

Sound beyond the hedge. Towards an acoustic construction of images

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Abstract

The use of images for representing the world should be considered as the product of a generative act of the subject more than the result of an objective process. It could be said that the construction of images is produced by a consonance, or even a resonance – a common vibration between the real and the subject, amplified in his mental processing: a physical as well as emotional, symbolic, cultural connection.

Replacing the metaphorical sense of “resonance” with its proper meaning, there are many artistic, architectural, literary experiences that have attempted a translation of sound into visual images and vice versa – sometimes aiming at a synesthetic stimulation of our perception, other times configuring “silent media” able to inspire our imagination.

More peculiarly, the role of sound in the process of unveiling and building images assumes a great importance in the experience of blind people. Sound strongly contributes to develop a “gaze” capable of perceiving and judging the outer world. This extends the scope of the image beyond the mere visual, placing it in a multisensory dimension.

Through the method of interviewing and analysis, the paper focuses on the acoustic dynamics that affect the symbolic horizon at the basis of the construction of the image, favoring an inclusive perspective, with possible repercussions in the field of communication, art, society and environment.

Keywords: Imagination, Sound, Soundscape, Deep Narration, Multisensory, Blindness.

1 Imagining images¹

The construction of images is not an objective process, which simply displays what is in front of us. It is the product of an imaginative act, deeply influenced by cultural and symbolic aspects, both individual and collective: «we often believe that perception is a neutral operation of recording external data, which would happen identically for any human being, whereas this is not the case: what we see is unconsciously filtered by cultural frameworks [...]. We see only what we are able to recognize» [1,106; 2].

We can find a clear example of this process in the way human societies have historically represented colors – not only associating different values to different shades but also, as a result, being able to see and recognize different color ranges. Populations living in the Arctic regions, constantly in contact with snow and ice, can recognize shades of white that are unknown to us. The alleged inability of Greeks to distinguish green is another demonstration of the profound influence of cultural apparatus on our receptor organs [3].

These considerations are generally underestimated, overwhelmed by the incessant flow of images that supports the needs of contemporary communication, assimilating “images” to “things” themselves. According to Luisa Bonesio, the risk is to «reduce the complexity and the contradictory inexhaustibility of reality to a mere and flat icon» [1,116]. Questioning the primacy of the image, understanding which mechanisms and processes are hidden in its production, would allow us to establish a deep and more conscious contact with our environment: from simple data to more complex structures, as places and landscapes.

The contribution focuses on the importance of sound in the process of image construction [4], starting from the analysis of some artistic experiences and interviews.

2 Learning by listening

The relationship between sound and image originates from a connective tissue in which fantasy, invention and creativity play an active role, producing an act of imagination which perceives the outer world.

According to local cognition studies, learning processes are part of the individual experience, becoming particularly significant if articulated in mental imagination. These processes bring out «new worlds from the dark bottom of the earth. They previously existed nowhere, destined to close themselves in the normalized, immobile and perishable form of the work – geographical and territorial» [5,17]. This explains why our orientation is both an imaginative and repetitive process, revolutionary and conservative.

Imagination allows us to grasp signs and give meanings, entering them into the communication network, within the disorder of the earth. The process is encouraged by a mental disposition similar to the “idiot” – in Dostoevsky’s perspective: the atti-

¹ The paper is the result of a collaboration among the authors. In particular, M. Mocchi was responsible for the paragraphs 1 and 6, C. Sillano 4 and 5, L. Rocca 2 and 3.

tude to consider with amazement what is normal for common sense, through the discovery of new elements and connotations right in front of our eyes [5].

Orientation requires a space-time reasoning that involves the maintenance and/or transformation of mental images in memory, with a strong contribution of multisensory information for supporting creativity and problem-solving skills. According to the evidence-based education approach [6], the creation or recovery of mental images produce effectiveness and strong didactic motivation among the learning strategies with a good effect-size (ES).

Shifting from visual to the acoustic realm, literature demonstrated the close connections between listening and deep physiological reactions, due to the activation of primitive areas of the brain involved in emotional responses, such as the limbic system [7]². The universe of sound is intimately connected to our emotion, acting like a powerful mediator even in our representation of the space: some experiments prove that, without ever having seen a person, we are able to understand their physicality only by hearing eight steps, or we can understand the length of a rod from the acoustic emission of its fall, or the shape of a metal plate based on its sound [8; 9]. Other studies highlighted our ability to understand temporal details – i.e. the level of a liquid in a container from the sound produced by the pouring act [10] – as well as the movement of objects: fundamental and trainable skills, which play a primary role for our security and orientation in space [11].

These capabilities are particularly developed in blind subjects [12], activating in their brain the same regions that are responsible for the visual stimuli processing – the parahippocampal cortex – reaching a surprising level of adaptability and plasticity [13]. This allow to distinguish, only on the basis of direct or reflected sound, objects location, their shapes, size, and even the materials from which they are made, producing extremely detailed mental images.

