

## The audio-visual city

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### Abstract

This communication is centred on the study of the audio-visual dimension of the city. The rapid and deep changes, in all areas of knowledge, from social, economic, political, cultural... that characterize our times open new lines of research. The growing appreciation of the subjective and sensory aspects in all areas of knowledge, the development and diffusion of *technology, have completely changed our interpersonal relationship with the environment, our ability to analyse, recording and data storage and handling of ephemeral and immaterial phenomena, such as sound, finally the democratic provision of all knowledge, through Internet, impose us another scientific approach to analyse, read and compose the city . Our work is based on a cross-modal approach to the apprehension of space, taking into account the complexity of the relationship between man and environment. We'll show a method that considers the relationship between space, action and audio-visual perception in an situ experiment, assuming that sound brings the time dimension into the perception of space, almost ignored in the traditional study of architecture.. Our methodology is applied using urban walks, in a continuous dialogue between audio-visual language and everyday situations, trying to capture the character of places, their everyday sensory identity. This work is an investigation of sensitive qualities of urban space based on an integration of various sensory aspects of daily life, taking into account the development, perception and representations that people have of them. These data are completed and compared with the physical and*

*morphological data.*

*We try to seek perceptual structures arising from the integration of the characteristics inherent to the relationship of sound and visual language, in the objective and subjective sense.*

Keywords : Time , space, body, walk, Inter-sensoriality ,

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## **The sound in an image's civilization**

One of the clichés of our time is the claim that we live in the civilization of the image. According to this, we live in an environment subjected to the power of images, in which the attention of theorists, researchers, including designers and planners focuses primarily on visual perception. Zunzunegui, in his book, *Thinking Image* says more than 80% of the information that contemporary man, living in cities, receives, analyses specifically through the mechanism of visual perception. So it is reasonable to say, that the phrase "the civilization of image, quickly characterizes our modern universe " adds Zunzunegui. <sup>i</sup>

For him, this expansion of the visual is largely the result of uncontrolled growth of the mass media. He considers as key issues in this domain of the visual; it's character of immediacy, specular appearance, duplication of reality.

This creates in the iconic Western culture confusion between reality and image. This situation is connected at the same time to a diminishing of other senses, such as hearing or smell, which once were a more important feature in capturing information from the environment.

In a culture where the visual is the main sense , we barely pay attention to the sound experience, this constitutes an environmental dimension little known in regard to its aesthetic and sensory qualities. However, the sound experience has begun to be, in recent decades, an important multidisciplinary tool to deepen the knowledge of everyday sensory experience and a important source of information in many areas of study

such as anthropology, architecture, landscape, ecology, history , contemporary art , pedagogy , psychology information ...

The research on sonic environment, is evolving, and it is no longer confined to traditionally isolated disciplines such as physical acoustics, audiology and psychoacoustics, The sonic experience is now important in other disciplines, on the one hand in aesthetic disciplines and on the other hand, in the social sciences, anthropology, sociology, urban planning, so that new variables are incorporated in the analysis. These theoretical and methodological developments begin to address the phenomenon of the production and reception of sound in a comprehensive manner, giving an idea of its complexity , posing a fundamental question : how can we complement traditional quantitative analysis by incorporating the qualitative and aesthetic elements of sound, both in the theoretical and methodological application .

The development of the qualities of sound can be of great interest, in many fields, whether artistic, scientific or technical. The qualitative development of sound is undoubtedly an important area of exploration within the field of architecture.

Traditionally the analysis of sound scientific culture is compartmentalized in various fields of knowledge, with no common language and with dispersed methods. This conception of sound analysis pays little attention to the subjective experience and other variables, such as the temporal and spatial context, which affect the performance and evaluation of sound.

### **The sound in the architecture**

The architectonic discipline is traditionally founded on the criteria of durability and stability, related with special characteristics that prioritise the visual perception, and it's means of expression are fundamentally graphic. The design such as metric and symbolic representation, exclusively refer to visual factors. These fundamentals, that have remained unchanged for century, are now breaking down and new needs

are emerging.

