Why should you care about sound?

An introduction for urban practitioners to making cities sound better.

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We often worry about noises that annoy us or keep us awake at night. And rightfully so. Noise is recognized as the second-largest environmental threat to public health, after air pollution (WHO, 2011), slowly but steadily consuming years of healthy living around the world. It is estimated that 20% of the European population - more than 100 million people - (EEA 2020), and a similar number of the United States population (Hammer *et al.*, 2014) are exposed to noise levels dangerous to their health. While such numbers are not readily available for other continents, for example, in Chile, the latest National Environmental Survey (MMA 2020) ranks noise pollution as the third most crucial environmental problem, following air pollution and garbage.

Yet, not all sound is noise. Think of a bustling street, an outdoor festival or a morning walk in the park, full of sounds reflecting everyday life! Sound can relax and energize city users, guide them, let them know if they are safe, and animate public spaces, contributing to the experience and memorability of our cities. Sound-producing activities including mobility, tourism, cultural and economic activities showcase what cities have to offer to residents and visitors and are a crucial part of local identities and cultures. Healthy and happy urban living allows cities to balance livability and vitality, combining homes, workplaces, leisure locations and other urban services. Sound can thus rather be considered an urban resource. This is a universal topic that applies to cities in both the Global North and the Global South, as we all have the right to cities that sound better,

Sign in Las Condes commune (Santiago de Chile). Photo credit: Caroline Stamm.

whatever "better" may sound like in different cultures, countries and contexts, to be discussed and negotiated between different local parties. A purely negative approach to sound – considering it as noise only, a nuisance to be mitigated – will be insufficient to also include ways to enhance aspects of urban experience and quality of life. Such an approach, focused on decibels and on "quieting" the city, has effectively restrained more nuanced conversations on urban sound in planning, design and broader urbanism, and how sound is intimately tied to notions of urban cohabitation.

Sound in urban practice

Approaches focused on the senses have been gaining momentum in urban practice, but remain dominated by a focus on eyesight, with comparatively less attention on the sonic dimension of the urban experience (Bild e*t al* 2016). However, intentionally introducing sound considerations in the practice of urban professionals will not bring additional stress to an-already overworked and under-appreciated profession. On the contrary: a recent study in Quebec (Tarlao *et al.*, 2024) has shown that urban professionals engage with sound more than they think they do – and, that, beyond their direct collaborations with acoustic engineers to merely respect noise mitigation regulations. Rather, their everyday decisions on urban form or uses almost always have an influence on the sonic dimension of the urban experience. Even if not always explicitly addressing sonic considerations, decisions to, for example, reduce speed limits for safety, or promote the use of electric bus and cars, also lead to a reduction in sound levels, and decisions to create pedestrianized zones create, if not quieter per se, more pleasant and vibrant sound environments for their users, in line with the desired or designed-for uses and activities.

Developing a more explicit awareness of the sonic implications of designs and urban decisions on use and experience has many benefits in the short and the long run. Think of the recent efforts to integrate the "agent of change" into planning law in various Australian states (Darchen *et al.* 2023) and, in 2018, in the UK (see

Children running around at the opening of Terrasses Roy, Montreal (2017). Photo credit: Christine Kerrigan

e.g. **link**). This principle allows to safeguard existing uses of a neighborhood when introducing new ones and putting the onus on the "agent" introducing the latter to manage their effects. So, be it musical venues or residential buildings, uses that were there first will take precedence over new interventions, thus protecting the existing liveliness or livability of a place while encouraging an informed sonic cohabitation. Practically, build a new condo building next to an established club and you must invest in protecting your future tenants from potential noise exposure; similarly, build a new club next to a residential area, you must invest in soundproofing your club so that you do not disturb the existing residents. This type of policy is intended to allow for the mindful cohabitation of different uses, involves intentional communication around sound and use to avoid complaints, costly fixes or closing of beloved venues.

Sound, urban practice and public participation

Considering that the current momentum is towards involving the various stakeholders of projects in the decision-making process for representative and socially accepted spaces, these conversations should include sound, explicitly. City users have knowledge about various dimensions of their lived experiences and needs and even if people don't always (or yet) know how to articulate what they want sonically, they will often recognize what they don't want or like as they experience it. Effectively, they might like how a new park looks, but place it next to a busy street with no sound protection, and they won't want to use it to relax; build a new residential building with lovely amenities, but use only reflective materials that will make any conversations or other domestic activities be heard all around the building, and people will not enjoy their everyday life. These failures to include the relationship between sound and use will often lead to complaints and to expensive fixes that could have been avoided; for example, noise barriers costs millions of USD per mile to build, retrofit the environment and infrastructure around, and almost as much to maintain, and noise complaints can mobilize communities and pressure decision-makers into cancelling plans that often have already cost cities in the thousands or millions of dollars. Conversely, using sound as an intentional element of urban design through e.g., soundscape interventions in public spaces in Montreal has been shown to improve the public space experience, reinforce the purpose of the spatial design, making the spaces sound better (not just less bad) and ultimately creating new and stronger bonds between users and their spaces (Steele *et al.* 2019; Steele *et al.*, 2021, Guastavino *et al.* 2022).

