



## Sound Anthropology and Ecosound

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November 1, 2024

# Sound design anthropology and “ecosound”

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## SUMMARY

“Acoustic ontology” characterizes the relationship we have with the world of sound, our world of sound being in the forefront, and that of the human tribe, the human community, being in the background. The word “ecosound”, a neologism composed of the contraction of two terms “ecology” and “sound”, refers to this paradigm. Since Schafer and his insights on the question of ecology, sound embraces the acoustic environment, through its notion of “amenity” (tuning), as an entire dimension in its own right and within which rethinking structurally the society can/must be done in relation to such acoustic reality. This acoustic reality constitutes a form of socio-economic engagement, with respect to health, norms and standards, and the environment, three areas of focus in design research. The role of sound design and its actors is therefore to monitor this question of a new “sound order”, which we have defined as “ecosonic” and within which, our daily life is organized in different living spaces, in accordance with existing norms and standards and structural frameworks, as well as others yet to be established.

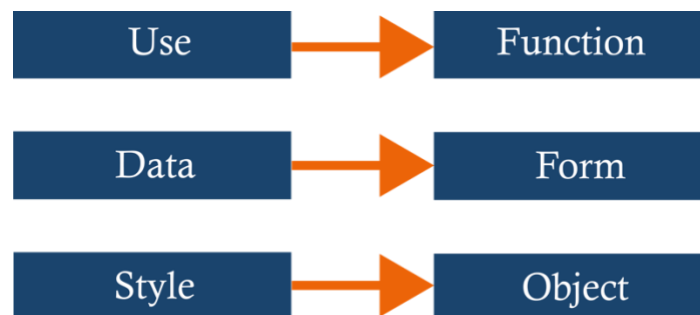
In anthropological terms, the architectural paradigm of harmonizing the living space and the environment is also in the ecological dynamics of the human project of “living together” where the living environment leads to finding the appropriate tools to produce and (to) reproduce, even limit the perimeter of our activities. The containment of sound is our destiny.

## KEYWORDS

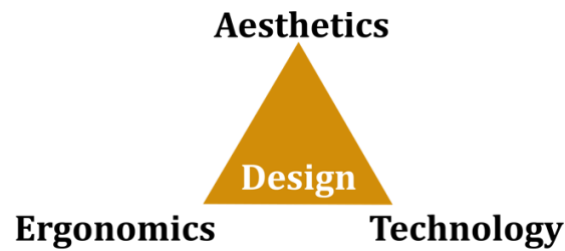
Anthropology, Design, Ecosound, Engagement, Environment

## INTRODUCTION

For the researcher, sound design is necessarily part of a multidisciplinary approach. This approach encompasses both design and sound and both terms are understood in their broadest sense. On the one hand, design itself integrates various activities that are linked to production: to produce is to “*design*” and to conceive is to “project” for specific-use purposes.



This is obviously a functional element which, in the first instance, answers the question "what is it for?" At a second stage, however, the term gradually evolved to include ergonomic and aesthetic criteria. For its part, sound, a physical phenomenon – an electromagnetic vibration - is a natural and omnipresent component of the universe within which human hearing unfolds. When considering the anthropology of sound design, it is necessary to understand the study and the identification of all social activities integrating an intentional or unintentional sound dimension. This intentional or unintentional sound dimension can be direct or indirect, and on a principal or secondary basis. This sound dimension has a specific use, whatever it may be. Its purpose is precisely “to affect listening”, human listening or animal listening or even other “targets”, since sound can be used in other fields, such as extra-auditory medicine, physics and astrophysics.



