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A Workshop on Sonic Ambiances at the School of Architecture of the University of Talca, Chile

Instrumental Condition of Space

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Abstract. *This teaching-and-learning event was held at the University of Talca which has a twenty-year-old educational programme in Chile's Central Valley. Today, this region is involved in a fast process of transformation, due to new economic activities that are having a strong impact on the way of life. However, a rich collective imaginary still persists. Throughout this workshop on the sonic dimension, the resources used were based on the soundscape approach, the paradigm of citizen science and the use of mobile phones. Other tools used were light beams and paper models to further develop the sensory experience. An assessment of the process added new data on how the learning process has been enriched.*

Keywords. *Sonic Environment, Sensitive Learning, Pedagogy of Architecture*

Introduction

Atmosphere and Experience in the Architect Workshop

Architecture's capacity to move people is what interests architect Peter Zumthor most. The "Magic of the Real" reveals itself through atmosphere which is the joining of materials, phenomena of sound, light and temperature and other aspects such as material consonance, coherence, etc. (Zumthor, 2006). Danish architect, Eiler Rasmussen's *Experiencing Architecture* (Rasmussen, 1974) considers architecture a sensory art form that must be experienced.

"The perception of space is a complex intersensory phenomenon in which the visual, soundscapes, smell and climatic senses constitute fundamental channels that are mutually determining. Light, sound, climatic environments, aspects regarding movement, paths and synesthesia are elements that qualify the perception of space" (Palmese and Carles, 2018, 31). It is through perception that we access the world but in a partial way depending on the domain and quality of our sensory apparatus (Gálvez, 2019). Juhani Pallasmaa, in his essay *The Eyes of the Skin* further examines the interconnected role of the senses in architecture with particular emphasis on the sense of touch and the role of peripheral vision (Pallasmaa, 2010).

The Architecture Workshop is an ideal place to put some of these approaches into practice due to its unique status as a space for experimentation and creation in the teaching of this profession.

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The School of Architecture of the University of Talca practices a very enriching and interesting pedagogy. With regards to the subject in hand, it is worth mentioning two workshops that are part of the first-year studies: the Material Workshop and the Body Workshop. Working with materials and later movement during the first year, allows students to become familiar with the complicated relationships that make up the discipline of architecture which through practice bring out subtle and profound connections. The students' hands on experiences with materials and space through work on the body in movement, immerse them in the implicit knowledge necessary for the project and create a very distinctive learning environment (Zúñiga, Gajardo and Ojeda, 2014).

Sonic Architecture - Sonic Urbanism

Originally, 'soundscape' was used to aesthetically describe acoustic settings and was restricted to natural and inherited environments (sonic memories). The fact that the instrument of the *soundscape* has not been adapted to the urban context leads to the need for a new conceptualisation to describe and intervene in this medium. The *Sonic Effects* proposed by Jean-Francois Augoyard add other dimensions to the soundscape and examine the perceptual and qualitative features of sonic ambiances (Augoyard and Torge, 2006). In subsequent evolutions, this study of sound is continuously evolving to include other new tools and perspectives aimed at improving their use in certain domains and with new practical objectives, i.e. teaching-and-learning in architecture schools.

Walking

According to the studies of the anthropologist Edward T. Hall (Hall, 1989) cited in (Gehl, 2010), sensory development can be broadly speaking classified into the 'close' senses: feeling and tasting; and the "distance" senses: seeing, hearing and smelling. Gehl believes that urban design should adapt to the speed of human movement and capacity of humans to perceive at these speeds.

Walking is essential for the recognition and appropriation of a place in the practice of architecture. It is also key in education. Walking has also been a fundamental practice in sonic exploration and its close counterpart, acoustic ecology. As a shared practice, this experience, and the way it is carried on is firmly established.

Permanence

In living spaces there is room for play, rest or reading as they are quintessentially, places for social interaction. For Gehl, in the context of urban planning, where the relationship between the senses is an important issue. This is based on the thresholds of perception of the 'distance senses' mentioned above. The information received depends on the lighting conditions on the subject and of the surrounding environment, for example with backlighting, and also on the visual sharpness of the viewer (Gehl, 2010). Depending on the situation, this distance can also be a reference for the intelligibility of speech in a normal open-air situation, once again with a wide combination of situations which may affect communication such as wind, background noise or the influence of surfaces which demarcate the space. These living spaces such as plazas are especially fragile in cities. The *Hush City* project which identifies quiet areas in urban spaces, is a research project which maps the position of quiet enclaves in cities worldwide and empowers people to identify and evaluate these locations. In this case, the tools used include descriptive methods, subjective and motivational effects on the users together with audio recordings, quantitative evaluations and images obtained on mobile phones. The questions are designed to explore the correlation

between the soundscape and issues such as emotional responses and social potential. (Radicchi, Henckel and Memmel, 2018)

Sound Identity

'Sound identity' is concerned with the sound material itself. This sound material allows those that live in it to identify with the location and feel a part of it. In some environments, the characteristic sound material is interrupted, accentuated or fractured. Characteristic sound objects can be heard and identified. The location of the sound material is immediately identifiable. These surroundings are characteristic in the rural environment, for example, where sound becomes inherited identity. In the current primarily urban context, these characteristic sounds tend to become standardised. another modality of identity emerges, characterised by continuity, soft transitions and detachment. Listening tends to be different, distracted. According to Ricardo Atienza, it is an everyday sonic identity (Atienza, 2008).

