

Noise is in the news these days, especially with airports and neighbors complaining that they're victims of decibel attacks from screaming planes and blaring videoboards. However these disputes are resolved, one thing is certain: The quality of sound, both good and bad, is among the most significant, yet least-discussed, aspects of the human habitat. But architects and urban designers invariably stress the visual and forget the aural.

And that's a shame, as Eric Leonardson will tell you, because sound's impact is ubiquitous, whether it's the soothing melody of a waterfall or the unrelenting beep of machines that keep hospital patients awake at night.

Leonardson, an adjunct professor at the School of the Art Institute, is founder and co-chair of the Midwest Society for Acoustic Ecology. "We're trying to raise awareness of the importance of sound," he said, explaining the tiny group's purpose.

Negative sound — the nuisance of noise — grabs the headlines. But there is also positive sound, and when Leonardson takes his students outside, he points out how sound can enrich human experience.

He asks them, standing next to a fountain, to pay heed to the hiss and spray of the water tumbling down; the giggles of the children waiting for the faces to spout jets of water; and, finally, the happy screaming and laughter that accompany the eruption.

Then there's a garden, whose massive "shoulder hedge" masks the sound of street traffic. Because of the hedge, "you get a clear sense of the sounds of birds and insects in the garden," Leonardson said.

Sometimes, we can't hear those sounds, due to the squeal of tires, the honking of horns and the revving of engines. Yet the background buzz of moving vehicles can also remind us that cities are vital, dynamic places. "Just listen to the music of the traffic in the city," went the lyric of Petula Clark's hit 1965 song, "Downtown" which helped lead people to rediscover cities at a time when many were fleeing them. In the urban romanticism of "Downtown," there are no grinding garbage trucks or zooming motorcycles.

There are no roaring jets streaking over city and suburban homes. And there is no bitterness of the sort that some residents are expressing at the noise emanating from speakers attached to a baseball stadium close by.

In ancient Rome, the World Health Organization's community noise guidelines inform us, "rules existed as to the noise emitted from the ironed wheels of wagons which battered the stones on the pavement, causing disruption of sleep and annoyance."

Sound (forgive me) familiar? Transportation versus sleep. Profits versus peace. And we all know which side wins out. It should surprise no one that Chicago's noise control laws exempt aircraft and airports, as well as stadiums. But there's another way.

In some Chicago suburbs, ordinances enforce "quiet hours" at night and restrict the times when lawn services can use those annoyingly loud leaf-blowing machines. In some European cities, car-free districts, and protected "quiet areas" let birdsong and other sounds of nature predominate over the sounds of machines. The [European Union](#) will soon phase in new standards that cut car noise. I

But not all sound is noise even if all noise is sound. Sound can alleviate, as well as accentuate, stress. It can delight us as well as drive us crazy. Sound should be a part of the recipe for cooking up great cities. Yet concocting that recipe is as much art as science. Our take on sound, in short, should be about much more than measuring decibels.

Some more aspects:

Plants can reduce noise pollution by absorbing sound. This works best in dense "walls" of plants, with shrubs and soil absorbing noise towards the ground, and the leaves of trees absorbing sounds higher up. Forests alongside highways can help serve this purpose. In cities, there usually isn't room for large forests near the street, so vertical and rooftop gardens have been proposed by the European Commission to protect buildings from the noise levels of busy streets. Plants cannot grow through walls or ceilings, so these gardens are built using a combination of soil and mesh. The mesh works to absorb even more of the noise than a plant would on its own.

Europe is also working to address the noise levels of trains, which are far more common there than in the U.S. Special acoustic grinding of the track to reduce roughness, quieter brakes, and blocks on the wheels can all reduce noise level significantly, and barriers are placed around

high speed trains, which are the loudest. Research is also being done to design high speed trains more aerodynamically to further reduce noise levels.

In 1975, there were about 200 million people flying in the United States, with about 7 million people exposed to what is considered significant aircraft noise. Since then, a Federal Aviation Alliance (FAA) study conducted in 2015 showed that the number of people flying in the United States had almost quadrupled yet the number of people exposed to aircraft noise had dropped to around 340,000, or a 94% reduction in aircraft noise exposure. Just this year, the FAA released a new regulation that further reduced the maximum noise level for planes by 7dB.

Malmö is a city in Sweden that is working to tackle noise pollution. The government is enforcing many steps on this path, including a speed limit of 40 km/hour in the city center, noise barriers in community spaces such as parks, using noise dampening asphalt to pave roads, and subsidizing homeowners who insulate their windows to block out noise.