

# Sensing Sound

Ali Donaldson, 2022

*It's early October in rural France. Cloudy, cool and drizzly. On my daily morning walk today, I'm paying attention to what I'm hearing. Tyres on a distant road, birds going ss-ss-ss, the crunch of my shoes on country paths, drips of rain on autumn leaves, and the whooshing of wind amplified by my hearing aids. You might be surprised to know that someone with hearing loss would be able to pick up so many sounds. Without modern technology I might miss the birdsong and raindrops but I would still hear loud wind and car noise.*

If you're lucky enough to have good hearing, I wonder if you can imagine how a person with hearing loss senses sound? Can they enjoy music and sound art? What difference do hearing aids and other technical fixes make? And what's it like to live with hearing loss all the time?

I'll start with music. It may be surprising to some that, with hearing aids, my enjoyment of music – and sound art – has not been diminished at all. Provided it's not too loud, I still get pleasure from listening to music, whether recorded or live, classical or jazz, African or Indian. There are exceptions, usually linked to room acoustics. Once when I went to St Paul's Cathedral to listen to a choir piece, it was a maddening experience. I was sitting far away from the singers, and all I could hear was a jumble of echoing voices and noise. (In this case, it wasn't just me. The person I was with had reasonable hearing and was also disturbed by the acoustics.)

My hearing loss happens to be partly genetic and partly age-related. I started to notice it in my 50s, since when it has gradually worsened. This is not as unusual as some might think – virtually everyone, from around their 50<sup>th</sup> birthday, will begin to lose some hearing.

## *The experience of hearing loss*

Anyone reading this who happens to be a sound designer, sound technician, sound artist or composer might be curious about the *experience* of hearing loss. After all, audiences are not always young, nor do they all have impeccable hearing.

One early and surprising discovery for me was the extent to which hearing – or rather understanding – happens not in the ears but *in the mind*. Take conversation. If the room acoustics are difficult, more than one person is speaking at a time, or people are talking over each other, I struggle to disentangle what I'm hearing and have to concentrate intensely. My mind constantly has to fill in gaps – relying on every cue it can get, including tone of voice, gestures and context. I soon realised there was little point in expecting to understand 100%.

Making sense of environmental sounds can be a challenge too, and it often produces strange confusions. I struggle to distinguish planes from the rumble of thunder. I hear a ring tone and it turns out to be a bird calling. I can't tell which direction a specific sound comes from, whether it's some creature scratching behind a skirting board or the noise of a combined harvester in a distant field coming through an open window. Not long ago, I was lying alone in bed and heard steady dripping on the ceiling. Panic! Did we have a leak? No, it turned out to be a builder at work on a distant roof.

One of the most common misconceptions about hearing loss is that it's about *volume*. In reality, what people with age-related loss need is not shouting or impatience but *clarity* and *definition*. If someone is speaking, I almost always hear *something*, but it might seem indistinct. And if someone faces away from me, makes throwaway remarks, addresses me from another room or talks to me from the other side of the garden, I will almost certainly miss what they say. Whispering, throwaway remarks and sotto voce speech regularly leave me baffled. One of the worst things is when a speaker starts laughing at their own joke before they have finished telling it. I can ask people to slow down or repeat, but that interrupts the conversation, draws attention to me – and spoils the joke.

Hearing loss is as much an emotional as a technical problem. Being able to understand – and be understood – are fundamental human needs. Struggling to understand speech can be tiring – but it can also leave a person feeling left out. In noisy situations – e.g. when people are talking over one another – I sometimes feel tempted to stop straining and to detach myself from the conversation. Hearing loss is more-or-less invisible, and if nobody notices me struggling or tries to draw me in – I occasionally feel sorry for myself.

To fight back, I can ask people to move closer together, I can choose where I sit in relation to others. I can even suggest we move outside to take advantage of the drier acoustic in the open air. According to my husband, I have developed a tendency to talk more than I used to. I'm not sure I accept his assessment... but it's true that it is sometimes easier, at a noisy party, to speak than to listen and risk not understanding.

### *Learning the language of sound*

The good news is I live with a composer and sound scholar, my husband Jean. Through our conversations I have learnt so much about the complexity of the sound world, and I have also discovered a new and different language to describe the experience of sound.

Let's start with speech. Rather cruelly, the frequencies that nature typically deprives us of later in life are in the mid-to-high zone – the very sounds that are crucial for understanding conversation. It follows that consonants frequently escape me. It can take as little as missing one letter – such as a 't' or a 'p' – for me to lose track of what's being said. Such sounds, says my resident sound expert, are "shaped breath" (shaped by mouth and tongue). The technical word is "plosives", and English has six of them: p, b, t, d, k and g.

In contrast, vowels pose little problem. They have a distinct “pitch” and more “definition” – in other words, they are less complex than consonants. And whereas consonants are short-lived, vowels (just like music) develop in time. They have a longer duration than consonants. Perhaps that offers a clue as to why I virtually always get the *overall shape* of words, even if the meaning escapes me. And maybe the ability to hear vowels explains why I pick up *tone of voice* as well as I ever have. I may even have become more sensitive to it.

What about noise? Until it was explained to me, I thought noise was just something annoying and loud. But apparently, it’s “a complex mix of sound with multiple frequencies, irrespective of loudness”. That’s fascinating, but very different to how a layperson might think about it. With my hearing difficulties, I’m constantly avoiding or fleeing noisy spaces. And even at home, I notice that it only takes a door closing, a kettle heating up or a plate clattering, for me to miss what somebody said. I’m told this is because such noises “mask” speech.

Similarly, I had no idea that a “reverberant” (echoey) room is a challenge because what I am hearing is a “dense cloud of sounds”. I struggle with such “sonic complexity”.

### *The consolations of technology*

Hearing aids can never fully compensate for the loss of the more sharp and balanced hearing of my youth. Even with the most up-to-date and expensive models, making sense of sound and speech takes concentration and effort. But there have been some great advances in recent years. For instance, the combination of hearing aids and Bluetooth has opened doors for me. I had a Zoom habit well before the covid pandemic, and it has allowed me to take part in video calls as easily as anybody else. In fact, the virtual world often sounds clearer than in-person conversations.

I’ve become a reluctant telephone user, on the other hand. I blame this partly on the poor quality of the calls, both landline and mobile. It would be well within the power of manufacturers or service providers, I am told, to improve sound quality. But perhaps they reckon it’s not worth the extra investment, and maybe people with good hearing seldom complain.

With modern hearing technologies, I can take part in life – not quite fully, but almost as fully as a person with sound hearing. I can engage in conversations with small groups of people, whether we are outdoors – in a garden, outdoor café or on a quiet day in the countryside – or in a quiet indoor space. I can hear high violins, listen to radio and podcasts, experience sound art and enjoy films. I can even make out birdsong, the gurgling of a stream or the breeze in the poplar trees.

Technology does at least help me sense sounds, even it doesn’t guarantee that I can make sense of sound.