

THE SOUND INSTALLATION

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ABSTRACT

In this paper we study the interaction between sound and the visual arts, its development in time, and its behavior in different acoustic spaces. We will concentrate on the concept of sound sculpture and sound installation, and on their aesthetic implications. The works analyzed belong to an interdisciplinary realm (often called *sound art*, time based art, and *intermedia art*), placed between the music and visual arts field. Different types of contexts that will be analyzed affect these works. Finally, we propose different sound organization techniques for the creation of sound installations. We hope that through this research, we will be able to understand better the complexity of these "new" sound aesthetic languages that also bring new paradigms about our perception and understanding of sound and its relationship with other media.

Note: The original paper submitted as a long paper had to be edited as a demo paper and is not complete here. For the full paper please visit www.artesonoro.net/soundartwritings

1. INTRODUCTION

Sound sculpture and sound installation belong to a relatively new interdisciplinary field, and in order to understand the main characteristics of this media, we need first to consider some important premises:

1. Sculpture and installation become **expanded disciplines** when sound is added to them. In this case the sound element attached could be part of the object, related with the object, or completely alien to the object.
2. When we add an element that has an alien language to the visual field, we inevitably create an **x connection** between the senses of our ear and our sight.
3. The experience of the artistic visual work is modified completely when we use sound as an integral element, due to the generation of a new **temporal perception of the space**.
4. The characteristics of the **place** modify completely our perception of the sound element of an installation; this specific place will also determine an **x context** that will alter the interpretation of the work.
5. We do not necessarily need a visual element to have a *soundart* work; an installation can be structured only with sounds.

I will concentrate in this text on the concept of **sound installation**, hoping to be able to understand better the language of this interesting genre, but I will also require defining the concept of sound sculpture, since it represents a precedent dimensional stage needed to define an installation.

2. THE SOUND INSTALLATION

2.1 Definition.

Let us begin by defining what is an installation. In the dictionary we find "conjunction of installed things". And if we look for the definition of "installing", we discover "To put or place something on its proper site". By which we infer that an art installation is a conjunction of elements placed in particular locations that are chosen by the artist. However, the space factor is not specific enough here and in visual arts it is important to know if the elements of an installation may be together or separated; then, we need to look up for some other definitions that have been established in this field.

In the text "Artistic territories for hearing and seeing", the curator and sound artist José Iges quotes a definition of installation by the Spanish artist Concha Jerez:

"The installation is an expansion of a three-dimensional space, with the notable difference with sculpture, that the axes with which matter is being organized are not exclusively internal to the work, but also external". A work of art is an installation if it establishes a dialog with the surrounding space, and the installation in situ is the installation per se" (Iges, 1999).

Later on Iges asserts: "A work is an **installation** if it establishes a dialog with the surrounding space, and the **installation in situ** is the installation per se, although there are installations that could be adapted to different spaces" (Iges, 1999).

Having covered the space element, we now need only to define what is a **sound installation**, and again, I quote José Iges who has realized an excellent theoretical work about this concept: "Sound sculptures and sound installations are **intermedia works**¹, and they behave like expansions of sculpture and installation".

2.2 Connections between the sound and the visual aspects.

What are the existing connections between the sound and visual aspects of a sound installation? José Iges suggests two structural possibilities:

1. Perceptive reality, dialectic or complementary, which has to do with a poetic statement more than with a musical one².

¹ The artist Dick Higgins (former member of the *Fluxus* art movement) created the term "intermedia" in an article written in 1966 titled *Statement on intermedia*.

² A good example of this point is the sound sculptures of the German artist Rolf Julius, who unites speakers with the sculpture matter. Nevertheless, he is not interested in the physical interaction of these two elements, but in the poetic discourse generated from the contact of both things, something similar to what happened with some surreal

2. - Works that present a visual part that behaves practically as an instrumental part for the fluidity of the sound discourse³.

I suggest a third structural category:

3. - A sound instrument with a sculpture quality, in other words, an aesthetic object with the capacity of producing sounds, either played by man, by natural elements (rain, wind, etc), or by a mechanical device⁴. A sound installation can be constituted by various elements of this kind interacting with space⁵.

I would like to go deeper on this subject and make a new classification founded on how close or distant is the relationship between the sound and the object. Here, it becomes necessary to make a division of the interactions that occur between these two different elements, obtaining then:

a) A close relationship, where the sound attached to the object was produced by it.

b) A distant relationship, where the sound added to the object doesn't have a connection with it, excepting the association established in our minds.

c) An intermediate relationship, where the sound attached was produced by the object or by a similar object, and was possibly transformed by the artist up to a certain degree where the existing connections would become ambiguous.

On the other hand, there is a particular case in which sound can interact in a physical way with the object. Here, there will be an abstract and psychological interaction as well as a real and concrete interaction, because the sound vibrations can alter the consistency of the physical object making it move or resonate in a particular way⁶.

3. PLACE AND CONTEXT

Lets talk now about the importance of the place and context of the sound installation. A common place for an installation is an artistic space, that is, a gallery or a museum. Yet, we can contemplate the possibility of

sculptures (like one by Joan Miro which consist of an egg placed on a chair for example).

