

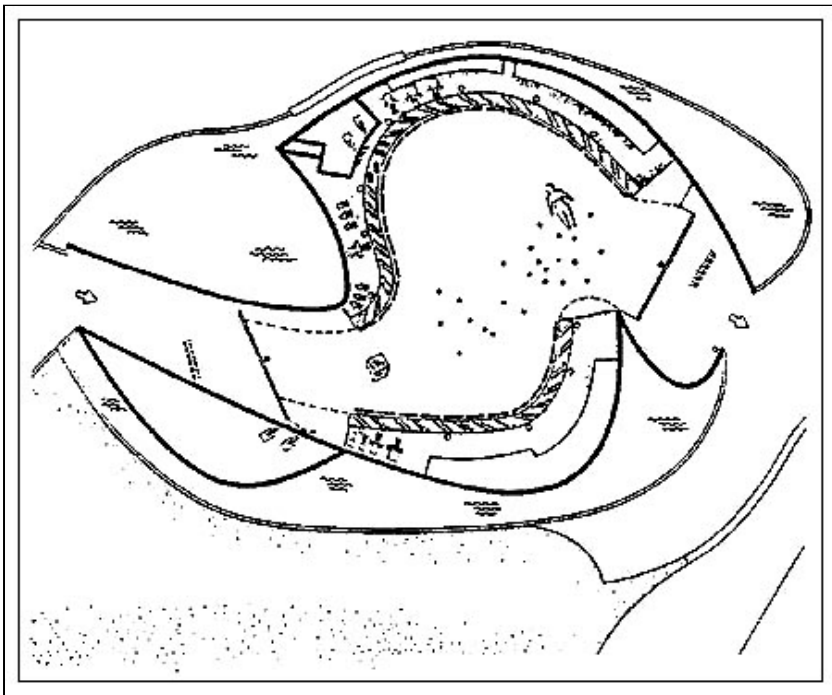
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On Plastic Work with Sound and a Different Music Perception

In this lecture I shall make some remarks about an art field which is sometimes called *sound art* and sometimes called *audio art*. I myself prefer to call this plastic work with sound or sculptural work with sound or sound installations. My speech is neither scientific nor historical. I shall focus on three sound installations which I have seen and heard personally and which have impressed me deeply. These three sound spaces have also influenced my own thinking and working as an artist. My concept for this lecture is to describe these sound works and play recordings of the installations for you. In the course of this phenomenological view I shall try to derive some theoretical reflections from these descriptions. Now I start with some sentences about the differences between visual and audio perception.

A blind person is largely dependent on his hearing. The physician also, using percussion for establishing a diagnosis or auscultating his patient's heart and lung with the stethoscope relies on his hearing. These, however, are borderline situations, peripheral in the life of Western European civilization which is basing perception primarily on seeing as opposed to the Vedic culture, for instance, which conceives all of life as sound and music. **The world is sound.** Space to the Western world is mainly the space for seeing, subject to the visibility of things. Seeing differentiates things clearly and definitely in space and puts them at a certain distance from the perceiving person. Space for hearing and for sound is related to the sphere of the night, in which things have no definite outlines nor limits. Space for hearing and for sound surrounds and envelops the perceiving person. 'Dusk pervades the room as does the night also, and its effects are like those of sound which unifies and binds the diverging by pervading and homogenizing space', Straus writes in his analysis of spatial shapes.

It is only some decades that space has become an aspect of music lending itself to intensive and not only casual exploration by the artists. One of the first sound spaces in the rather young history of plastic work with sound is Edgard Varèse's *Poème électronique*, in which the usually divided arts of music and architecture meet and form an outstanding work. Upon the invitation of the Philips Company, who wanted to make themselves known at the World Fair in Brussels in 1958, Le Corbusier suggested the project of a pavilion. Iannis Xenakis designing the architecture and Edgard Varèse (1883-1965) rendering the pavilion musically.



The architecture of the pavilion, a concrete building in the form of a tent with three apices or intersecting cones, was determined by paraboloids and hyperboloids which had suggested themselves to Xenakis in a graphic interpretation of the glissandi of his orchestral work 'Metastaseis'. Visitors were admitted into the pavilion in batches and could then listen to the composition of Varèse for eight minutes. 425 loudspeakers had been installed on the inner sides of the tent together with 20 amplifiers to play the three channel tape composition. Now, finally, Varèse could realize his concept of **spatial music** as 'bodies of intelligent sounds moving in space freely'. In his

lectures Varèse spoke about his music using terms from the sphere of sculpture: 'moving of sound masses', 'moving of shifting levels', 'collision of sound masses', 'projections to different levels', 'movements at different velocities and in different directions', 'sound projection', which Varèse conceives to be the departure of sound into space without leaving us the hope of being returned by reflection. By means of **electronic instruments** Varèse could finally create a composition, close to his ideal. **'The entire work will flow like a river flows'** he said. The *Poème électronique* suggested to him that 'the music was moving around the pavilion or coming from different directions, was being reflected etc. For the first time', he said; 'I heard my music being literally projected into space'.

