbling through the woods – and so you spook an animal away from a food source or something.**

**And because our world is getting so much noisier, these problems can lead to wholesale behavioral changes for some species.**

<<music swells and fades>>

**In Alberta, Canada, for example, sparrows living near noisy oil and gas pumps and other big infrastructure gadget things are singing their love songs differently.**

**Nate Hegyi: Huh.**

**Jeongyoon Han: They're actually becoming screechier.**

**Nate Hegyi: Wait, what do you mean by screechier?**

**Jeongyoon Han: So researchers recorded sparrow sounds —**

<<recording of bird sounds provided by Miya Warrington to the [New York Times](https://www.nytimes.com/2018/03/13/climate/oil-field-birds-change-songs.html)>>

**and then found that they're using entirely different pitches that give off this screechy effect.**

<<recording of bird sounds provided by Miya Warrington to the [New York Times](https://www.nytimes.com/2018/03/13/climate/oil-field-birds-change-songs.html)>>

**A study in Western England found that noise from road traffic led to bat activity decreasing by two thirds in the area.**

**Nate Hegyi: Wow.**

**Jeongyoon Han: Some frogs have a harder time finding mating partners because they can't hear them over external noise. Also, loud ships, sonar devices and oil wells mess with dolphins when they use echolocation to find food and to communicate. These sounds have literally disoriented dolphins and left them stranded on beaches.**

**Nate Hegyi: Wow. That's way worse than I thought it was. I just thought I was getting grumpy because I'd hear a tinny cell phone or a bunch of cars honking. But – but this is way worse.**

**Jeongyoon Han: But humans weren't built to handle this level of noise either.**

<<music begins, sound of car driving by>>

**Before the Industrial Revolution, some of the sounds that people were used to were… like… roosters or church bells maybe…?**

**Nate Hegyi: Or like goats?**

**Jeongyoon Han: Horses clunking on, on cobblestone streets? I don't know. Stuff like that. But with more noise cluttering our cognitive processing all the time...**

*Rachel Buxton: That can lead to stress and, you know, that can lead to a whole bunch of downstream health issues for us.*

**Jeongyoon Han: Increased sound pollution** [**can lead to**](https://www.newyorker.com/magazine/2019/05/13/is-noise-pollution-the-next-big-public-health-crisis) **ringing in your ears, heart disease, obesity, diabetes. According to the Western Europe Office of the World Health Organization, traffic noise in particular leads to an annual loss of at least 1 million healthy years of life.**

<<music fades>>

**And around one-third of people in the U.S. live where it’s noisy enough to cause adverse health impacts.**

<<music begins>>

**Nate Hegyi: Wow. We've got to get Felix out of Boston like, ASAP.**

**Jeongyoon Han: We’ll see.**

*Jeongyoon Han: I did not enjoy this experience overall.*

*Felix Poon: No?*

*Jeongyoon Han: No. I mean, it wasn't like it was extremely loud, but…*

*Felix Poon: But I feel like it is in the ears of the beholder. Can we say that?*

<<music swells>>

*Jeongyoon Han: I feel like it's gotten quieter.*

<<music ends>>

**Jeongyoon Han: Okay, so, on to our next soundscape. Do you get bothered by silence?**

**Nate Hegyi: Uh, depends on the situation. I don't like working in silence — but actually, no, I do get bothered by, by complete silence. I always like to have noise. Crowds or some background white noise. Got to have that.**

**Jeongyoon Han: So, so noise pollution is so everywhere that it, it really is rare to experience that true absence of sound. But I wanted to hear what that sounds like, which brought me to the University of New Hampshire.**

*<<Jeongyoon drives up to Stan Ellis, rolls down car window>>*

 *Jeongyoon Han: Hi. Are you Stan?*

*Stan Ellis: I bet you’re Jeongyoon.*

*Jeongyoon: Yes I am.*

*Stan Ellis: I saw someone driving in looking confused. And it was you!*

*Jeongyoon Han: [Laughs] I look confused! Hi, how are ya?*

*Stan Ellis: Good, I’m fine, how are you?*

*Jeongyoon Han: Good!*

**Jeongyoon Han: So this is Stan Ellis. He's an engineer within the space department at UNH. Great guy. He also introduced me to Jim Connell, professor in physics and astronomy.**

