

Essay

Notes on the Aural Aspects of Built Environment*Bálint Veres*

Abstract: *Aural architecture might seem at the first sight as some oddity, a deliberately unique niche genre, and an out-of-the-ordinary hue on the wide spectrum of built environments. In contrast, the essay overviews some of the most important aspects that foster a broader conceptualization of architecture conceived as substantially interlinked with the sonic realm. In comparison with the established discourse on soundscape, this writing does not start from fieldworks and empirical-based terms with the goals of a general theorization but works the other way around: it arrives at the notion of soundscape in its conclusion by pointing out the unsatisfying nature of any conception of architecture that misses the aural aspects of architectural space, hence excluding a crucial somaesthetic dimension both from theoretical discourse and designer practice.*

Keywords: *architectural experience, aural architecture, soundscape, sound insulation, urban planning.*

1. Introduction

In the last two decades, research on the arts has shown that the perspective provided by somaesthetics could greatly contribute to the efforts of rethinking artistic practices and the aesthetic experience in general (Shusterman, 2014; *Journal of Somaesthetics* vol. 1-7). In addition, the somaesthetic perspective has also helped to re-conceptualize the social impacts art can and does exert (Koczanowicz and Liszka, 2014; Rynnänen, 2015; Shusterman, 2022), viewing those impacts from different angles than the ones provided by sociology of art (Luhman, 2000), relational aesthetics (Bourriaud, 2002), participation theories (Bishop, 2012) or the anthropology of culture (Pfeiffer, 2002). In an earlier study (Veres, 2014), I contributed to the discourse of the somaesthetic theory of art proposing that we should take architecture as the best model for a somaesthetically oriented and historically founded scrutiny of the arts and conceive it as the paradigm throughout the aesthetic field. To make this proposition seriously, there is a need to ponder how architecture can be understood as an art form in the first place and how architecture can bridge what is considered art and non-art. In the present writing the

cultural status and symbolic capacities of architecture are not discussed, instead approached only along its multisensory nature and prime somaesthetic relevance.

However, an immediate objection might occur that needs an urgent response: aesthetic phenomena are countless and infinite, and one must admit that a somaesthetically founded model of art developed from architecture may seem less explanatory with regards to such intensely performative creative practices like dance, music, theatre, and all those vivid and engaging human activities, which are aesthetically relevant but do not have the status of art. This objection is fully admitted, but on the other side, it is worth noting that architecture should not be reduced to the scale, sensorial modality, and range of action it is identified in mainstream architectural discourse. One of the most crucial aspects of the architectural experience – in opposition to the common understanding of its visual primacy (Pallasmaa, 2005) – is its *kinaesthetic* nature, which has to do with a deed, performativity. Architecture is a verb – as the architect, Sarah Robinson insists (Robinson, 2021). This has already been highlighted by Goethe who likened the architectural experience to choreography (Shusterman, 2012, p. 226), and also by Gadamer (1993, p. 332) who identified the act of walking through the space (“durchschreiten”) as the primary way of the bodily understanding (“leiblich verstehen”) of the architectural work.

To illuminate important performative, non-objectifiable inherent aspects of the built environment, my approach attempts to feature a phenomenon critically that connects architecture, understood usually through its static and lasting outcomes, with performative practices and their ephemeral phenomena – like the way stage and action (the Greek *proskenion* and *drama*) are connected in a play. What directly connects architectural structures to the general *Lebenswelt* in an encompassing experience is the dimension of audibility that comes with every kinesphere, regardless of whether it is understood as a site for actions or as the web of deeds. Although every kinesphere is aural *per se*, from the perspective of somaesthetics, audibility is especially crucial in the built environment – the site of human residence, which takes on a wide range from urban tissues and public spaces to tiny rooms. The many kinds of sounds, noises, murmurs, and silences that fill these spaces awaken (or irritate) our sensibility, and thus, provided they are taken into account within the scope of meliorative pursuit, they offer the possibility to progress our discernment and sensual awareness. As a pioneer in the study of the aural aspects of architecture, Michael Southworth wrote in 1969 (p. 49):

At a time when technological progress is bringing city sounds to the threshold of bedlam it is no longer sufficient to design environments that satisfy the eye alone. Today's city dweller is bombarded by a continuous stream of invisible but highly attention-demanding sounds, smells, and micro-climates. His experience of the city is a crazy quilt of sense impression, each of which contributes to the total picture. It is important to explore the consequences of this invasion of nonvisual sensations on the quality of city life and to ask how manipulation of them might improve that quality.