The introduction of new technology, in the different phases of architectonic study and projects, and the interest of the new architecture in the investigation of the way we perceive our habitat, is redefining the limits of the field. They are not only taking into consideration the relationship between spatial and temporal aspects, but also taking into consideration the sound dimension. We have got to redefine our traditional view of space, so it is seen more as a collection of phenomenon and events.

Like temporal factors, in the words of French philosopher Jean-François Augoyard, the element of sound makes the experience of a place dynamic, and the material elements are like a sounding board for everyday life, that further enliven the space.

Without exploring these variables, the habitant is a spectator on static stage, where the set for the stage is built with only one sense in mind, that is, eyesight. However space is the result of a multi-sensory perception, inevitably modified, distorted or contaminated, in his physical characteristics, by other senses besides sight. Like R. Atienza says “ the habitant's perception of the public space is intimately linked to the dialogue established between repetition and variation, antagonistic but inseparable concepts. This dialogue describes an ambivalent temporal journey in which continuity and change, periodicity and evolution are confused.”

On the one hand, digital technology has made it possible to store, analyse, manipulate and distribute sound and image in a way that until recently was impossible even to imagine. On the other hand, the knowledge , techniques and methods to perceive this sensible space by the habitant , or citizen, is an important tool that can be used in architecture. We propose to approach the complexity of daily experiences integrating aesthetic conceptions, and scientific and technical contributions, developed from various disciplines, involved in the interaction space and men, such as; physics, architecture, sound art, electro-acoustic, audio-

visual field etc.

### **Walking as a tool**

In our purpose of incorporating citizens experiences, the body, and movement in the analysis of the architecture we will resort to a useful tool : urban movement . The interest in the movement , walking, journeying, has always been present in the architecture, from the beginning, just think of the great monumental complexes Assyrians or Egyptians , and following throughout the history of architecture . Obviously this interest has resulted in different ways depending on the historical and cultural moment in which it was stated, with the emphasis on traditionally, aspects of light and geometry and in a few cases aspects of acoustics. We have also verified the existence of a genuine tradition in Western culture of the last centuries of the use of walking space both in architecture and urban planning, that goes from " Flaneur " Baudelairean, in their scientific approaches in the field of

sound landscape and studies of urban environments or atmospheres, through Le Corbusier , Benjamin or the situationist movement.

Specifically Le Corbusier, was the first to raise a dynamic conception of space, introducing explicitly time, as a design element; presenting the Villa La Roche, Le Corbusier said: " We enter; the architectural spectacle presents itself to our gaze; we follow an itinerary, and various points of view unfold ..... The window bays open up views onto the exterior, and we rediscover the architectural whole."

For him, the "architectural promenade" is, therefore, a journey that involves a complex mental process, to measure dynamically and through a series of relationships in space, the unity of a work of architecture; and although the proposed new architecture consists of relationship with spaces, and the assessment of the temporal dimension, which involves memory and expectations of the subjects, the intellectual component predominates over sensory.

In this approach the concept of time is an abstract concept, a numerical

range, is a quantitative measure of the experience, without at any time qualifying it. In this concept, the architecture is a unitary object, defined, objective. This way of introducing the journey, the dynamic, time in architecture, does not consider the complexity of multisensory perception, the subjective part in the construction of space, the complex relationship between man and environment, that modifies and recreates its architectural setting.

Another way of strolling, is to walk as a critical and cognitive instrument in the landscape. Francesco Careri, in his book *Walkscape*, focuses his study on man-travel-landscape relationship, and recognizes walking, as an ancient practice of man; previously in ancient Greece, movement was associated with the knowledge. Careri, in his book examines the walk as a tool for understanding the landscape.

Walking, in this view, becomes an aesthetic tool with which to explore and transform the spaces of the contemporary city. It is important in this way, of touring a city, to recognize the importance of subjectivity in the journey.