*Jim Connell: I had a high school chemistry teacher who said cleanliness is next to godliness, except in a lab where it comes first.*

**Nate Hegyi: [chuckles]**

**Jeongyoon Han: Their science hall has a ton of cool stuff, like debris from actual rockets that went into space. And it had the thing that I was looking for, which is an anechoic chamber.**

<<music begins>>

**Nate Hegyi: Wait, wait, wait. So. So what is an ana — how do you say that? An anechoic chamber?**

**Jeongyoon Han: Anechoic, anechoic.**

**Nate Hegyi: Anechoic. I have never heard of an anechoic chamber.**

**Jeongyoon Han: So these are special rooms that stop electromagnetic waves or sound waves. So they totally deaden sound.**

**Nate Hegyi: Huh.**

**Jeongyoon Han: And the one at UNH is about the size of a bedroom, mostly empty except for a bench to sit on, and it has these giant, blue foam spikes on all sides of the walls — even the ceilings. So the foam absorbs the sound. Really well.**

**Nate Hegyi: Anaerobic is like –**

**Jeongyoon Han: Mm. Exactly.**

**Nate Hegyi: Lacking oxygen.**

**Jeongyoon Han: Same thing**

**Nate Hegyi: An-echo. Lacking echo.**

**Jeongyoon: Mhm.**

**Nate Hegyi: Got it.**

*Stan Ellis: And then you can go into the chamber, see how the sound changes. I'll stay outside.*

*Jeongyoon Han: How would you describe how the sound changes?*

*Stan Ellis: It's going to get really weird when you can't hear yourself talk. It's just, you get no echo. It's very strange. Go on in.*

*Jeongyoon Han: Oh no. [chuckles] Well, I'll be here with Jim.*

*Stan Ellis: I’ll be sure to let you out.*

*Jeongyoon Han: Okay.*

*Stan Ellis: I’ll give you five minutes.*

*Jeongyoon Han: Okay.*

**Nate Hegyi: Were you scared?**

**Jeongyoon Han: Yeah, I was a little nervous about it because I heard something about possible side effects of, like, being in a quiet space.**

*Mercede Erfanian: And this is something that has been reported by a lot of astronauts because we know that sound does not travel in space.*

**Jeongyoon Han: This is Mercede Erfanian, a neuroscientist studying sound at the University College of London.** **She says there are people who really dislike being in silence, and that could be because we're programmed biologically to expect a certain amount of sonic stimuli.**

**Nate Hegyi: This is why there are so many movies. When a character is like…**

 **“It’s quiet… It’s too quiet.”**

**Jeongyoon Han: Mhm, exactly. In a weird way, silence raises all these alarm bells for us. It heightens our awareness. And that's that's a problem for astronauts doing spacewalks where there's literally no sound except the ones coming from your own body inside of a spacesuit.**

*Mercede Erfanian: So you can't hear anything. It's just sheer silence in the space. So when your brain does not get enough information or auditory information, it starts to make it because it will go crazy if it does not get that information.*

<<music fades, sound of doors closing in anechoic chamber>>

*Jeongyoon: Okay. The doors have closed.*

*Jim Connell: Yeah. And you can hear how quiet it is. And you can hear that there's no echo of what you say.*

*Jeongyoon Han: No. [long pause] I can't tell if this is — my — just — a very actual reaction or just my brain trying to adjust, but it feels like I can't breathe as much, or – it's not – my breathing is not as full. I don't know if that's a result of the silence. Of it being quieter. I can still hear. Some. White noise type of — wind? — Not wind, but something overhead. But I feel very closed in.*

*[pause]*

*Jeongyoon Han: How do you feel, Jim?*

*Jim Connell: Well, again, I'm a little bit used to it. It's interesting. I tend to feel if I close my eyes more like I'm in a big desert area where there's nothing around to reflect sound.*