These considerations, which include not only the aural but the tactile, the thermic, and the olfactory as well, could lead to decisions regarding the built environment that serve our best interests both on the personal level and on a societal one, perhaps including also the shared interests of other species in the living world.

2. The Omnipresent, Sounding Wallpaper

Before we get closer to the aural dimensions of architectural sites, for the sake of an illuminating analogy, let's take a detour and recall an example of the somaesthetic relevance of the direct visual environment. In Charlotte Gilman Perkins' 1892 short story, *The Yellow Wallpaper*, the narrator suffers from the oppressive atmosphere of a bedroom – although this should be the place that otherwise would provide intimacy, security, and utter “habitability” (cf. Franco, 2019). Although the protagonist-narrator arrives with her family seeking healing in the “ancestral halls” rented as a summer lodge, her emotional state remains gloomy, and her vitality and ability to act fade as the days pass by. A sinister atmosphere pervades the colonial mansion, and the room seems to hold her captive and drive her up the wall, literally. The woman with broken physical, mental, and emotional condition wastes her life in such a place, which simultaneously manifests itself as the embodiment of suffocating care and male objectification, as well as the intolerable lack of freedom in family life and social relations, along with the resulting frustration and helplessness (Horowitz, 2010, pp. 175-187).

In the focal point of the story, is a densely patterned wallpaper that can be interpreted not only as a manifestation of the overflowed visual wealth of late Victorian homes but even more so as a projection of an individual psychological state and a symptom of specific socio-psychological dynamics. The patterns of the yellow wallpaper of the room give rise to an aesthetic experience in which the taste judgment, which seems purely individual and contingent, is influenced and occupied by uncontrollable psychosocial energies, and the narrator desperately fights with her conflicting desires. These desires sometimes urge her to the destruction of the wallpaper, other times to cross the borders of reality and dwell in the “inner world” of the patterns. This double and centrifugal attraction paired with ambiguity is echoed also in the effects by which the narrator characterizes the wallpaper: “It is dull enough to confuse the eye in following, pronounced enough to constantly irritate and provoke study” (Gilman, 2009, p. 168).

Analogous to what happens with the narrator in her affective life and her somatic condition as she is deeply influenced by her visual environment, in the acoustic dimension of the built environment, dizzying ambiguities loom large to millions of people everywhere around the world. After all, everything that lives also moves, and everything that moves also makes a sound, in a large proportion in the range perceptible to the human ear. And while at least the eyelid provides the last shield for the overwhelmed consciousness against the toxic powers of material imagery (cf. Mitchell, 1996, pp. 71-82), it is impossible to escape from the audible: we have no ear-lid that can be lowered. Wherever we retreat from the noisy world to the peace of the home, the solitude of the country house, the yawning silence of the wine cellar, the drowsy murmur of the water in the bathtub, all these can never be more than mere pauses, a transient suspension within the planetary-scale noise. Quietness is unsustainable as a permanent state, because the world, either the outer or the inner one, shouts again and again into the silence and the acoustic calm of the withdrawing life. The neighbor rattles with something in the yard, the noise of a terrible quarrel seeps through the wall, a truck rumbles in front of the house, the dogs start to bark nervously nearby, the beats of a distant rock concert pulsate into the night, the ticking of the wall clock infiltrates the peace of siesta time with a feeling of alienation, the heating system makes a whistling noise, a moving vendor yells through the open window, and on the forest path, in the vicinity of the populated area, a bunch of youngsters sings aloud - with a tint of nostalgia for the 80s glam-rock - their apocalyptic expectations: “it's the final countdown”.

None of these examples can be reduced directly to architectural space; yet, none of these examples can be conceived and experienced without planned and constructed environments.

Researchers of acoustic ecology always resounded the elementary phenomenological insight: the sonic realm belongs to the object and its perception at once (Brown et al, 2016, p. 7), and the experience is both acquired and generated. This cannot be avoided when conceptualizing architecture, either of its practice or its experience, on a broader level.

3. Dreams of Silence

As desirable as it might be for many, a total acoustic pause proves impossible not only because of the millions of external effects of the environment but also because of the specific internal living conditions of the sentient being, our living, functioning, aspiring, and tormented soma. It is well known that John Cage, the loudest twentieth-century propagandist of silence retreated to Harvard University's anechoic chamber only to realize that it was precisely due to the elementary life processes flowing within his own body that he had no chance of experiencing complete silence (Cage, 1973, p. 8). In his famous experiment, he was only curious about the possibility of silence in the acoustic sense, even though through internal hearing and sonic memory – either voluntarily or involuntarily – the entire hearing range of human beings extends beyond the spectrum of the actual physical vibrations.

