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## Sound art and architecture: New horizons for architecture and urbanism

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### Abstract

The article discusses the crossroad between art and architecture. It sketches out the theoretical and practical aspects of involving art into architecture and multisensory dimensions of space. The analysis is based on examples of innovative experimental activities for architecture: educational projects such as workshops, seminars and courses, combining art and architecture, with special emphasis on sound art, and the consequences of such synergy for the perception of the space. Specifically, it aims to understand how this interdisciplinary approach in architecture can emphasize our understanding of the potential of non-visual aspects of space and stimulate architectural creativity.

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### 1. Introduction

What we experience with our bodies and senses differs dramatically from the theoretical concepts of pure space as proposed by scientists. Space can be defined by surfaces, lines, points. But besides this obvious physical nature of the space there exists its character, not measureable as easily – the phenomenal space. Our own human experience of space is quite different from a hypothetical concept of pure space because we are embodied beings and experience our environment with all senses available to us. Prominent philosopher Maurice Merleau-Ponty (1948-2002) points this out and argues that we are all part of that space, we are one with it. Similar statements are expressed by Charles Landry with his remark that “*People are the part of urban story otherwise physical remains the empty shell*” (Landry 2006). This suggests that personal experiences in relations to space uncover sensual nature of architecture.

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Sometimes architecture and, more generally, art itself, serves to provide the experience that directs our consciousness towards the world and our sense of self. It also helps us experience ourselves as spiritual and embodied beings. Such was the stipulation of a well-known theoretician and architect, Juhani Pallasmaa (2005). Building upon the phenomenological concepts of philosopher, Merleau-Ponty, Pallasmaa argued: “*Architecture is the art of reconciliation between ourselves and the world, and this mediation takes place through the senses*” (Pallasmaa 2005). His proposal was to interpret architecture in more profound ways, as an expression of our relationship with the world, and not simplistically, as a mere practical, functional aspect of life, providing shelter, workplace, school, and other functions. (Pallasmaa 2005)

The education in the fields of architecture and design should encompass those very complex sensory phenomena of the space and to attempt to pose questions about them and propose solutions. The challenge becomes to introduce such pedagogical practices and educational design strategies that would reflect the profoundly rich space experience. In order to search for experiential activities to explore above mentioned issues we could turn to art. As Vitruvius mentioned in his groundbreaking work on architectural theory: architecture is a combination of several arts and abilities. (Vitruvius 2001) Today, postmodernity opened relationships with the public which in turn led to a creative dialogue between art and architecture. Cooperation ensued between architects specializing in the designing process, aesthetic discourse and spatial and conceptual issues as well as landscape projects. This model of work has developed in the recent years and scientists are now often working with artists, musicians with architects. (Femie 2006)

In order to provide a unique perspective and to teach new competencies to architects this project proposes to concentrate on the complex sound environment. This can be done by learning to listen, performing sound and implementing sound to the architecture practice increase sensory sensitivity. Outlined below are specific examples that illustrate practice-based assignments which incorporate using art, with special emphasis on sound art, in experimental activities for architectural education.

## 2. Listen to the sound of the city

*"A sound-walk is an invitation to give our ears priority over other senses"* (Westerkamp 2014, 1974)

The soundwalk "Listen to the City" was the type of excursion focused on listening and was a part of the experimental activity introduced to students within the soundlab during the Light City Sound Workshop in cooperation with the sound artist Krzysztof Topolski. (Fig.1.) (Fig.2.)