*Jeongyoon Han: A big desert area.*

*Jim Connell: Yeah. Because it’s like my words just go off to infinity.*

*Jeongyoon Han: Okay, I'll try that now.*

*<<music begins>>*

*Yeah. I can see that.*

*<<music swells>>*

**Jeongyoon Han: And then Stan was like, okay, that's that's enough. And then pulled this out of the chamber.**

**Nate Hegyi: Wow. That was. It has just sounded like you were in, like, the best studio ever. I felt like I could hear every little, like… [makes mouth-clicking noises].**

**Jeongyoon Han: Everything you don't want to hear. You were able to get it all.**

*<<music fades>>*

**Nate Hegyi: It sounded like you were just encapsulated in a, in a pillow. Like just a, just a giant, comfy pillow.**

**Jeongyoon Han: But have you — have you heard of the composer John Cage?**

**Nate Hegyi: Yes, I have. Yeah, I was kind of really obsessed with him when I was in my early 20s. And in that kind of peacoat-wearing, artsy phase of my life. So.**

**Jeongyoon Han: So, then, you probably know this, but he was really inspired by silence. And that was one of the core ideas behind one of his most famous and notorious pieces: *4’33”*.**

**Nate Hegyi: Yes, I have heard of that piece, but I don't think I've actually heard it.**

**Jeongyoon Han: So the piece premieres in 1952, and John Cage gets his friend, uh, this pianist David Tudor, to perform it in Woodstock, New York.**

**Nate Hegyi: Okay.**

**Jeongyoon Han: So what happens is David walks up to the piano.**

<<sound of person walking>>

**Nate Hegyi: Mhm.**

**Jeongyoon: He starts a stopwatch,**

<<sound of stopwatch clicks>>

**and then he closes the lid,**

<<piano lid closes>>

**and then he just sits there. And that's the start of the performance.**

**Nate Hegyi: Completely still.**

**Jeongyoon Han: He doesn't touch a single piano key. Yeah. And then after a bit longer, he restarts the stopwatch**

<<sound of stopwatch clicks>>

**and continues to sit there for four minutes and 33 seconds until the piece is done.**

<<music begins>>

<<audience claps>>

**Nate Hegyi: Talk about like an awkward silence. I'm sure people in the audience were just like, dumbfounded by it.**

**Jeongyoon Han: Yeah, but that's the entire thing that John Cage was flirting with.**

**Nate Hegyi: Hmm.**

**Jeongyoon Han: Because in his eyes, this wasn't four minutes of silence. When someone in the crowd coughs or shifts uncomfortably in their seat… That’s the real performance.**

**Nate Hegyi: So like every performance of four minutes and 33 seconds is different because of the sounds.**

*John Cage: The sound experience, which I prefer to all others, is the experience of silence. If you listen to Beethoven or to Mozart, you see that they're always the same. But if you listen to traffic, you see it's always different.*

<<audio clip from city streets, overlaid with music>>

**Nate Hegyi: After the break, some of the ways people propose we try to think of the sounds around us. Stay tuned.**

<<audio clip of city streets>>

<<audio clip of stop watch>>

**Nate Hegyi: Welcome back to Outside/In. I'm Nate Hegyi here with Jeongyoon Han. And so far in this episode we visited downtown Boston to talk about noise pollution… and an anechoic chamber to talk about silence.**

**JH: And that brings me to our third sonic landscape for this episode… and the search for the ideal space between too noisy… and too quiet.**

*QPI representative: Quiet Parks International is the first and only organization committed to the preservation of quiet for the benefit of all living beings.*

**Jeongyoon Han: So there's this nonprofit that scopes out and nominates certain public spaces as designated quiet parks. And there are hundreds of them across the U.S. and the world, from urban parks in cities to big, wild forests.**

**And they do it partially because there are studies that show being immersed in nature can help you feel relaxed, restored. And that will in turn help you adjust your attention span.**

*QPI representative: Quiet is a resource. And if we don’t do something to protect it now, it will be much harder in the future to regain what we’ve lost.*

**Nate Hegyi: So, when they say it’s a designated quiet place, does that mean you actually have to be completely silent in it, or something, like, not play a Bluetooth speaker or something?**

**Jeongyoon: No, they don’t have any enforcement power, so they can’t tell you to be quiet. You can still do what you want.**