For Francesco Careri, we not only create landscape filling the territory with objects, but also filling it with meaning. Following the speech of Careri, walking, man begins to build the natural landscape around him, exploring and transforming. In the last century research into the city, through walking

was common to various avant-garde movements such as Surrealism and Dada, movements exploring ways to anti-art; but it was with the Situationist movement that an architectural and urban transcendence occurs. Previously the surrealist movement (Breton) raised the importance of subjectivity in the process of perception of the city. As does the lyricist movement, who considered that architecture influenced the lives of people, and in turn criticism of architecture is a critique of life in general.

Guy Debord and Situationism propose the theory of psychogeography, a

theory of the combined use of arts and technique, for examining the relationship between environment and peoples behaviour. One of the main tools of this theory, is to use innovative mapping to transform architecture and urban space. take For Guy Debord "

"The spectacle is heir to all the weakness of the project of Western philosophy, which was an attempt to understand activity by means of the categories of vision. Indeed the spectacle reposes on an incessant deployment of the very technical rationality to which that philosophical tradition gave rise. So far from realizing philosophy, the spectacle philosophizes reality, and turns the material life of everyone into a universe of speculation "

### **Difficulties in experimental methods**

Light, sound, climate, environment, movement, the routes and urban synaesthesia are elements that qualify the perception of space, although there is no sufficiently proved methodology in the architectural field. It is more and more necessary to establish an interdisciplinary field in which to develop methods capable of linking quantitative and qualitative dimensions. These methods need to take into account and integrate various aspects such as in situ perception, social representations of the environment, urban management and technical developments linked to the control of the sensory parameters of the environment (lighting, sound, thermal, olfactory, etc..)

Our proposal aims to take from existent methodological tools that address qualitative and quantitative aspects, prevalently used as a single sensory channel and adapt them to a audio-visual approach, to test the interaction between sound and the visual dimension.

We are aware that this is a limited approach to the study of the environment as multisensory experience, that will require further analysis and research, which will incorporate and integrate different sensory channels (climate, olfactory, tactile ..).

The sound dimension and activity of listening, Is one of the essential

components of the environment and urban situations. The ability to qualify the time, its vivaciousness, and its ability to generate not only information but also aesthetic and sensitive elements (memories, emotions, meanings ...). are indispensable in a multisensory research on environment. Although it is easy to verify empirically, how sound and visual dimensions interact with each other, and produce complex perceptions, we don't have specific research on an inter-sensory approach.

The process will be the development of multidisciplinary analysis techniques and tools to cross-examine the audiovisual dimension of architecture, taking into account the difficulties that entails. We first we will try to integrate the objective evaluation, in relation to ordinary perceptual experience of the subjects. From the point of view of space is analyse how the sound affects the shape or form of the space, and how space reveals or interacts with the sound. Incorporating audiovisual dimension of space means taking into account the time dimension, the movement and dynamic perception of urban space through the interaction of two sensory channels, sight and hearing. This leads to two difficulties: First, integrating quantitative and qualitative data and secondly, to consider the sensory interaction. The latter, in turn, raises a number of methodological challenges arising from the difficulty to apprehend, qualify or verbalize feelings, which has been reported by several authors particularly in the field of sound. Indeed, the fact poses a qualitative methodology, which involves addressing the difficulty for humans is to express feelings, emotions or ideas. The fact also that the sound environment has often been analysed solely in relation to "noise pollution", creates a further difficulty in talking about "sound" and the environment without this negative connotation.

## **Methodology**

An experimental process had been undertaken in a specific urban space: the city of Cuenca, in order to develop and analysis procedures to help get a better theoretical understanding of the sound and audiovisual dimension of the city, This experiment is a procedure that goes from the



general to specific, using various techniques and strategies for data collection. As reflected in the chart # 1, our study focuses on the in situ observation of urban phenomena in terms of three fundamental elements: complexity, objective-subjective interaction and the relationship between physical space and social practice.



Graph 1. Elements of analysis of urban phenomena.