3 Sound and deep narration for communicating art

C. *«I never saw a picture like this!»*

C. has been blind since birth and took part in a unique visit to the collection of the MASI Museum in Lugano (Swiss)³. During the visit, a research team realized a chal-

² Sad music is generally subdued, slow, and low, inducing changes in heart rate, pressure and epidermal conductance. The same is for the tone of voice, when it has to communicate bad news. On the contrary, a joyful music or voice is usually louder, faster and with a high tone: also, it produces a change in the rhythm of breathing or blood pressure. When a sound produces a thrill in the listener, endorphins are activated – the same that are stimulated when we do sports, sex or enjoy a pleasant food.

³ The project was part of the research “Mediation Culture Inclusion”, developed by the Visual Culture Laboratory - SUPSI in collaboration with FSC, Swiss Federation of the Blind and Visually Impaired and UNITAS, Association of the Blind and Visually Impaired of Italian Switzerland. Sound artist Xabier Erkizia – for DFA Department of SUPSI – proposed the

lenging artistic experience [14], based on the physical relationship between the acoustic and architectural features of the site. The experimentation, coordinated by Xabier Erkizia, sound artist, aimed at translating artistic works – pictorial and sculptural – into sound, considering their subjects, their aesthetics, the time of their realization, their format, their materials and also the exhibition space. This offered an innovative experience to visitors, allowing them to discover new aspects of the museum and of the works themselves.

Each “acoustic description” – as every translation – is the result of a subjective approach, giving rise to an arbitrary interpretation of the artistic work. The main goal of the experimentation was to investigate a method for generating mental images from acoustic sensations, resulting in a gallery of sounds that allowed not only to “visualize” works, but also to enhance their poetics and originality. Some of these interpretations offer the listeners a contemporary non-verbal commentary, generating “dense descriptions” and new meanings.

According to the focus groups carried out at the end of the visit, the research revealed a great educational potential, enriching visitors’ experience and proving the effectiveness of sound in the transposition of visual meanings. Through sonification, the space of the museum became a private and almost sacred place [15], where everyone was free to imagine his own relationship with the work of art, shifting from the idea of “objectivity” to an intimate and emotional fruition.

The use of the speakers – size and type – is calibrated to reflect the physical position of the works in the rooms, creating strong parallels between the visual sensations and the acoustic ones. The audio equipment was strategically placed to interact with the layout of the rooms and the general planning of the exhibition.

T. «I could hear the acoustic frequencies and vibrations; thanks to the pulsing sounds made the canvas and the colors looked alive. Sound has an incredible immersive strength. The acoustic description, which combined words and sounds, perfectly expressed the physicality of the works, as if I were in it»⁴.

Some “deep narrations” have been experienced as descriptive and facilitating, others was more similar to as an evocation of the spirit of the work. Some aroused positive emotions, others negative, parts were understood, others were not. All of them, however, allowed visitors to develop a personal “vision” of beauty and ugliness, eliciting emotions related to the works. The experience of sound placed sighted and blind participants in the same conditions, giving the latter an expert knowledge, increasing

“acoustic translation” of some masterpieces of the Italian Switzerland Art Museum (MASI Lugano) collections, exhibited during the Lugano Art and Culture (LAC).

⁴ Other significant descriptions: B.: «sound made me “see” the picture. I preferred the sonorization to the visual figure of the works. You could hear crickets...». A.: «During the visit of the yellow and red paintings sounds were so hypnotic that it felt like into a meditative trans. I was described the yellow and its pulsating on the canvas, and I loved it: sound showed me the vibration of yellow. Surely, without the sound I would not have even stopped in front of this work». The complete narration collected by the sound artist is available at <https://paesaggisonori.supsi.ch/progetti/rumore-di-occhiali-da-sole/?lang=en>.

the perception of counting in the context and, for this reason, feeling involved in the place.

4 Immersive mental images. Sound in the cinematic experience

Another important reference to support our reflection is the documentary “The Immersion” by Lukino Ramelli, which collects the testimony of three blind people with respect to the experience of watching a film⁵.

Since the beginning of the movie, the reflection focuses on sound design as a strategy to convey mental images and shape the “dream”: «when you do not see something, your imagination – as well as your ears – are more stimulated, because you have to fill the void with your imagination. The film will not be identical to what the director had in his mind, but it will lead you to a new personal world» (4’00-4’36”).

While scientific studies [4;16;17] confirm the predominance of visual references in our common language, the word of T. opens new possibilities: «in speaking we say “I watch a film”, but we could also say “I sit and listen to a film”, because in the end the image of the film is in our head. This expresses the power of sound in creating images, giving shape to complex cognitive structures that allow us to interact with the world» (5’02”).

The importance of this process for individual learning and growth [18;19] is underlined at 5’09”, through a parallelism between the sounds of the scene and ordinary life: «by listening to the film, everyone builds his own baggage of sound and noise – the puff of the train, the sound of rain, the cutting of scissors». This creates a continuity between real life and film, during the screening, and vice versa between film and real life, after its conclusion: an inclusive experience for the listener, impossible to separate from real life.