### ANTHROPOLOGICAL CONTEXT

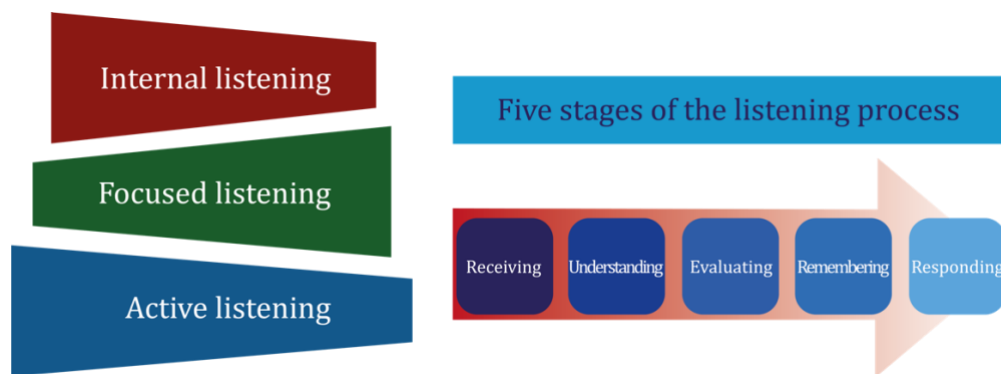
Within societal space, hearing holds a special place amongst our five senses. Sound existed before light, and most of the great religious stories translate this physical sequence, first the sound then the light (the photons). Sound is the first sense developed in humans; the fetus hears sound as early as the third month in the womb. Besides the fact that sound places man in a particular context, and even beyond the human condition, the experience by Pavlov (1899) has shown everyone that a dog can be trained to anticipate food by the sound of a bell.



Such reflective behavior can be applied in humans, where sensory, perceptual and cognitive organization takes place. The sphere of influence of sound is thus closely linked to the attractiveness of the hearing principle, which is exercised differently in different societies depending on the culture. We thus notice, in almost all civilizations in human history, similar practices of sound use. More particularly, with regard to large societies, such practices may be sacred, such as prayers sung during religious services; military practices, such as combat training or demonstrations of encouragement - army marches and/or the sound of weapons; socio-political, such as ceremonies, parties or hunting or economic, sound arrangements that influence our purchasing decisions. The (sound) service status associated with the design therefore relates to common objectives – with audible alarms, to provide acoustic support for instructions, to give signals for training or precision or to provide atmosphere or emotion, etc. If sound can determine our behavior, it can also influence our listening skills in key sectors of societal organization. While depending on a particular case, it is always a question of capitalizing “attention” by means of sound with a strong identity, listening is often evaluated by opposition - loud/weak (intensity), high/low (frequency), short/long (duration) or more generally as “texture” (timbre) or dynamics (envelope). These basic properties form “listening criteria” for the common use of sound within any culture.<sup>1</sup> The open-mindedness of human sciences to the “sociology of sound” was initiated by Jonathan Sterne in his concept known as the “new sound modernity” (Sterne, 2003). Sounds in the human body, whether or not they are perceived, occupy a primary place in the medical field for example. In particular, sound can

<sup>1</sup> Sound oscillates between two antagonistic poles, noise on one side, music on the other. When a sound is perceived negatively, it can be improved, just as music can represent noise for those who cannot bear it.

serve as evidence of its profound nature and of the subject's disorders. While all sound is made to be heard, the ordinary sound experience or "everyday soundtrack" is now a permanent object of multidisciplinary study in all areas of human life.



According to the current meaning, natural sounds, like the elements, are various noises linked to forces in action in a given place<sup>2</sup> - and are different from artificial sounds, or sounds produced by man - movements, activities, communication, machines<sup>3</sup>. But listening is also “designing” the sounds we hear and make. The case of the creation of sounds, if it corresponds to an "artificialization" of sound, is only pertinent here if the sound artifact produced is made for “utilitarian purposes”. If music has already been created for other purposes but is re-invested or re-instrumentalized, it remains the object of sound design, and this in order to respond to a functionality which is extrinsic to it<sup>4</sup>. We must therefore consider the societal issues according to our sound exposure in occupied spaces. Even beyond the “schizophonic<sup>5</sup>” (Schafer, 1977) aspect of prosthetic listening (with headphones) and which leads to immersion and a form of isolation with an asocial tendency, “schizophony” can then relate to the extreme acoustic confusion that arises in the inopportune use of sound on the scale of human relations, all orders combined.

## SOUND USES

Among the issues raised in the project, in accordance with “listening requirements” contributing to presenting sound as a conveyer of audible meaning, the "transversality" specific to sound design meets the different criteria of sound according to its field of application - places of worship, ceremonies of all kinds, mobility, care, sound signage, and services. These fields, which are therefore associated with targeted practical utilities, give rise to “directed listening” situations, replacing the use of sound in the social space. This use of sound can be observed in production (artefacts) by sound professionals or sound practitioners with diversified professional profiles - engineers, acousticians, urban planners, sociologists, advertisers, therapists, musicians, designers and consumers.