³ In this case José Iges quotes the sound installation "The bird tree" by the German artist Christina Kubisch. In this work an audio cable is placed along the wall, in such a way that the design simulates trees with branches, the audience uses headphones and walks forward listening to sounds from different kinds of birds.

⁴ This device could be a musical instrument because it has aesthetic qualities. If we place for example a guitar in a gallery or museum of contemporary art, we would automatically convert it into an art object.

⁵ Sound sculptures could be conformed simply by speaker cones or loud speakers, in which case they will become objects with aesthetic qualities. Nevertheless, in this case there cannot exist a sound that is specifically fit to a speaker because the speaker reproduces an infinity of different sounds, so the only natural element of a speaker is its vibratory effect, which poses a visually neutral aspect.

⁶ There are various sound artists that have worked with speaker cones vibrations interacting with different kind of materials like water recipients (Hiroshi Yoshimura), aluminum plates with ping pong balls and broken glasses (Manuel Rocha Iturbide), sand (Gary Hill), etc. In most of this cases we are dealing with sound-kinetic experiments, but in some others the effects produced by these interactions have to do more with a poetic effect resulting from the contact between sound and matter. This is the case of Rolf Julius sound sculptures quoted before.

placing sounds in a public space that has nothing to do with art. In this case, the sounds introduced will change the perception of that place in the same way that the music specifically designed for supermarkets or waiting rooms (better known as *musak*) changes our mood while being at those places⁷. Some artists like Max Neuhaus have worked in public spaces like parks, and have disposed loudspeakers in trees with the purpose of altering the mood of people passing by, in order to establish a *new perception of the place by way of sound*.

Speaking about change of context, I can refer to the sound work *Ligne d'abandon* before mentioned. The first presentation of this work dealing with the screeching sounds of a car wheel was in a gallery⁸; later on, I presented this work in a four floor underground public parking lot at the *World Trade Center* in Guadalajara, during the FITAC art fair in 1996. In this second presentation, the screeching wheel sound traveled with more liberty through the huge space of the parking lot, obtaining also a clearer relationship between the ambiguities of the screeching transformed sounds and their locomotive origin.

4. THE ORGANISATION OF SOUND IN AN INSTALLATION

To finish with this paper I would like to explain in detail, which are the essential factors to be undertaken by the musician or artist in order to realize the sound elements of an installation. This will determine the type of interaction that will be established between the public and the work.

To start with, there are artists that aren't necessarily musicians, and we have to contemplate that they need to organize sounds in time, if not in a musical way, at least in an artistic way. Furthermore, its important to be conscious that a sound installation can simply consist of sounds diffused in a space, preferably from different points in favor of best underlining its acoustic qualities and thinking that the movement of the audience in it will enhance the sound perceptual result of the work.

4.1 Linear sound

Many artists that do sound installations use a short audio track that repeats over and over by way of the well-known *loop* artifice. This simple and sometimes boring technique has a lineal character, and thus, the surprise factor doesn't exist. On the other hand, there can be longer audio tracks where there is a development of sound in time, however, when they have a linear nature we risk keeping the audience at the site of the

⁷ Talking about supermarket music and context, the Mexican artist Fernando Ortega brought about an action in which he hired a *musak* company in order to install their music system during the inauguration of a photo exhibition in the museum "Centro de la Imagen" in Mexico City. The three artists and the audience did not know anything about this, and the reactions were varied. Some people did not notice, others came moved with the museum director to cheer her for the nice music, and others were outraged.

⁸ "Ligne d'abandon" was presented as part of Gabriel Orozco's exhibition at *Crusel Gallery* in Paris in 1993 where he presented his well-known sculpture made out of a Citroen Car (*La DS*).

installation only a few minutes, missing then a possible dramatic outcome or conclusion.

4.2 Open form

There are artists that try to go further in the sound organization having a more organic conception of sound; these artists have chosen to use an open form (Eco, 1962). It is important to say that in these types of works the participation of the audience is often essential⁹. Moreover, there are different kinds of interaction between the open work and the public: there are works in which the individuals create the result, and others in which we find a balance in the interaction.

4.3 Computer music technology in sound installations

The development of computer music technology in the last decade has permitted the creation of interactive software¹⁰, as well as sophisticated interfaces that use different kinds of sensors. This technology is now available for the public and many artists have been using it in the last few years. Besides, there are artists and musicians with a programming background that have developed non-interactive musical software, but with a high degree of complexity. These programs generate sounds in an automatic way by way of auto-generative processes. In this case, the sounds produced should always have the same global structure in order to maintain some coherence, although they will always be changing in time.

In the creation of a sound installation with the help of a computer, we have to contemplate the essence of the auto-generative processes, that is, the type of algorithms and sounds that we will use, but also the degree of interaction that we will have with the audience. The range of this type of processes goes from the auto-generative work that uses evolution algorithms (cellular automata, neural networks, etc), to chaos, and to other kind of processes that can be transformed by an external agent¹¹ and where the response of the program will influence the transformation that follows the agent¹² (Row, 1992). Finally, when we use the computer to create a sound installation, we have to be well centered in the balance we wish to obtain between the interaction process and the final product (Dannenberg & Bates, 1995)¹³.