**Nate Hegyi: Okay.**

**Jeongyoon Han: The thing that makes them quiet, though, according to this group, is that you can’t hear as much human-made noise pollution when you’re in them.**

 *Jeongyoon Han: Hello, okay, yes. This works.*

**Jeongyoon Han: So a few months ago I got a chance to visit the first official one in Europe, which is a place called Hampstead Heath in London.**

**Nate Hegyi: It’s like the perfect English park name.**

*Jeongyoon Han: So what’s your name.*

 *Rob Steadman: My name is Rob Steadman.*

*Jeongyoon Han: And what brought you to this park today?*

*Rob Steadman: Well, I live in the area, so I'm just kind of working from home today. So taking a bit of a break from work and having a wander.*

*Jeongyoon Han: What about it do you like?*

*Rob Steadman: It's just… It's a lot more natural than a lot of the parks around London. Like just down the road, I've got Primrose Hill, which is really nice, but it's a bit more wild here, and kind of let to, let to overgrow. So I kind of like that element of it. Um…*

**Nate Hegyi: That sounds really lovely!**

**Jeongyoon Han: It was quite peaceful, I gotta say, it was great. At times.**

*Jeongyoon Han: Does it feel any quieter?*

*Rob Steadman: Perhaps it's yeah, it's quiet. Everyone it's quite quiet and peaceful here, I suppose. I think in a lot of the other parks, you get people kind of running, jogging and talking with one another loudly…*

*<<sound of helicopter drones over Hampstead Heath>>*

*Rob Steadman: I don't think I've ever seen anyone bring guitars down here or anything like that, which you kind of get in other parks.*

*Jeongyoon Han: Mm.*

*Rob Steadman: But I think there's a lot of rules and regulations about the parks. I don't know all of them, but…*

**Nate Hegyi: Okay. So to be a Quiet Park International, it's totally cool to have a helicopter or a plane flying overhead all the time, I guess.**

<<music builds>>

**Jeongyoon Han: It's one of the requirements, actually…**

**Nate Hegyi: [laughs]**

*Nora Ma: Okay. Hi. My name is Nora Ma. I'm a student and I study here in London.*

*Nora Ma: I don't think it's that quiet.*

*Jeongyoon Han: You don't think it's that quiet?*

*Nora Ma: No, because, like, just from this experience now, you can hear like, construction going on in someone's house. You can hear someone calling for their dogs. But I'm sure if you're like in the middle of the heath, it might be much more quiet.*

*Jeongyoon Han: I'm curious to get your thoughts on this, too. Oh, Corgi!*

**Nate Hegyi: [00:30:37] Focus, Jeongyoon, focus!**

*Jeongyoon Han: Oh she’s so cute.*

 *Person: Thank you.*

 *Jeongyoon Han: Aw.. Have a good one!*

 *Person: You too!*

**Nate Hegyi: [Laughs.]**

<<music dies.>>

**Nate Hegyi: So what is your takeaway from your visit to the Heath? That, like quiet parks aren’t possible?**

**Jeongyoon Han: I think it’s that there’s not gonna be a place that’s gonna be completely quiet. But I still enjoyed it. I had a nice time, because it’s a social space. You get to see everyone there enjoying themselves, doing whatever they want. Like people walking their dogs,**

**Nate Hegyi: Yeah.**

**Jeongyoon Han: Or, for me, people watching was really fun. Um. It’s also true though, that humans make noise, and that can be hard to manage at times.**

<<music builds>>

**Jeongyoon Han: So this brings us back to our special friend Erica Walker, from the very beginning of the episode.**

**Nate Hegyi: We are talking full circle.**

**Jeongyoon Han: So she tried for a year and a half to evict her neighbors. But her various efforts did not work.**

*Erica Walker: And so eventually I ended up just moving out.*

**Jeongyoon Han: And that whole experience really affected her.**

*Erica Walker: And so I was like, Wow, this is something I never thought about. And my friends were like, We really think you need to take all of this energy and put it into something productive.*

<<music continues>>

**Jeongyoon Han: And soon enough, our failed architect, artist, furniture maker Erica Walker, was on the fast track to earning her degree in public health. And researching sound pollution became her passion.**