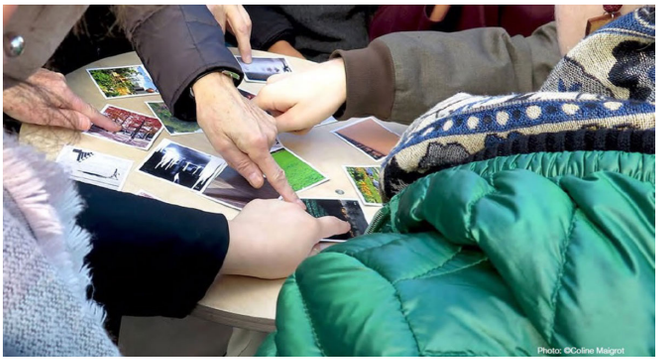
Encouraging involvement in sound-related communi-

Neighborhood concert in the Plateau Mont-Royal borough (Montreal). Photo credit: Daniel Steele.

cations between different stakeholders (and particularly community members) can make people feel represented, their concerns and needs heard, thus increasing the acceptance and appropriation (Carmona, 2010) of urban spaces from those communities that usually comes with participation. If these conversations are had before, as part of a genuine participatory process aiming to encourage sonic cohabitation as part of broader urban cohabitation goals, the results will be more successful: less expensive, embedded in the community, better sounding.

And while this might make sense, it might still make you wonder: how does this apply to MY city? We acknowledge that in many geographical contexts, planning guidance and directions are often too abstract when it comes to sound / noise that allow for fixes typically quite late in the process and that from a mainstream, "sound as a nuisance to mitigate" perspective, making implementation vague or burdensome. We also know cities are in different stages of dealing with sound, and that urban professionals think of sound in a range of ways, from a simple element to check off a list of long urban factors to an integral element of the urban experience that should be thought of in the early stages of planning (Steele *et al.* 2023).

European cities like London have developed comprehensive noise and soundscape action plans that also consider the positive effects of sounds (Noise Strategy of the City of London – City of London Corporation), or Lyon, which boasts a noise and sound observatory (Acoucité – Observatoire de l'environnement sonore de la Métropole de Lyon). Montreal is the playground/living lab for the Sounds in the City research partnership, a one-of-its-kind initiative in North America, bringing together academic researchers, professionals who shape cities, artists, and communities to rethink the role of sound in urban spaces. Sounds in the City works to develop solutions to make cities sound better, by coaching a first generation of soundscape facilitators and educators and developing tools, soundscape interventions and research approaches that can help support urban professionals. Finally, in Chile, while sound is currently being addressed from the "traditional" noise mitigation perspective (Campos *et al.*, 2021), an interdisciplinary team has recently initiated a four-year publicly-funded project that aims to complement the existing studies of acoustic measurements in Santiago de Chile with research on the inhabitants' perception of noise and sound. While in its infancy, the project responds to the need to add perspectives from cities in the Global South. Sound considerations could be more explicitly a priority in the work of urban professionals in the Global South, where there are still few research and soundscape focused policies in the area even though noise is the main source of local conflicts (Stamm and Ulloa, 2023). New methodologies and data can help said professionals better understand their own sonic local realities and consider soundscapes in their future practice.



Collaborative public space design process (stakeholder engagement). Place des Fleurs de Macadam (Montreal). Photo credit: Coline Maigrot.

While these are just examples around the world focused on sonic urban practice, we argue that you, as an urban professional, know – and do – more about sound than you think. You already talk to people about other things (transportation, safety, etc.), and some of these topics already touch upon sound. We encourage a stronger sound awareness and adding sound as an explicit topic in those conversations. Sound is pervasive and intertwined with all the urban considerations you already have in your everyday work: every space use makes sound and thus every urban decision impacts the sound environment. You already plan for space use, and people will conduct the activities they think fit the expectations they have of their different environments, sound included. As urban professionals, it's part of your job to accompany city users through the participatory process. And it's part of the job of soundscape facilitators to accompany you through this process of learning how to effectively ask about sonic needs and experiences and expectations. Explicitly discussing sound considerations will lead to addressing them hand in hand with those other considerations, resulting in a better sounding environment that will fit all the needs of communities, not just the sonic ones.

Sound and communication

If you take away only one thing from this reading, it is

that it is not only about decibels, but, crucially, about the lived experiences of sound – which can converge with the decibel levels but cannot be fully represented by the numbers. A street concert can be as loud – in decibels – as a highway, but the effects on urban users will be wildly different. The most important conclusion is that, irrespective of where a city is in their process of integrating more nuanced understandings of sound in planning and design practices – be it Paris, Montreal or Santiago de Chile, it is not about developing universal insights that are easily transferable but rather about developing ways to learn about the local context and its needs: at the end of the day, it's all about communication. You might not yet know how to talk about sound, nor do the other stakeholders, but people like soundscape facilitators can walk you through the process and equip you with the necessary tools. And one must not always wait for policies or legal requirements to frame action, but rather find ways to change one's frame of mind first, from sound as a by-product to sound as a structural dimension of spaces and of cohabitation. More intentionally engaging with sound can help you be an active leader in the process of learning about sound for urban users, working towards effective communications about sonic needs, experiences and expectations, and thus less complaints, less costly fixes and better sounding cities.

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Plaza Juan XXIII (Santiago de Chile). Photo credit: Edda Bild