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Exploring Phenomenological Spatial Experiences Through Sound

PhD Proposal

The Glasgow School of Art

20 March 2005

Context of Proposed Research

Presently we understand space within these four aspects of Lefebvrian theory: perceptual space, architectural space, mental space, and social space. Closer inspection of these categories shows us their inherent similarities and differences. Perceptual space bridges abstract and real space within the act of understanding. Architectural space is the easiest to both identify and understand, because it is demarcated physically; this physicality creates a framework for social space. Everyone encounters and interacts with it, more often than not unintentionally. Of the four kinds of space, architectural and social share a great deal. One cannot have an architectural space without social space and vice versa; this mode of thinking applies for all of the spaces mentioned above, as a physical social space sets up various perceptual and mental spaces. It is hard however to have a general concept of mental space, because of its individualized nature. Mental space is defined by the boundaries of other space(s); there is no way to clearly account for it, or to give it a defined 'image', as such a definition resides within the individual. One way of providing a clearer understanding of mental space is through theoretical practice. Each theoretical practice will produce its own particular mental space. One of the problematic issues surrounding the term 'mental space' is the ease with which it is applied. Lefebvre states that mental space is the headspace of philosophers and epistemologists. I have found that its enhanced ideology clouds a clear definition. However one way to underline its importance within the scheme of the other spaces is the fact that mental space is indeed a central reference point or an axis for Knowledge (Lefebvre p. 6).

The purpose of this research is to build a template in order to generate a perceptual architectural sound space that can be experienced and understood both within and out-with of a fine art context. The idea of a spatial construct is a given; we continually construct mental, social, and architectural spaces. Our current understanding of these spaces is deeply rooted in historical frameworks. It is my belief that we have somehow stopped producing space within a Lefebvrian context. Space has evolved within the construct of such things as the satellite town and the suburb, which serve to destroy the construct of city. Socially, by changing the context of the city, by removing the need to actually go there, we have eroded both its nature and its necessity. One no longer needs to go to a city for work, shopping, or cultural experiences. The very nature of the suburb has reduced the importance of a centralized location as people's social needs have changed. We have also changed the physical appearance of the interior and exterior of architectural space. What we have not done is changed the actual physical make-up of what space means, we have not removed the materiality, and constructed it out of the immaterial. For example: sound.

Research Aims

The primary goal is to both create and understand a perceptual architectural sound space, and its phenomenological impact on those who interact with such a space. Within a contemporary fine art context the outcome will greatly influence the way architectural space is both observed and experienced on two levels: the level of creation, and the level of interaction. Outside of a contemporary fine art context the implications will be more pervasive. The fundamental parameters within which we think about and create space may be redefined as a result.

Research Questions

Within the context of a contemporary fine art practice in relation to architecture, what are the implications of manifesting perceptual space through the use of sound, and what qualifies it as art?

Can a perceptual architectural sound space be created using only one aspect of Lefebvrian space, or is the creation of such a space reliant on all four to be successful?

What are the challenges posed to our [landscape of] understanding by a perceptual sound space within and out-with a contemporary fine art context?

Methods and Procedures

The majority of the research will be primary, studying the physics of sound: investigating both new and old methods of creating new sound, ways of recording and manipulating pre-existing sound, and exploring the methods of presentation (speaker technology). Depending on the context and nature of the sound, a number of places that specialize in experimental sound/music may be utilized: STEIM in Amsterdam (NL), Planet CCRMA at Stanford University in Palo Alto (California), and the MIT Media Lab in Cambridge (Massachusetts). At this stage it is too early to ascertain which place would be most beneficial to my particular research. However one particular method, which seems to have a lot to offer at this early stage, is the use of Open Content software. While more traditional sound processing systems (Pro Tools and Logic Pro for example) offer a wide variety of tools, utilizing Open Content software will allow me to create very specific programs for specific functions. With reference to that process, MIT Media Lab, and Planet CCRMA would be the most obvious centers with which to liaise, based on their usage and development of Open Content software.

In addition to the study of sound, research will be conducted investigating the construction of architectural space, in reference to both spaces created for acoustic perfection and spaces created for phenomenological experiences, both within and out-with a fine art context. Examples of such spaces include concert halls and performance spaces such as The Sage music center in Gateshead, U.K. designed by Norman Foster.

Secondary research will also address the psychology of sound within an architectural context, the concept of phenomenology, and the influence of sound on the mental and emotional processing of spatial experience. Conditions such as synesthesia and blindness will be explored to gain further insight into the brain's understanding of and response to a perceptual architectural sound experience. This research will help clarify the design of this experience. The impact of blindness and the phenomenon of synesthesia will be investigated to study spatial experience that falls outside of what is considered normal. Lastly, research will be conducted into the existence of phenomenological spaces produced in a contemporary fine art context through the use of light and other media, for example Robert Irwin's two-part installation at the Dia Centre NYC, "Excurses: homage to the square[3]". In addition to the Irwin piece, various installation works by James Turrell will be studied, for example his "Skyspaces", "Heavy Water", and the "Perceptual Cells". While none of these may use sound as the determining factor for a phenomenological experience, they are worth investigating to determine how the generation of a spatial experience through sound could work.

Proposed Analysis and Presentation of Research

The nature of this research requires that at least 50% of my studies will be presented in a portfolio format. If further investigation leads to the conclusion that a perceptual architectural space cannot be generated through sound alone, 50% will still be submitted in a portfolio format, to "show" why such a space could not be created. The written element will be of equal importance to both detail the various methods taken and to provide analysis of the successes and failures within the research.

Why this Research is Worth Doing

Spatial experience contributes to a range of human experiences; the exploration and creation of a perceptual architectural sound space has yet to be established, or explored. However the desire for experience(s) that removes humans from the everyday remains unsatisfied. This research will make significant contributions to our knowledge and understanding of how space is currently perceived, and how with new methods we can push both our understanding and our expectations of a perceptual spatial experience. The purpose of this research is to build a template to generate a perceptual architectural sound space that can be experienced and understood both within and outside of a fine art context.

Facilities Required to do this Research

A studio with a high-speed Internet access point will be required. In addition, it is important to have a solo space, so that I can build a recording studio, as the ability to construct and control the environment within which I make the work is paramount. Additionally, unrestricted access to the Electronic Media Arts Centre will be required to access to the school's sound production. In addition access to large book-able spaces to test out various sounds and speaker technology, as well as any access to new sound equipment the school purchases will be required. Lastly, permission to install Open Source software on some of the school's faster machines will be necessary to help with processing the various sounds produced.

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