Either way, peace is certainly not brought about by silence, although the nostalgia for silence is stubbornly fixed in the structure of desire of the late modern citizen, who carries all the shocks of urbanization already in his genes. However, nostalgia, by its very nature, aims exactly at a state that was never available (Trigg, 2006). For the architectural practice and the areas of the service industry that have adapted to the nostalgia for silence, the issue of acoustics essentially coincides with the problem of sound insulation (Hopkins, 2007; Mommertz, 2009; Rindel, 2018). This strives for nearing the utopia of a spatial existence that is utterly stripped of any outer noise and provides total autonomy for undisturbed, self-referent action.

In art, a similar but more complex nostalgia appears in ambivalent masterpieces such as Joseph Beuys' late installation, *Plight* (1985) which put on stage a grand piano exposed in a room full of felt which exerts a suffocating effect on the instrument and arouses tension on the visitors, as the latter experience an inner ambiguity regarding their acoustic expectations associated to the instrument. Thus their general affection for calmness is once amplified and denied by the peculiar spatial-acoustic situation, which is characterized by a double bond that is directed simultaneously toward the dream of music and towards the dream of silence.

In contrast to the perceptive, symbolic, and affective ambiguities and conflicts exposed in such multisensory artworks as Beuys's *Plight*, the aesthetic disputes on architecture and public space, no matter how overheated they are, have little to say about the non-visual aspects of the built environments. The sonic realm especially suffers from this neglect. Thus, a crucial somaesthetic aspect remains hidden, which in turn has a decisive influence on the experience of the lived space (Gehl, 2010).¹ Nevertheless, the scarcity of discerning attention towards the aural aspects of the built environment in architectural discourse is very understandable. If the lack of audible sound is portrayed as the optimum in spatial acoustics – a typical symptom of which is the idealization of architecture by cool and smooth images in coffee table magazines (cf. Han 2018) –, then at the arrival into the actual sonic realm, architectural aesthetics should inevitably transfigure into anaesthetics: either as a poetic expression of the desire for calmness or a technical-methodological discourse on silence or as the practical need for sound attenuation.

¹ The influential urban planner, Jan Gehl approaches the concept of a desirable and attractive city by applying a multisensory methodology (2010, p. 31-60), the aural aspects, however, lack more extensive scrutiny.

Anaesthetics in the present sense can be primarily described as the discourse on the physical and mental reactions by which one seeks to reduce the spectrum of experience to protect one's physical, emotional, and mental-well being as much as possible. However, this anaesthetic approach does not correspond in the least to the elementary experience of the spatial existence of a being who is ingrained in "the flesh of the world" – as Merleau-Ponty put it (1968). Prenatal perception develops along touch and hearing: both attest to the directness of the world, the intimacy of it as a continuum between the sensed and the sentient being. Through hearing, "inside" and "outside" merge. "Our perception of sound is founded on the corporal perception of vibrations," writes Reznikoff (2004/2005). Thus, from prenatal life on, we learn about the world as a pulsating, quivering, and vibrating entity that surrounds us and embraces us, but in addition to that, it is through hearing that we first come into contact with the language and the invisible too. The acoustic dimension is not some kind of extra that optimally slips unnoticed into the visual, haptic, proxemic, and climatic layers of the spatial environment, but appears directly at the origin of spatial perception (Sheridan and van Langen, 2003; Blesser and Salter, 2007). Voice provides orientation; by voice, I navigate myself or give orientation to others. As Reznikoff states (2004/2005): "the first consciousness of space is given by sound." It is the most elementary, most "ready-to-hand" building material I can use to demarcate a slice from the physical and also from the psychical and imaginary space. Sound translates our body and mind, our objects, and our buildings into loci of resonance. While one is dreaming of silence, the built environment reverberates the soft snoring of one's sleeping body. In turn, in the state of being woke, this reverberation and mutual resonance could lead to veritable transformation: a sound begets another sound, hearing brings about susceptibility, and something new can be born from this susceptibility.

4. Sound that Transforms

This magic of transformation through sound, which is also a key to the powers of the moving image, was put on stage in a highly illuminating way in the performance piece titled *I am sitting in a room* (1969) by the Fluxus artist, Alvin Lucier. In this work, he gradually managed to dissolve, at least for an imaginary period of life, the individual specificities of his speech into a spatial sound, hence subjecting his physical difficulty, stuttering, that significantly determined his whole life, into an "artistic" cure, in which the personal and impersonal aspects of the acoustic spectrum were mingled.