⁹ Nevertheless, there are open works in which the audience doesn't participate at all like in the auto-generative computer processes, but I will talk about this later.

¹⁰ Like MAX MSP, the software that has become more popular since the end of the 90's.

¹¹ Evolution and Chaos algorithms can also be transformed by an external agent, yet, computer music researchers working with them have been so interested in the automatic processes that they have left sometimes aside interesting possibilities of braking the rules in order to create hybrid processes.

¹² In these retro-feeding processes we can find the highest degree of interaction.

¹³ There are art works in which the process is the goal, and others in which the result is more important than the process. "In some cases, the process of interaction is the art. In others, there is a clear product of interaction such as a music performance or an image. The

4.4 Alternative low technology techniques

Using a computer tool for the generation of a sound installation may naturally have an open aesthetic character¹⁴. Nonetheless, due to the technical complications that this entails and to the economical difficulty of having a sophisticated computer system in a gallery or museum during one month or more, sound artists have been sometimes obliged to make use of other simple technological means to create their works¹⁵. For example, to realize a sound work with out a computer we could record various CD's with different tracks and then activate the Random function of the CD players. Also, we could record and play various cassettes in loop, letting them gradually get out of phase with each other and creating works that change in a continuous way¹⁶. Likewise, we can simply create several audio tracks of different duration's that are repeated, and because they are out of phase for a long period of time, we would have the impression of always listening to different sound combinations¹⁷.

4.5 Conclusions

The experiences I've had using different sound structures for my installations have made me believe that the open work aesthetic is the most interesting one due to its complexity in terms of always changing sounds. I also conclude that the open aesthetic has a quantum character (Rocha Iturbide, 1999). In one hand because of the relation of determinist and indeterminist elements, and on the other because of the interconnection of these elements, since their organization in time will not be important as long as the open structure of the work is successful¹⁸. However, there will always be cases in which the simplicity of constant repetition of an audio track will be more wanted in a sound installation, and in

ambiguity of 'where the art is, for us, is one of the attractions of this approach' (Dannenberg & Bates, 1995).

¹⁴ Because if we wanted to create a repeating fixed thing we won't necessarily need a computer.

¹⁵ Museums and galleries don't have often the means to buy or rent computers that use specific software, that need a specific sound card, etc. Then, the artist is obliged to lend his equipment and it is difficult that he will be willing to leave it there for long time since it constitutes he's daily working gear.

¹⁶ In these two cases, the work becomes open because it changes continuously but there is no concrete interaction with the audience (in terms of sensors changing the parameters of the audio elements). However, in a good sound installation using electronic or mechanical devices without sensors, there will always be an important interaction with the public if we create sound phenomena that interact with the acoustic space when we move around.

¹⁷ My sound installation *Mechanisms for the absolution of waste* (1997) is structured by way of three speakers placed in a bathroom. One in the WC, another one in the socket of the light bulb, and the third one in the sink. Each speaker has its own on/off *switch* in order to be activated, having then three different kinds of combinations of these sound mechanisms (number one alone, number 2 alone, 3 alone, 1 and 2, 1 and 3, 2 and 3, or 1, 2 and 3). Also, activating each mechanism at different times throws out as a result 3 minutes looped sequences that will always be out of phase.

¹⁸ The perfect open work of art is a *Mobile*, a sculpture in which the elements change continuously in the space, but that keep a clear connection between them; this structure establishes certain movement boundaries giving it certain coherent organization.

this sense, this will always depend on the conceptual nature of the work¹⁹.

Finally, it is important to say that even though the new technologies offer new possibilities of experimentation, many of the works created with these sophisticated media have resulted in lacking artistic content. This happens because the artists have paid more attention to the electronic interactivity programming mechanisms than to the aesthetic and conceptual theory in which these works are founded, or to the necessary equilibrium that should exist between form and content.

"If we subdue to the possibilities of technological means, which are only apparently unlimited, we risk of missing the necessary reflection about the conflictive relationships between the visual and the sound aspects concerning all interactive processes. Instead of a dissolution of the old artistic categories, we assist to an accumulation of gadget effects perpetuating the redundancy spirit and the parallelism that rules after various decades in most of the attempts for a dialog between the arts" (Bosseur, 1998).

The new technological means provide tools with a grate potential for the creation of new languages. However, we shall never leave aside our main objective: the successful communication of aesthetic ideas with an organization and disposition in space and time, which will conform into a complex and interesting **intermedia artwork**.

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¹⁹ In my installation *Rebicycling* (2000) where I use five abandoned bicycles laying in the ground, four small preamplified speakers and two transparent CD players, I ended up making four synchronic sound tracks that are repeated every 12 minutes (with two minutes of silence in between). In this case, the audio is completely linear and it becomes a sort of composition that develops canon structured sound sequences built up from the noise of a bicycle wheel spinning. These sounds that grow and evolve continuously, simulate a noise machine that is generating energy in order to revive the dying bicycles. When the process is over, silence seems to be the result of an automatic regulator that turns the sound off when enough energy has been produced.