In a “listening / meaning” transmission scheme, recorded sound is captured and is therefore available for manipulation and use outside of its own production. This aspect of being “captured” makes it intemporal and it is therefore accessible as potential audible capital to be exploited by the user, both “ready to use” and “in the service of” the user. On the anthropological level, this mediatization of sound has largely contributed to the emancipation of sound and to those of generalized practices of sound consumption that have become

<sup>2</sup> These natural, stochastic sounds are defined otherwise as Wind, Water and Birds (WWB).

<sup>3</sup> This distinction, which can be kept as a convenient working hypothesis, poses a problem since it radically separates man from nature.

<sup>4</sup> It is thus necessary to separate what can be separated and consider that the anthropology of sound design is interested more precisely in sounds created for this purpose (if not already used for something else): sounds “in the service of”, for such “use”, “sounds “as a message”, sounds “in or for a specific environment”.

<sup>5</sup> Schafer writes: “by coining this term “schizophony” in the new soundscape, I wanted to underline the pathological character of the phenomenon. Close to schizophrenia, I used it with the same sense of aberration and cut off from reality».

"commonplace". The consumption of sound can be a matter of listening to individual music, commercial broadcasting, sound signage, audible alarms, equipment or various objects.

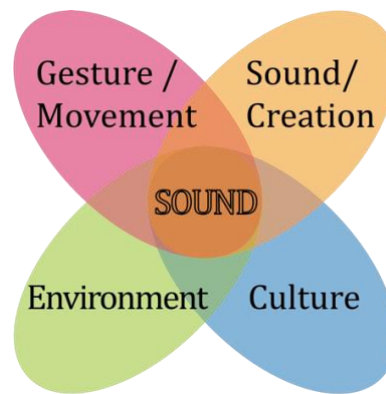


On a broader societal level, even if these practices already existed, they were not even considered as professional design practices, such practices resulting from more general industrial or other design/manufacturing projects, such as crafts. The evolution of these practices is directly linked to those of reproduction / broadcasting technologies which are constantly renewing themselves through use and listening behavior (Savonardo, 2010).

#### **FROM SOUNDSCAPE TO ECOSOUND**

Sound places humans in a listening context within a given environment, which has been defined as “the soundscape”. Murray Schafer, in his work "Tuning the World", was interested in "the study of the relationship of human beings with their acoustic environment" when he had founded with others from the end of the sixties, the World Soundscape Project's publications. The study of a specific "soundscape" highlights the "image" of the soundscape shaped by the perception of the listener. “Image” analysis is based on cognitive units such as foreground, background, outline, rhythm, space, density, volume, and silence. From these units were derived analytical concepts such as the “keynote”, “signal”, “sound imprint”, “object and sound symbol”.

Continuing the research in “ecological acoustics” (“sound ecology”) undertaken by Murray Schafer in the 1970s, the expression “soundscape” thus indicates how the environment is understood by those who live there. The individual listener in a “soundscape” is part of a dynamic information exchange system, which Barry Truax describes with the term “Acoustic Communication”. Also, the soundscape ideology recognizes that when humans enter an environment, they have an immediate effect on sound; the soundscape is man-made and, in this sense, “composed”. An interpretation which means that listening is selective, not only to adapt one’s ear to the environment, but also as a physico-biological organ reacting to acoustic fluctuations coming from outside. Listening is both organizing the audible and communicating its meaning.



Resulting from the multimedia revolution, the digital instrumentalization of the sound world generates the “in betweenness” which has a direct influence on our auditory behavior, thus “artificialized”. Steve Goodman (Goodman, 2012) and others like him, believe that the “hyper-industrialization” of contemporary society, since the advent of sound reproduction and obsessed by productivity on all sides, has generated a sound infection (“earworms”, “audio viruses”) with effects that are difficult to control, and by extension which affect the relationship of man with the living, the natural environment, as well as of man within societal structures. In the proclaimed era of the Anthropocene and ecological lobbies, haunted by the sacrosanct “organic” labels – such as biodiversity and bioacoustics - the distinction is made between a “hi-fi” perception of natural sound spaces and “lo-fi” artificial sound spaces. If this distinction is to remain relevant, it must integrate technological performances of the third industrial revolution known as digital, a new sound generation of intelligent “hyper-objects” endowed with empathy. Insofar as these hyper-objects respond interactively to hidden algorithmic principles, often at the expense of their users, it is important to control their “effects” if we do not want to end up with a society where constant audio streams are crossing through constituting a form of noise pollution that will necessarily have to be arbitrated.