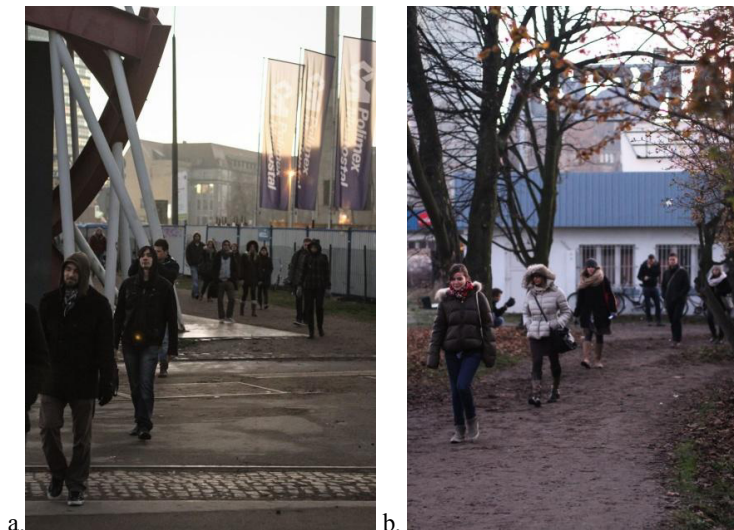


Fig. 1. (a) (b) Soundwalk in the Gdansk shipyard

This unique practice stems from the acoustic ecology and soundscape movement. It was initially developed in the 1960s by Canadian composer Raymond Murray Schafer (1977) and his team of researchers and titled: "World Soundscape Project". It focused on creating an increasing acoustic awareness of the sound environment and on exploring the space between art and science and our own presence within it and our experience of it.

Soundscape of the city is constantly changing oscillating between orderly cacophony, sometimes noise and many other sounds communicating information. It is only occasionally when some aggressive noise hovers over the soundscape or as some strange happening silences the environment that we notice just how strange is the sound of silence in the city. Soundwalk experiment was centered on listening, then recording and finally analyzing the acoustic terrain of the city recordings of the soundscape. In its final stage was focused on soundmapping, that is documenting and sketching the sounds into particular terrains of the city, such as the city center as well as the industrial outskirts and suburban areas. Geographic map was overlaid with a symphony of sound created to reflect it.

The methodology of this study consists of the analysis of soundscape: the sound environment of the city. The sound recordings consisted of a broad range of sounds uniquely significant for a given area. Selected recordings were used to create a sophisticated map of the area. It included sound recordings of each of the walks with specific information about the area and the location of the recording. This recording become a sound reference for the geographic map of the city and could serve as a type of soundtrack to the city.

The inspiration for the soundlab comes, among other things, from the 1960s trend of sound ecology, which was promoted starting in mid 1960s of, 20th-century by R. Murray Schafer and his research group: "World Soundscape Project." According to him the sound environment is contaminated and the modern western culture is centered on visual aspects while neglecting the importance of the sound perception. The focus on visual perception diminishes the importance of sound, but Schafer's acoustic ecology insists that our environments should in fact be perceived as a piece of music. The idea of sound ecology is centered on the concept of the environment as a musical piece. (Schafer 1977) According to Schafer, analyzing and understanding the soundscape of the environment is a necessary step leading to a conscious process of shaping such an environment. The practice of recording and listening to sound recordings of geographic terrain is an integral part of the artistic process proposed by the composer. It has an important pedagogical aspect. Learning to listen and sound education in general leads to building increased sensitivity and creates a different perspective and competence. It can create more awareness about non -visual values of the space.



Fig. 2. Experiments in anechoic chamber at the Audio Acoustics Lab at Gdansk University of Technology

### 3. Perform the sound of the city

The second step in this approach was the performance of the sound spectacle – a unique live concert of soundscape of the city. Using the methodology (Fig.3.) and the idea of sound spectacle by the artist Zorka Wolny, this experiment called for utilizing strange and often unexpected instruments and tools including our own bodies.<sup>1</sup>

This work was conducted within the WIRE 2014 - Winter School International Research and Education; Art and Architecture introducing art into architecture and design practice.

The spectacle investigated sensorial aspects and characteristic of the space and was composed to the specific architecture and acoustic environment. The central goal of this workshop was to create a sound of the city and the final composition consisted of a sequence of exercises. The members of the group had to get to know each other and explore their individual personalities. At the same time they were analyzing the qualities and sound capabilities of the space and of their own role within it. The spectacle consisted of personal input of each of the performers and was the final and most important part of this workshop. The performers were inspired by the acoustical sensations of the space and created music and sounds using everyday objects such as their bodies and voices. They were inspired by what they observed in those urban spaces such as the sounds of people talking to each other or walking by or hearing nature and more specific sounds of a bustling urban environment. The culmination of this experimental performance was a transformation of these separate individual sounds into a complete abstract musical piece which represented the sound environment of the city.

The final composition titled the “Sound of the City” was a unique experimental performance. Each audience member could interpret it differently using their own sensory experiences. The emerging non-visual representation of the space and of the architecture of the city was a unique way to stimulate the architectural creativity of the performers as well as to stimulate the audience to look at their environments in a completely different way.