The transformative power of sound is prevalent, however, within more prosaic everyday circumstances as well. It is enough to embark on a walk through the city with headphones and a music player: the space around us takes on new shades everywhere, and the bustling contingencies of everyday life become arranged in a mysterious choreography as if they would be resonating membranes of a single melody. As the architect, Juhani Pallasmaa (2005, p. 49) puts it:

Sight isolates, whereas sound incorporates; vision is directional, whereas sound is omni-directional. The sense of sight implies exteriority, but sound creates an experience of interiority. I regard an object, but sound approaches me; the eye reaches, but the ear receives. Buildings do not react to our gaze, but they do return our sounds back to our ears.

In a popular television show in 1960, performing his piece *Water Walk* (1959), John Cage masterfully demonstrated how everyday sounds organized by a predetermined temporal structure can transfigure ordinary house activities – such as making toast, boiling water, flower care, and the like – into a mysterious choreography, the moves of which heighten everyday somatic routines up to the plane of some kind of dancing and a somewhat comic celebration. The way we glance at the visual appearance of an object, of course, plays a significant role in the experience of the thing, but sounds and reverberations from the environment shape the horizon of our experience even more intensely and inevitably than that. Masters of horror movies have long learned this.

However, sound cannot necessarily be understood only as a medium of immediacy. It is no coincidence that in antiquity, sound - not any random sound, of course, but mathematically based sound phenomena - has already been considered a mediator of cosmic order, which is beyond physics (Mathiesen 2008). This idea of sounding order is fruitful even if we consider the concept of order to be acceptable only with an index of temporality or only as a regulative ideal. I mean it in a somewhat similar way to the one exemplified by Deleuze-Guattari's brilliant metaphor about the singing child seeking a home in a dark, unknown, expansive space (1987, p. 311):

I. A child in the dark, gripped with fear, comforts himself by singing under his breath. He walks and halts to his song. Lost, he takes shelter, or orients himself with his little song as best he can. The song is like a rough sketch of a calming and stabilizing, calm and stable, center in the heart of chaos. Perhaps the child skips as he sings, hastens or slows his pace. But the song itself is already a skip: it jumps from chaos to the beginnings of order in chaos and is in danger of breaking apart at any moment.

Only after the sound of the child's song emerges, more precisely after a somaesthetic orientation by a sound leads to the formation of a temporary center and the arrangement of the unstructured space to be formed, only then can the actual "construction" begin: with signs, objects, and various physical entities.

II. Now we are at home. But home does not preexist: it was necessary to draw a circle around that uncertain and fragile center, to organize a limited space. Many, very diverse, components have a part in this, landmarks and marks of all kinds. This was already true of the previous case. But now the components are used for organizing a space, not for the momentary determination of a center. The forces of chaos are kept outside as much as possible, and the interior space protects the germinal forces of a task to fulfill or a deed to do. This involves an activity of selection, elimination and extraction, in order to prevent the interior forces of the earth from being submerged, to enable them to resist, or even to take something from chaos across the filter or sieve of the space that has been drawn.

The acoustic dimension, however, has played a decisive role not only in the preparation to be at home but primarily in the actual dwelling experience. Deleuze and Guattari thus continue:

Sonorous or vocal components are very important: a wall of sound, or at least a wall with some sonic bricks in it. A child hums to summon the strength for

the schoolwork she has to hand in. A housewife sings to herself, or listens to the radio, as she marshals the antichaos forces of her work. Radios and television sets are like sound walls around every household and mark territories (the neighbor complains when it gets too loud). For sublime deeds like the foundation of a city or the fabrication of a golem, one draws a circle, or better yet walks in a circle as in a children's dance, combining rhythmic vowels and consonants that correspond to the interior forces of creation as to the differentiated parts of an organism. A mistake in speed, rhythm, or harmony would be catastrophic because it would bring back the forces of chaos, destroying both creator and creation.

Then again, structuredness and order – that filter out any outer noise – get gradually shifted towards receptivity for the unfamiliar. The dimension of audibility opens up again before the aural world would become a self-evident monotony. We have no ear-lids; our somatic being is on full alert towards the things to come. Our immersion into the audible makes us the aptest to be oriented towards the future.