## **ECOSOUND**

“Acoustic ontology” characterizes the relationship we have with the world of sound, ours at the forefront and that of the human tribe, the human community in the background. The word “ecosound”, a neologism constructed from two terms “ecology” and “sound” refers to this paradigm. It means the harmonization or “*ecognosis*” (Morton, 2014) of sound with the surrounding environment. Though one should not consider the negative aspect of a “dark ecology”, the latter nevertheless constitutes the starting point of any ecological consciousness in reference to the existential trauma that it can induce in a community space.

Since Schafer and his insights on the question of ecology, sound embraces the acoustic environment through its notion of “amenity” (tuning), as an entire dimension and within which rethinking structurally the society can/must be done in relation to such acoustic reality. This acoustic reality constitutes a form of socio-economic engagement, with respect to health, norms and standards, and the environment, three areas of focus in design research. The role of sound design and its actors is therefore to monitor this question of a new “sound order”, which we have defined as “ecosonic” and within which our daily life is organized according to different living spaces, in accordance with existing norms and standards and structural frameworks, as well as others yet to be established.





It is now proven that noise in workspaces, whatever its nature, impairs concentration and reduces work productivity accordingly. Studies made on open workspaces, initially created to promote synergy between employees of the same company, have shown that they significantly and paradoxically reduce the performance of the company by generating a quantity of noise pollution with distracting effects, leading to trade-offs with regard to other advantages of these particular environments (some workspaces must be open). While today there are tools for systematic analysis of the "home interior" for such measurements - sound level meters and sound-reputational surveys being the most common, acoustic engineering is most often limited to physical sound evaluations, rendering the issue of socio-acoustics a secondary factor. Now the task is that an "ecosound", in accordance with ecological requirements complying with the regulations in force, provided that a solution exists in reference to the tolerance of sound in place in various social practices, and which can act as an acoustic regulation of the environment for optimal acoustic quality. The management of ecosound can then take on different aspects - laws, decrees, standards, education, while respecting the diversity of protocols.

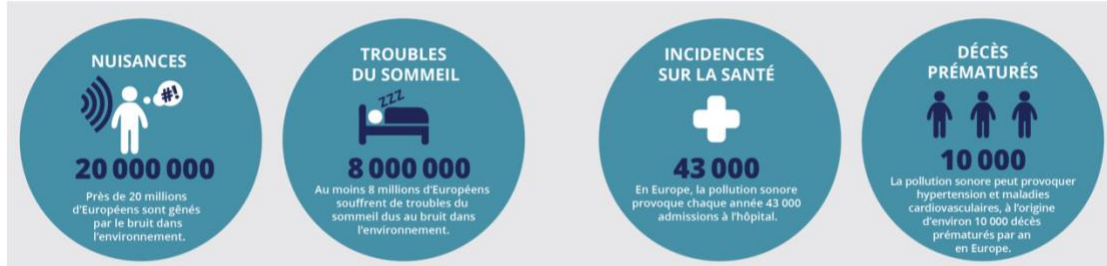
### THE DESIGNER SOCIAL RESPONSIBILITY

"Design" (in the generic sense) can be the influential indicator of the acoustic environment, while man, plagued by doubts about his ecological condition, intends to rethink his future in light of the announced disasters. In anthropological terms, the architectural paradigm of harmonizing the living space and the environment is also in the ecological dynamics of the human project of "living together", where the living environment leads to finding the appropriate tools to produce and (to) reproduce, even limit the perimeter of our activities, the containment of sound being our destiny.

Les niveaux de bruit générés par le trafic routier supérieurs à 55 dB L<sub>den</sub> affectent environ **125 millions de personnes, soit un Européen sur quatre.**



 **> 55 dB L<sub>den</sub>**



Victor Papanek in his book “Design for the real world” (Papanek, 1971) thus emphasizes the social responsibility of the designer in its various aspects - choice of materials, manufacturing methods, recycling... - which will become the bases of resilience in eco-friendly material. Today, the interaction between the human social system and the ecosystem leads any design project to a “responsible” action. Environment, product and sound service must therefore integrate this anthropological paradigm of sound design - give substance to sound by recomposing daily listening - at the risk of not being understood or accepted by the community and going against the current of uses, in any case, real “sound or not” needs. If there must be an eco-design, then there must be an “ecosound”.

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