In laboratory research a few variables are isolated, to analyze these phenomena, missing variables related to the context in which they occur, with their circumstances and contingencies related to a space-time given situation. These situational variables define urban phenomena as well as the variables isolated in a laboratory study, although there is little research with this approach. This brings us to the second element that will consider the valuation of subjectivity in relation to objectivity, based on the idea that both are necessary and complementary to the knowledge of an urban phenomenon.

The third element to be considered for our observation in situ is the relationship between physical space and social practices. The traditional architecture considers the space as static, regardless of the dynamic relationship that exists between the physical space and corresponding social practice. But the perception of physical space is not fixed and stable but is recreated by the experience of the user of the space, " the public perception of space is intimately linked to the dialogue established between repetition and variation, but indissoluble antagonistic concepts. This dialogue describes an ambivalent temporal journey in which continuity and change , periodicity and evolution is mistaken .

Incorporating the audiovisual dimension of space means taking into account the time dimension, the movement and dynamic perception of urban space. That is why our research is focused on a specific city tour in the city of Cuenca.

### **The search for the walk and a first experiment**

For the choice of the walk/route we need to know the urban reality. To look for documentation of quantitative (acoustic character, urban , etc ... ) and qualitative character, to make inquiries and interviews with experts and connoisseurs of city, which allow us to have complementary information and to define better the work space .

In our specific case, the methodology has been applied to a walk that has been chosen, after analysis of two previous studies and conducting a general survey. The studies are a qualitative analysis of acoustic sound on landscape (Cristina Palmese , José Luis Carles and Antonio Alcázar. *Paisajes sonoros de Cuenca*. UCLM 2008 ) at the Special Plan of the upper city and it's canyons ( ) a conventional urban project, exclusively visually centred on the top of the city of Cuenca (*La ciudad alta de Cuenca y sus hoces* . Juan Manuel Alonso Velasco. Casa del Libro 2003. Madrid ).

From these first analysis there is a clear division of the city into two, the higher hill top city, (monumental) origin of the first settlement, and a new city below, commercial, with more modest architectures. The two towns are separated by two natural elements, the rivers of Huecar and Júcar, that create a strong relationship between nature and town, which is one of the most important characteristic of this place.

With this background, our next step was to define a route in which to apply our methodology to our research, how sound and image are related and how they build an inseparable dimension of thinking, doing and living in the architectural space. The walk/route includes the double feature of natural space and built space, characteristic of Cuenca, developed through complex situations, sometimes contradictory that characterize the city from a spatial, morphological, cultural, ... view.

Our method is composed of different existing methods and techniques in both sound and visual field, and integrating new variables for specific audio-visual analysis. . We have integrated here different procedures, applied separately in the visual field ( cognitive maps ) and sound ( sound travels commented ) into a new methodology for integrating audio-visual characteristics .

In order to do this, we need new tools to measure and represent the architectural and urban space. Tools that will establish a new dialogue between man and his environment; which will allow us to measure and analyse the variations and complexity of the space, with a predesigned system that is

capable of gathering information that represents the multi-sensory experience and the varying perceptions of space and time of the inhabitants of the environment.

For our first experiments we use the video as a format of representation, as well as analysis. The space we selected to undertake this experiment was in the town of Cuenca, in Spain, and in this case the area surrounding the bridge of Puente San Pablo. We assigned a person to hold a measuring stick, defined in metric units, to move along the bridge at intervals of 10 metres. With a video camera we then took a 360 degree film at each 10 metre interval. We then had ten individual 360 degrees audio visual recordings of 30 seconds each. Each one allows us to obtain information and an approximation of the surrounding conditions. The repetition of the filming in different locations helps us collect information relating to the changes in space and time. The chosen space becomes multi- dimensional composed of different experiences and different moments of perception.

An analysis of the film, then becomes an important tool to study the area, its surroundings, and its variations. In editing the film, you then have another tool of representation, interpretation and communication. In this way the use of audiovisual recordings becomes the basis for a virtual experience, or a virtual recreation. The area you have studied, is then construed and recreated with new information that even surpasses the

experience of being present in the space

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