*Erica Walker: I know what it's like to suffer from sound. So when I know that someone is at the point where they're trying to reach out to get relief, I know it's rock bottom.*

**Jeongyoon Han: She launched the Community Noise Lab, now based at Brown University in Providence, Rhode Island. Communities come to her with all sorts of noise complaints, and she tries to figure out what might help.**

*Erica Walker: Uh, we work with communities near airports, communities near major industrial networks, concerts, firework issues, motorcycles, cars with the bass…*

**Nate Hegyi: That's a lot of sound. Like, how do you deal with all that? I mean, like, how do you stop people from popping out fireworks, you know, at midnight in August?**

**Jeongyoon Han: Her approach was about having conversations with people, trying to get them to talk things out and find compromise.**

*Erica Walker: So for me, I kind of just like to take it on an individual community by community basis, individual by individual basis, because ultimately it's about what an individual and what a community can or cannot control.*

**Nate Hegyi: That kind of sounds like a tough job.**

**Jeongyoon Han: Yeah, for sure. She's come to learn a lot of lessons about sound. And one of them is that having neighborhoods or cities strive to reach a point of natural, quiet or silence isn't the right approach.**

<<music fades>>

*Erica Walker: Quiet and silence means that somebody needs to be quiet. Somebody has to stop doing whatever they're doing. And in today's society, usually the people who have power and control are the ones that can exert silence and quiet on other people. And they usually have their preconceived notions about what's loud and what's quiet.*

**Nate Hegyi: That's interesting.**

**Jeongyoon Han: She says that the way people talk about noise can be coded with racial bias.**

*Erica Walker: ‘These people are loud because I don't want them in my neighborhood. These people are loud because they bring down my property values.’ So I think that when we're looking at quiet or silence, we are looking at a power differential where people who have the power to silence people will. And who are they silencing?*

<<music begins>>

**Nate Hegyi: This is a pretty dramatic shift from someone who tried to have her upstairs neighbors evicted because they had kids.**

**Jeongyoon Han: Like I said, a redemption arc.**

*Erica Walker: So I was — I was horrible. I didn't say it was a good person. Uh…*

**Jeongyoon Han: Anyways, anyways… when it comes to having designated quiet spaces, Erica is only half on board.**

*Erica Walker: If it's equitably distributed in the community where everyone is able to access that space, I think that's great. But I don't know if it is the solution to the community noise issues because some people are creeped out by silence and some people just like, ‘Look, I want my neighbors to stop running upstairs. I don't. I like living in a city. I love hearing the horns. That's just, that feels like New York City, that feels like Providence.’*

<<tape of city streets grows, music fades>>

**Nate Hegyi: It's like what John Cage said, like the world just becomes a symphony.**

**Jeongyoon Han: The world is your oyster.**

<<music begins>>

**I don't know if that's how the phrase is, actually.**

**Nate Hegyi: It’s not.**

**Jeongyoon Han: Hahah, but anyway…**

**Nate Hegyi: okay, well, the world is your sonic oyster. Enjoy.**

<<music continues>>

**Nate Hegyi: Okay, so before we sign off — we want to know, what are your favorite and/or least favorite sounds, in nature, or otherwise. Like, I cannot stand the sound of someone chewing an apple. That is just one of the sounds I don’t like. Uh, what sound bothers you? What sound do you love? Send us a voice memo at outside in at nhpr dot org.**

**This episode was produced by Jeongyoon Han.**

 **It was mixed by Jeongyoon Han and Taylor Quimby.**

**Editing by Taylor with help from me, Nate Hegyi, Jessica Hunt and Felix Poon.**

**Our executive producer is Rebecca Lavoie.**

**Special thanks to Ethan Kross. His book, “Chatter,” is about how we can harness our inner voice. He has an interesting chapter about how being in nature helps us emotionally, mentally, and physically. You should definitely check it out.**

**Music in this episode by Blue Dot Sessions, Edvard Greeg, and Mike Franklyn. Outside/ In is a production of New Hampshire Public Radio.**

**Nate Hegyi: Should I do that in ASMR?**

**Jeongyoon Han: [whispering]: Uh-huh.**

**Nate Hegyi: [whispering]: Outside/ In is a production of New Hampshire Public Radio.**

**Jeongyoon Han: [whispering]: Nicely done.**

**Nate Hegyi: [in normal volume]: Perfect.**

**Title:** Shhhhhh! It’s the sound and silence episode

**Summary**: The world is literally getting noisier. How can we manage our sonic landscapes?

**Teaser:** Humans are noisy. The National Park Service estimates that all of our whirring, grinding, and revving machines are doubling or even *tripling* global noise pollution every 30 years.

