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Mediating sonic space

A prototype for communication of urban sound

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Abstract. *Sound as a mediator of different qualities is not sufficiently taken into account in creative design processes of architectural and urban planning projects today. The currently weak interest among professionals in the architectural and urban planning sector for sound as a bearer of information and meaning, point at an existing challenge of finding new ways of communicating this invisible and transient information to others outside the research sphere. One way of approaching this problem is through the transmittance of qualities of urban space in terms of sound. In my ongoing PhD-work Urban Sound Design – Methods for Qualitative Sound Analysis, I have recently focused on the creation of a digital and interactive model, which enables the cross-reading of visual and sonic material. The intention is to put the finger on some of the acoustic qualities that we can find in everyday urban spaces.*

Keywords: *urban sound design, qualitative sound-analysis, architecture, planning*

A site of interest

The decision to study a 2.3 km long and completely straight street in the central parts of Stockholm was grounded in my aim of trying to grasp and understand the sonic qualities of everyday urban life in relation to the built environment. This explorative work mingles two perspectives; the sonic reality focusing on the non-visible as well as the spatial reality focusing on the visible and surrounding environment. Different methods of observation and analyze are mixed in this research, qualitative as well as quantitative.

Hornsgatan is an interesting street to explore due to several factors, like for example its central position, topography, heavy traffic, frequent use by pedestrians and sections of emblematic value. A variation of building-typologies and different usages in relation to topography and geographic position provides this street with certain qualities. For example we here find houses from different time periods containing various internal and external businesses, activities and usages. Characteristic for this area is also the prevalence of apartments, including the frequent occurrence of elderly-houses and nursery schools. People both live and work here. At each end of the street there is visual contact with the shoreline of Stockholm. Green spaces such as small or widespread city-parks can also be found either close by or in the immediate surroundings of Hornsgatan.

Methods of approach

I began the explorations with a number of observational and documentary strategies, both on and off site. Some approaches have been more rewarding to use than others. An example here of is the superimposing of sound and video-recordings onto a digital city-map. In

this strategy the 360° video-surveys of all the chosen sites proved to be an efficient tool for describing the spatial and sonic parameters of the different places. While solely listening to good quality sound-recordings have required more time and additional visual and textual information to obtain an adequate understanding of acoustic quality in relation to spatial configurations. The information communicated through these two formats of representation is charged with different meaning and my conclusion is that these two methods have the ability to be used differently by the urban sound-researcher or designer depending on the given situation and intentional drive.

During the course of the project my database increased rapidly and a severely problematic situation slowly emerged. Finding efficient tools for handling diverse and complex forms of data has since the beginning of the project been an urgent issue to deal with and try to solve. The ability to quickly move between different perspectives and levels of focus such as visual, aural, structural, spatial aspects for example, has proved to be an important question. In fact this has turned out to be a key issue to consider, test and evaluate continuously in the project.

On a general level I believe that the management of these aspects can be regarded as a precondition in order to create a base for a practical and implementable urban sound knowledge. Focusing on a design-driven audience also provides us with certain limitations. Limitations may in this case function as a possibility that frames and set bounds to further actions. As the sense of vision is a dominating perspective among the professional group of architects and urban designers, the question of “making visual” is crucial to consider. A visual strategy can in fact be applied to the sonic world with the intention to understand it better. By putting the spotlight on the unseen we can begin to see. I regard the “making visual-strategy” in my work as a way of organizing complex material, but at the same time it may generate tools for reaching out to this specific group of visually oriented professionals.

Expanding strategies

Recently I have had the opportunity to work with the development of a digital and interactive model for transmitting visual and sonic data. The model functions now as a prototype that enables the cross-reading of site-specific sonic material in relation to its geographical context. The digital and interactive sound-model is currently under development and it has been made possible through a collaborative work with Gerhard Eckel, Professor of Computer Music and Multimedia, Graz, and Guest Professor at KTH.

The intention with the model is to be able to scroll between specific places at Hornsgatan, while simultaneously listen to the recorded and looped sound-files, fading in and out of each other as the listening position changes on the map.

The perspective of the user can be said to be distant and specific at the same time. The listener/researcher has the capability to zoom between areas of the map, alternating between visual surveys or site-specific “walking” between recorded sonic spaces of the urban mesh.

The relevance of the model will be examined further. Adding more complex layers of information may be an important next step as well as how it is experienced and potentially can be used by others. Having the ability to survey, compare and discuss divergent situations in the city under these circumstances, can hopefully provide the researcher with knowledge and insights that are of relevance in a design-process or even function as a pedagogical tool in the dialogue between concerned parties of the architecture and planning sector.

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