Fig. 3. (a) (b) Sonic experiments at the Gdansk University of Technology

<sup>1</sup> Sonic experiments based on the exercises developed during the workshop „Sound Measures” within the Soundplay project Gdansk 18-22 March 2013, by Zorka Wolny and Anna Szwajgier with support of Justyna Borucka.

The workshop participants: artists and students, focused on sound, a topic very unusual for architects to concentrate on. The conclusion of weekly workshops was a public concert at the space of the Gdansk University of Technology, in which workshops participants and artists created musical and spatial installations with natural sounds of space and human voices.



Fig. 4. Experiencing of sound art project within the Narratives Art Festival, Gdansk 2012

#### 4. Implementing the sound of the city

Another way of introducing the issue of multi-sensory perception of the space was the creation of a sophisticated online visual and sound representation of the city based on the prior excursions and walks through the city environment. An important part of this stage was incorporating the experiences of the participants in the art city festival attended at the same time and which served as an additional methodological inspiration. (Fig. 4.)

The city was mapped using traditional visual methods but, in addition, a sound map was created to provide unique sound to each separate city section. Each location was additionally represented by films and pictures as well as narratives of personal experiences of those who focused on that particular location. The final product was a unique multidimensional and nontraditional architectural representation of the area with a map as well as soundscapes and individual narratives creating a sophisticated cityscape. (Fig.5.)

Soundwalks and soundmaps document and investigate the city in ways that traditional architectural representations do not. Participants of soundwalks are encouraged to critically assess sounds of the environment and to think about how they contribute to the sonic environments while sound walks provide a unique sonic route to follow along the terrain, and to incorporate sound into their experience of the city. ( Truax 1978)

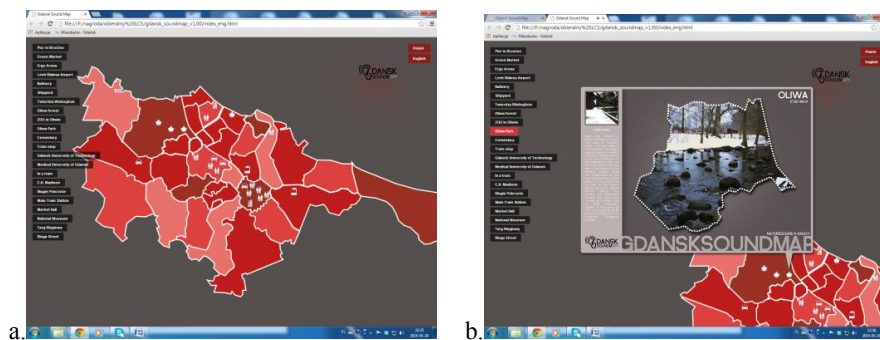


Fig. 5. (a) Digital soundmap of Gdansk; (b) Digital soundmap of Gdansk district - example

## 5. Conclusion

The future of architecture depends on the interdisciplinary character of the discipline and the progressive, innovative ways in which it is practiced. This project demonstrates that art provides means to approach architecture in innovative ways. It is using art that we can develop new approaches as well as communicate architectural concepts to a wider audience. Using art to communicate architectural concepts can serve as a feedback loop through which the community can reflect on the evolution of the discipline, provide feedback about the use of space and articulate ideas about architectural design.

The exercises described above represent a highly multidisciplinary approach, linking such disciplines as architecture, arts, electronics, sociology of the city, anthropology and media design. It is based on the assumption that most advanced and promising phenomena are emerging on the very edge of the blurring borders between traditional disciplines. The problem of training new architects is widely discussed within Europe, as for example during panels of the European Association for Architectural Education. It is becoming evident that future practitioners will have to establish their highly-specific competences and strengthen entrepreneurial capabilities to successfully face global challenges. The proposed new kind of educational activities promote new methods for teaching architecture.

Such new methods often focus on processes of understanding and designing the multisensory dimension of public spaces and thus strengthening awareness about their phenomenological characteristics. This approach has been neglected for far too long, and providing new opportunities and design studios may help to change that, and to bring the focus to new innovative ways of architectural design. The future approaches could advance the discipline, and influence better understanding of its contemporary manifestations.

In addition to enriching theoretical foundations such new methods and approaches will help practitioners and students acquire skills in using the advancements of different disciplines in architecture and urban planning. Expected learning outcomes will also provide new directions, unique propositions for broadening existing learning programs in architectural schools by adding to their knowledge about sound art and new technologies and scientific research.

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