Sonic Creation in Architecture

The success of architectural design resides in the fusion between the known and the imaginary. According to Galvez "a perception that is both imaginary and real at the same time" could be a perception that is known and recreated over which an imaginary perception is superimposed" (with a sonic ambiance which overlaps a real environment, the inner ear imagines a future sonic scenario) (Gálvez, 2019).

Introducing a dynamic understanding of urban complexity, several authors propose in-situ artistic processes (Sand and Atienza, 2012). For other authors the *dramatic form* has a place as there is scope to connect architecture with theatre. Cities and buildings like theater have dramatic principles of representation. Residents walk, interact, play but also *perform* in urban life (Morales, 1984).

Presentation of the Case

Contextualisation: Human Settlements

The workshop took place in a series of eleven medium-sized towns in the area around the city of Talca which is one of the main cities in the region of Maule. It is situated within Central Valley, a geological depression in central Chile extending between the Cordillera of the Andes and the Pacific coast that offers great contrasts in orography, topography and natural environments. The aim of the course was for students to put forward proposals to provide these towns with high quality public spaces and with facilities for performance art. The project had to cater for both the recreational and living requirements of the inhabitants and their variety of everyday activities as well as provide a space to be able to occasionally accommodate performances by small theatre companies from a network of local artists.

The idea we had at the start of the workshop, was to propose a network of public spaces in the Maule region. We had the support of the Regional Maule Theatre. Students visited the theatre and received a great deal of information about what was required. The teachers were very interested in the students integrating the work of the whole group and for them to get a greater awareness of the territory.

Objectives

Above all, the main aim was for the sonic ambiance to play a central role in the recognition of a location, in the initial decision making and also in the creative process which would develop afterwards.

The specific objectives of the workshop were:

- To explore the possibilities generated by the sonic ambiance of the space and the architectural forms;
- To experiment with intersections between tactile-sonic-visual sensory fields integrated into a creative process;
- To incorporate the tools and skills relating to the sonic ambiance into the practice or creative process in the Project Workshop.

Structure of the Process

The process was divided into three stages. We are going to refer to the activities of most relevance to the subject of this article:

Exploration and analysis - weeks 1 and 2

Visits: Soundwalks and audiovisual ground recordings. Appearance of sonic and material textures of the place. The students must choose two locations with a relevant sound identity and a potential for living spaces.

The student is expected to listen and select two-minute fragments of sound to present in the workshop from the chosen locations.

Presentation of ideas: the group listens to and views the audiovisual recordings on the students laptops which are placed on the tables. The computers are arranged in the room according to the geographic location of the towns where they were recorded. Various reproduction and listening methods are trialled: successive, simultaneous, with the students in movement.

Activated space vs the architectural object - weeks 3-5

Building of models: this experience interconnects the manual work with the sound of paper creasing as it is being created. The work of Fátima Miranda, *perVERSIONES*⁴, is shown to the students.

Presentation of ideas: activating the space on the paper model using beams of light. The configuration of the empty space is explored assimilating sonic sources and lighting to create guidelines to understand space through the movement of small adjustable spotlights.

Project - weeks 5-10

The Project takes a new direction. The architectural object (vertical) is *per se* a *dramatic entity*, with the capacity to activate the empty space, available to be occupied and 'sounded' by the population.

The assignment on ground textures (horizontal) appears to have been intuitively internalised by the students. The material nature of the assignment observed seems to incorporate definite sonic qualities that are produced through contact and movement. The students are asked to make a final reflection on the existing sonic ambiance and its significance on the project. Students are asked to write a review of their chosen location and share their data of 12 locations with the *Hush City Community*⁵.

4. Miranda, Fátima. *perVERSIONES Après un rêve-Gabriel Fauré*, see: <https://youtu.be/f85vD301L6E>

5. See: <https://map.opensourcesoundscapes.org/view-area>

Final Presentation: Exhibition

The overall group assignment comes together. The students assemble an installation, creating an atmosphere in semi-darkness. The murmur of the recordings, that are once more arranged in the room according to the geographic location of the places where they were recorded, can be heard. This time the sounds come from the ground. Illuminated paper models emerge from the darkness in the centre of the room and the rest of the graphic documents and models hang around them. Sounds predominate and the visual is out of focus⁶.



Figure 1. Final exhibition, Students and teachers, 2019

Discussion and Conclusions

The *practice of listening* was particularly important in the first stages. It became a form of appraising the first point of contact with the place and also facilitated the collection of a valuable compilation of audiovisual recordings.

No previous preparation was necessary for an auditory immersion in a sonic ambiance. None of the twenty students that attended the workshop were left indifferent to these activities.

The type of recordings and the attention to the variations in the sonic ambiances over the different visits, helped to make sense of the social use of the space.

The job of selecting the fragments of audiovisual material was important as was repeating this task in various stages of the workshop. A more attentive review of the sonic material also provided a new perspective of the ground that acquired new prominence through video, connecting sight and touch.

The creative process was supported by the use of the *dramatic* as a resource and of

6. See: https://youtu.be/eC_NexUd9qE

other materials such as paper and light that were intertwined with each other, as with the other aspects of perception that were addressed in the workshop.

The main achievement of the workshop was the result of the integration of all the assignments. A significant level of synergy was achieved with an emphasis on the sonic information provided by the final installation piece.

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