III. Finally, one opens the circle a crack, opens it all the way, lets someone in, calls someone, or else goes out oneself, launches forth. One opens the circle not on the side where the old forces of chaos press against it but in another region, one created by the circle itself. As though the circle tended on its own to open onto a future, as a function of the working forces it shelters. This time, it is in order to join with the forces of the future, cosmic forces. One launches forth, hazards an improvisation. But to improvise is to join with the World, or meld with it. One ventures from home on the thread of a tune. Along sonorous, gestural, motor lines that mark the customary path of a child and graft themselves onto or begin to bud "lines of drift" with different loops, knots, speeds, movements, gestures, and sonorities.

In the discourses of modern and postmodern architecture and discussions on criticality (Shusterman, 2012), we have learned a lot about architectural meanings (Jencks, 1997), ideology (Tafuri, 1976), history (Frampton, 2020), technology (Abel, 2004), access (Imrie, 2006), justice (Soja, 2010), representation (Venturi, 1977), identity (Lynch, 1960), and functionality (Alexander, 1977). However, the constitutive role of the acoustic dimension in the experience of lived and embodied space is only sporadically recognized, mostly in some urban research or phenomenological studies. “Aural architecture” (Blessner and Salter, 2007) in this perspective seems to be something special, a peculiar extension of a commonly conceived standard architecture that is crystallized in genres such as the concert hall, the sound studio, the cinema, and the like (Bagenal, 1951; Beranek, 1996).

If we admit that architecture is one of the most defining components of everyday life and of social and individual well-being in physical, emotional, and mental terms alike – an observation confirmed also by Sir Winston Churchill claiming in 1943 that “we shape our buildings, and afterward our buildings shape us” (see in Brand, 1995)–; then we can also acknowledge that from the point of view of an individual equipped with a multi-directional acoustic sensitivity and also with an even finer and more extensive sensitivity of inner hearing, the audible qualities of the environment enjoy a privileged status with regards to the overall experience of spatial being. Architecture that is ready to facilitate dwelling and “to open up a world,” to use Heideggerian wording, ought to pay more attention to these qualities. Acoustic space, which is intellectually homeless, and somaesthetically neglected, when unleashed, becomes an anonymous murmur of

chaos or terrain for a complacent resounding of power. “It is thought-provoking – comments Pallasmaa (2005, p. 49) – that the mental loss of the sense of centre in the contemporary world be attributed, at least in part, to the disappearance of the integrity of the audible world.”

5. Summary

Our built environment – intentionally or unintentionally – creates, re-creates, transforms, and shapes inescapably a sonic and resounding environment for our individual and communal life forms. This can be very pleasant and harmonious but most often turns out to be painfully noisy and chaotic. If we acknowledge this as the unavoidable starting point for any endeavor that strives for better living conditions, then instead of cherishing a nostalgia for silence, it certainly seems more encouraging and fruitful to accept the challenges of shaping the environment and doing so in a way that could help us to surpass our all-too-well-known, discouraging everyday acoustic experiences. For, these ordinary experiences follow most often than not those patterns of the personal and collective soundscape that are “dull enough to confuse [us] ..., [and] pronounced enough to constantly irritate and provoke study” - to appropriate again Gilman.

The lesson to be learned is not theoretical, but primarily practical: the constant and entrenching effects of the aural realms on our somatic life are not to be suffocated but to be channeled and taken into account as a formative endowment. Garth Paine (2017) enlisted several suggestions belonging to a possible action plan, which can foster the above goals. Among these, his final proposition (2007, p. 4) seems to be the most important, stressing that only “long-term analysis of trends in the acoustic ecology of both conserved nature and urban environments could lead to insight into the vectors of change and subsequently provide new tools for environmental monitoring, land management, and urban design.”

Keeping all these in mind, somaesthetically literate urban planning and a broadened practice of architecture should complement its range of action by incorporating refined planning of urban soundscapes, the study and creative practice of which was initiated by R. Murray Schafer (1977), Barry Truax (1984), and their followers in acoustic ecology (Kang and Schulte-Fortkamp, 2016). In addition, theories of architecture should extend their scope too, embracing the consequences that are associated with the mutual dependence between the notions of planned space and kinesphere: these are the inherent performative, dynamic, and aural aspects of the built environments. A forward-looking example is the work of Sarah Robinson who rightly suggests substituting the all-too-visually determined and naturalized term “space” with the qualitative term “medium” which is more corporeal, engulfing, and resistant. A crucial aspect of such an understanding of space-medium is immersion. As Robinson, providing directions both for future theoretical and designer activities writes (2021, p. 27):

We are immersed in a medium, and it is very telling that a much more accurate indicator of space tends not to be our sense of vision but our sense of hearing.

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