«Sound wraps you. An image may involve you, but it doesn’t wrap you». The immersive peculiarity of sound reveals its profound influence on human mind and its impact on the development of the individual: «music leaves deep brushstrokes in memory», D. says (6’40”).

Referring to cinematic experience, the interviewees emphasize the predictive power of sound for the narrative: «from dialogues I can get a number of information that allow me to predict facts before they happen» (8’54”), establishing deep links with the films, the actors and the characters interacting on the screen⁶.

⁵ The documentary is available online at the link: <https://vimeo.com/169669975> (last accessed 2021/06/01). The minutes indicated in parentheses refer to this version.

⁶ If approached in an acoustic sense, the relationship between characters and actors is very curious, reinterpreting the normal relation of the two figures: while usually the actor makes the character possible, assuming a sort of priority, acoustic reading reverses the roles: «I don’t have a favorite actor, but nonetheless I’m able to establish a connection with the characters in the movies».

5 Better in the dark

The third level of our analysis investigates a dimension of listening that is no longer limited to an artistic-performative horizon – in which, despite the multiplicity of factors, the context is still controllable – but it relates to everyday space [20].

A significant experience that attempts to deal with this scenario is that of a night walk led by Wolfgang Fasser, a blind physiotherapist and music therapist, who closely touches the evocative power of sound to orient himself, building symbolic references capable of altering moods and emotions such as fear, security, happiness [21; 22]. Together with Fasser, the director Nicola Bellucci shot a documentary entitled “In the garden of sounds” [23], which offers to the audience the opportunity to create its own sound representation of the image, as would happen to those who really cannot see it. At the age of 22, Fasser loses his sight as a result of a hereditary disease but acquires the ability of a deeper vision [24].

WF: When I walk in the woods at night, the others go blind. I am the only one who can see, because I listen [...]. We are used to rely too much on sight, in the woods, at night, you learn how to use other senses. You can hear, smell and listen. A thousand noises come out from an indistinct whole and are transformed into figures, animals, plants, and one also learns to find the adjectives for these noises. A sort of inner eye that uses ears, nose, skin, rather than pupils, and becomes the prevailing sense. You learn to distinguish your travel companions by their step, their voice, their breath, the way they shake hands, even if their faces are not known. It would not be the same if you had a chance to see each other at first. In this way all possible prejudices are eliminated, and we know ourselves for what we are at that moment. Our eyes are sometimes traps; we use them to continuously monitor ourselves and keep us at a distance. Listening can be enough to enchant, to amaze, to fall in love: sound connects us with each other in ways that sight does not allow. Sound makes us rethink the meaning, nature and importance of our social experience.

Being guided by Wolfgang in the dark is an immersion in the void. At first the loss of visual reference points produces chaos and bewilderment, then the closeness of other people fosters trust and allows unexpected encounters. You can hear the air, the sounds of birds, everything is new and unknown. This is exactly what Wolfgang tries to achieve with his nocturnal walks: you don’t need your eyes to see. Indeed, very often the predominance of the eye limits our imagination, the more overall human experience should draw on a “democracy of the senses” [25]. Plunging into the darkness is an experience that allows to develop the senses that we usually do not use: when we are in a place we do not know, our ears get on alert and are able to distinguish sounds and find information that we didn’t even notice before.

Wolfgang moves easily at midnight in the middle of the woods. He sees, he has arranged all the paths to walk without obstacles. He accompanies people in having a different experience, in which it is necessary to rediscover oneself in order to acquire a listening point and a specific attention to the surrounding reality: at night people rely on him and it becomes a moment full of new and unexplored sound stimuli.

6 Perspectives

Through the methods of interview and experiential comparison, the paper aims to develop some considerations about the acoustic dynamics that converge in the symbolic language, at the base of image's construction. Starting from a horizon of "inclusiveness", the proposal intends to investigate the daily mechanisms of sensory interaction that affect the sound-image relationship.

The described experiences explore some fields in which a better understanding of this dynamics could represent an important contribution: from the artistic context (pictorial, sculptural, musical) to the cinematographic one, and more generally to that of collective space. The awareness of the role of sound in image's construction allows us to deepen our relationship with the world, in the multiple dimensions of the environment and in the relationship with others.

In this sense, the research perspectives reveal their potential also in relation to chaotic and complex contexts such as the urban ones, where the domination of the visual aspects generates contradictions, flattening the experience of the urban environment on purely visual models and contributing to the pervasive growth of a sensorial "pollution" at all levels. In continuity with some experiments that since the seventies [26] have tried to highlight the importance of sound behind the "image of the city" [27], the reflection presented aims to make a contribution towards a better framing of the concept of "sensory intensification" [28], increasingly strategic thanks to the numerous technological devices capable of "increasing" the urban space, in the perspective of a smart, integrated and inclusive city [29].

This not only assumes a cognitive, aesthetic or theoretical value, but also and above all educational, linked to the possibility of defining truly inclusive individual growth paths, drawing on deep mechanisms in the construction of subjective memories.

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