But right here we are confronted with the dilemma of all sound spaces or sound buildings: When the pavilion was torn down at the end of the World Fair, the music also disappeared with the pavilion. The paths of the sounds in that distinct space and the effect of the loudspeakers in their porelike arrangement on the sides of the tent nearly breathing the sounds, can no longer be conveyed; if you listen to the recording, the composition *Poème électronique* of eight minutes' duration does not acquire any spatial or musical presence. The *Poème électronique* was a composition for a clearly defined room, a real sound space, and was irrevocably linked up to the existence of that space. The *Poème électronique* was in this sense a site-specific composition.

By way of contrast, music at present is mostly listened to in concert halls, auditoria, opera houses. These places have been designed by sound engineers in a way that ideally the sounds played by the orchestras can be heard equally well from any seat in the hall, if not, orchestras of renown will refuse to play these places. The same result is achieved by hi-fi-technology when playing records or tapes on the stereo set at home. These are techniques separating places from specific sound or sounds from the specific place. From this point of view, most music sites are **abstract sites for the sounds** in a similar way as a museum is an abstract site for the works of art exhibited there in constant succession. Quite a series of composers and artists is now concerned with making music concrete - not as implied by the 'Musique Concrète' of Pierre Schaeffer - but as the attempt to relate sounds and their time structure to the acoustic properties of a certain site. This could mean that every site is suitable for music - provided the music has been made especially for this site only and is thus specific to this situation

In the discourse 'Eupalinos or on Architecture' by Paul Valéry, Socrates says to Phaidros, 'I would like to hear the song of columns and to see the monument of a melody in the clear sky'. To him, architecture and music are closely related and he sets them against the other arts. The relationship of these two arts comes from the fact that we can be within their creations, 'like fish in the wave, we can bathe in it, we live in it, we belong to it'. 'Didn't you have the feeling that the original space had been replaced by a sensitive and variable space or rather as if time as such were surrounding you from all sides?' With these words Socrates tells Phaidros about his experience of a sound space.

The **spatial character of music** is obviously derived from the spatial character of sound itself, which is a plastic being as such. If a sound moves through a medium, the molecules vibrate or oscillate at the point places of that medium which then become event places. Human ears can usually perceive those movements only in the medium air and sometimes in water. When there is no sound, every molecule of the air is still. If any deformation happens somewhere in the medium, a knock on the table, for instance, the elastic forces cause a movement in the closest places, they, in turn, excite their neighbors and so on. The sound moves through space as an elastic wave. Not mass, but energy is being transported through the air. After the sound has passed a certain stretch, there is not enough energy left to incite further air molecules and the sound ebbs away. 'Most people consider music to be an art only. Is their listening to music never enlightened by a spark of reason telling them that they are subject to a physical phenomenon: only when the air between the ear of the listener and the instrument is being perturbed, music can happen', Edgard Varèse emphasizes **the acoustics as the basis of music**. Sound can become a plastic material for artists, a material in which space and time are already blending, a material, that artists use to create sculptures and sites of experience.

Rainforest IV designed 1973 by David Tudor (1926-1997) is an electro acoustic environment, in which live-electronically produced sounds are not transmitted by conventional loudspeakers, but by specifically designed sculptures, that is, different objects, each of them forming a sound body of its own. For example the listener can step under a tub suspended from the ceiling open end downward and can listen to the sounds coming from that tub. *Rainforest IV* is realized for and in a special definite environment and is played live by the group 'Composers Inside Electronics', these are John Driscoll, Phil Edelstein, Ralph Jones, Martin Kalve, David Tudor, and Bill Viola. Each of the composers of the group designs and builds his own sound objects or object loudspeakers and independently from the others each of them produces sound material in the live situation to represent the resounding characteristics of his sculptures. The result is a kind of **material music**, partly determined by the musical preconditions set by the composer like rhythm or pitch, and partly determined by the proper frequencies of the objects used. The sculptures are used as musical instruments, and they establish a sound environment, that can be experienced visually and acoustically, but also physically.