A lot of that noise is negatively affecting wildlife and human health. Maybe that’s why we’re so consumed with managing our sonic environments, with noise-cancelling headphones and white noise machines — and sometimes, we get into spats with our neighbors, as one of our guests did…

So for this episode, producer Jeongyoon Han takes us on an exploration of three sonic landscapes: noise, silence, and something in between.

*Featuring Rachel Buxton, Jim Connell, Stan Ellis, Mercede Erfanian, Nora Ma, and Rob Steadman.*

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**LINKS**

Behavioral ecologist Miya Warrington and her colleagues [found](https://www.nytimes.com/2018/03/13/climate/oil-field-birds-change-songs.html) that Savannah sparrows changed the tune of their love songs as a result of noisy oil fields in Alberta, Canada *(The New York Times)*

Bats have [changed](https://www.theguardian.com/science/2020/apr/15/traffic-noise-reduces-bats-ability-to-feed) their day-to-day habits because of traffic noise, according to research conducted in the U.K.

Natural sounds are proven to improve health, lower stress, and have positive effects on humans. Rachel Buxton and her colleagues wrote about that in their [study](https://www.pnas.org/doi/abs/10.1073/pnas.2013097118) from 2021.

Erica Walker’s organization, the [Community Noise Lab](https://communitynoiselab.org), monitors noise levels in Boston, Providence, and Jackson, Mississippi. You can read more about her work in this [article](https://www.harvardmagazine.com/2018/03/erica-walker) from *Harvard Magazine.*

Are you interested in going to a Quiet Parks International-designated [quiet park](https://www.nationalgeographic.com/travel/article/discover-the-planets-last-few-naturally-quiet-places)? The organization has a [list of spaces](https://www.quietparks.org/quiet-places) across the world that they’ve certified.

Here’s a [radio story from NPR](https://www.npr.org/2000/05/08/1073885/4-33) that serves as an homage to John Cage’s 4’33”.

If you were ever curious about why bird songs are good for you… This [article](https://www.washingtonpost.com/wellness/interactive/2023/birds-song-nature-mental-health-benefits/) from the *Washington Post* should be on the top of your reading list!

This [*New Yorker* piece](https://www.newyorker.com/magazine/2019/05/13/is-noise-pollution-the-next-big-public-health-crisis) from 2019 outlines how noise pollution might be the next public health crisis. Since that article, there’s been even more research showing that [noise can take years off of our lives](https://www.nytimes.com/interactive/2023/06/09/health/noise-exposure-health-impacts.html).

So, you’ve heard lots of sounds in this episode. But do you want to see what sounds *look* like? Click [here](https://www.washingtonpost.com/science/interactive/2023/nature-audio-pictures/) — and this is not clickbait!

Ethan Kross, who is a psychologist and neuroscientist, wrote a whole book about noise — the noise in your head, to be precise. It’s called [*Chatter*: *The Voice in Our Head, Why It Matters, and How to Harness It*](https://www.ethankross.com/chatter/).

Mercede Erfanian’s research into misophonia and soundscapes is fascinating. You can hear her speak on the subject of different kinds of sounds in a [show](https://the1a.org/segments/the-scientific-method-can-color-sound-help-us-get-things-done/) aired from 1A, or watch her [presentation](https://www.youtube.com/watch?v=HI93oLLhojE) on the effects that soundscapes have on humans.

**CREDITS**

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Executive producer: Rebecca Lavoie

Music by Blue Dot Sessions, Edvard Greeg, and Mike Franklyn.

Our theme music is by Breakmaster Cylinder.

*Outside/In* is a production of New Hampshire Public Radio