What happens in the **traditional concert** is exactly the opposite of *Rainforest IV*. The concert is a cultural event going back to the beginning of the 19th century and the rise of the middle-class society and is still prevalent in the same form today. In a concert music is 'realized' or 'presented' in a conventional way. Be it classical music, jazz or rock, in any case, the musicians assemble on a platform higher than and in front of the audience to attract attention. The listener in his own home too confronts the loudspeakers and hears music in a similar position. Organically, our ears can do much more than permitted by this hierarchic order of hearing. They can locate sounds, can determine directions, can perceive movements of sounds. A sound produced by some instrument in space, can be perceived in that environment in numerous ways, depending on reflections, interference, distances, time shifting etc. This experience can be used also to define the term of 'sound' in general: **'A sound is the entity of the possibilities of hearing it'**. Into this definition Bill Fontana wants to include also the recording and reproduction of a sound at other times and the live-transmission via satellite and radio to other places and other contexts.

The sound environment of *Rainforest IV* is not only an environment for listening in a restricted sense but due to the numerous capabilities of our hearing also a **place for movement**. Different from our behavior in the concert hall or that at home, where you wait to be irradiated with sound, the visitor here is stimulated to move. The listener walks for the sounds, explores their movement in space, approaches the sculptures physically, listens from a distance, circles the sound sources and so on. His or her movement is something like a dance and is no longer movement on purpose. The visitor of such a sound environment dances and does not try to find the shortest way from A to B. These spaces are not characterized by one certain direction; turning around and moving back are no longer prohibited as they are in everyday life. There is no goal to be set. The movement of the visitor finds its orientation in the perception of the music in space. This means the music induces the movements of the listener and on the other hand his movement changes of course that what he hears while moving. The visitor experiences in this way a process of approach and adaptation and can feel a **unity with the objects and the sounds**.

The composition *A House Full of Music* realized in 1982 by John Cage (1912-1992) for the Overseas Museum in Bremen shows that such sound spaces change not only the hearing of music but also will change the process of composing and the concept of musical composition. With his composition *A House Full of Music*, Cage could 'make his dream come true: to sound music of all ages and all kinds simultaneously in numerous rooms'. The Overseas Museum in Bremen is an ethnographic museum with two spacious light yards, extending over two stories and containing large boats from the South Sea, a Japanese garden, and many other treasures from non-European cultures. At 37 different places of this museum, on various levels giving onto the yards, 800 children were playing simultaneously musical pieces of their own choice and of all types, solo pieces and orchestra symphonies, classical music and folksongs and many others more. The score by Cage had established the partly overlapping entries for the different places of the building.



During the concert the listener could freely develop his perception of this composition. Each visitor of that house, that was also acoustically full of music, heard different things on his ways through the house within the one and a half hours of the concert. He heard the music that he or she himself or herself wanted to hear in that open structure intended by Cage and he did not hear something that had been conceived by the composer or that had ever been heard before. **It is the listener who is turned into a fully responsible composer** for himself, because he is choosing his way within the musical offer of the actual composer John Cage. Inspired by the work of art, his dance through the music and through the sound space animates the composition and the space.

Thus this sound space was filled with movement and continuous change: **a place of flux** and also a social sculpture radiating social warmth. In order to set off his music against prevalent, totally determined music, Cage wants his non intentional music to explain to the listener by different means. They could be musical, theatrical, architectural, or others. He stresses that hearing a piece is the listener's own activity and that the music is more his own than that of the composer. This could be achieved by dissolving the temporal structure of music into space, as it were. This could mean a **spatial polyphony**. The space actually experienced by the listener corresponds to the time actually experienced by him or her. Through his or her movement the elements of the composition find their place in his specific personal and unique time perception.

The above mentioned sound spaces cannot be classified only under one category of art. They are mostly to be found in the **triangle of music, architecture, and sculpture**. Not because the artists were chasing a fata morgana of multimedia art, but because they do not want their work to be reduced to only one of the human senses. We seem to be confronted with an **expansion** of the concept of sculpture, maybe also an expansion of art, including the concept of social sculpture. An art which takes its bearings from the concept of freedom of perception and love to intellectual and sensual adventure. And we find artists, who do not accept the borders or restrictions in the art business of galleries and museums. Artists who try to find their way in time-based and site-specific art.

Literature:

John Cage, A House Full of Music, Pro Musica Nova, Programmheft, Radio Bremen, Bremen 1982

Bill Fontana, Gedanken über Klänge, in: Bill Fontana, Klang Recycling Skulptur, Edition Giannozzo, Berlin 1983

Richard Kostelanetz (Hrsg.), John Cage, Köln 1973

Erwin Straus, Die Formen des Räumlichen, in: ders., Psychologie der menschlichen Welt, Berlin 1960, S. 141 - 178

David Tudor, Rainforest IV, in: Für Augen und Ohren, Katalog, Akademie der Künste, Berlin 1980

Paul Valéry, Eupalinos oder über die Architektur, Leipzig 1927

Edgard Varèse, Rückblick auf die Zukunft, Musik-Konzepte, Heft 6, 2. Auflage, München 1983

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