

'From the soundscape
meme to self-awareness'

José Manuel Berenguer

06

**QUADERNS
D'AUDIO**

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Frankly speaking, when I include myself in what I call 'myself', I always come across with a specific perception pertaining to hot or cold, light or shadow, love or hate, sour or sweet or some other notion. Without the existence of a perception, I can never capture myself in a particular time and I can observe nothing but perception.

David Hume¹

Until a few years ago, mentioning the word 'soundscape' to somebody who had never heard it before made you feel as though your interlocutor was, at that very instant, discovering the term for something he had always experienced but never had a name for. His face would light up, indicating that he knew exactly what you meant. There was no need to explain further. It was clear: soundscape, of course! This concept has the remarkable, stimulating quality of evoking all kinds of experiences in all kinds of people. The other side of the coin is that all those experiences are not necessarily the same, so, inevitably, the meaning of the term has become bloated and its boundaries have blurred. Nowadays, hardly anybody is surprised when it comes up. Its leap into the public domain has made it genuinely polysemous, and this polysemy could be one of the keys behind the phenomenon of positive feedback that has made it so widespread.

Barry Truax defines the term 'soundscape' as 'an environment of sound (or sonic environment) with emphasis on the way it is perceived and understood by the individual, or by a society. It thus depends on the relationship between the individual and any such environment. The term may refer to actual environments, or to abstract constructions such as musical compositions and tape montages, particularly when considered as an artificial environment'². I often wonder about the sudden emergence of this idea of a soundscape as a thing that is constructed or stems from the modification of some other thing, namely the field recording of a specific sound environment. If that were its only meaning, why would Murray Schafer himself claim that 'motors are the dominant sounds in the world soundscape. In reality, Schafer is not very precise when he writes about soundscapes as 'any acoustic field of study (...) we may speak of a musical composition as a soundscape, or a radio program as a soundscape,

1 David Hume, *Treatise of Human Nature*. New York: Oxford University Press, 2000.

2 Barry Truax, *Handbook for Acoustic Ecology*. Canada: Burnaby, B.C., ARC Publications, 1978.

or an acoustic environment as a soundscape',³ in an attempt to make the term as broad as possible. This opening up may, partially, have been taken to mean that a soundscape is the result of specific actions linked to sound production, but even so, the notions of environment and of an acoustic field of study do not imply manipulation or a change of context. As for the more specific cases of compositions and radio programmes, even they allow generalisations that lead them to become perceptual environments for their passive receivers. For example, the radio programming of a particular place comprises its radiophonic soundscape. Similarly, when a composition is performed it becomes the most important element of the soundscape in the concert hall at that moment.

The emergence of the definitions that could put the concept of soundscape on the same level as that of the 'ready made' may stem from the emphasis on painting of a natural environment that tends to be given to the meaning of 'landscape', the word on which the term 'soundscape' is based in English, and which is directly used in the equivalent term in Spanish *paisaje sonoro* (sound landscape), French, and Romance languages in general. The definition of 'landscape' in the Oxford dictionary is as follows:

1. n. All the visible features of an area of land
2. n. A picture representing an area of the countryside
3. n. The genre of landscape painting.

While the second and third definitions refer to the artistic meaning of the term, the first is 'all the visible features of an area of land,' a definition that clearly includes the element of phenomenal experience, given that it is 'visible' and can thus be experienced. This experiential aspect also implies an observer – the experience of a single individual at a specific moment in time. The fact that the term 'soundscape' is sometimes considered to be analogous to the second and third definitions of 'landscape' may have to do with the artistic (clearly musical) origins of the term. In a room set aside for listening to a modified or original recording of an acoustic environment over loudspeakers, the prevailing element of that soundscape will be the output of the loudspeakers. But that doesn't mean it is the soundscape. The source of the recording will be the set of all the sounds that make up the distant acoustic environment, part of it, obviously. But the

3 R. Murray Schafer, *The New Soundscape: A Handbook for the Modern Music Teacher*. Canada: BMI, 1969.

recording is not in itself that soundscape.⁴ Consequently, I don't believe that a soundscape comes into being by simply changing the context of a field recording or manipulating it further, for whatever purpose. It is not field recordings that become soundscapes, but rather the set of all the sounds of a particular space during a specific timeframe, by virtue of being experienced by a sentient being complex enough to do so. Although recordings of soundscapes can carry high aesthetic value, going to the place and listening, whether you make a recording or not, is almost certainly a much better experience than simply listening to the recording. I think there is still much work to be done in this sense, that of the actual experience of listening, of analysing, of the emergence of the consequences that listening has on one's perception of oneself or selves, of each person's place in his or her society. Taken to the extreme, if you want to have an authentic experience of a sound and a soundscape, you may be better off not recording, and simply listening without the mediation of technical paraphernalia. By this point in time, the proliferation of general-purpose workshops and related activities may have hidden the fact that the interesting thing about recording does not lie in doing it: it lies in the way in which time is frozen, and the fact that this allows the events to be repeated for subsequent analysis and interpretation. Not just so others can listen, although there is that too; but rather so that these others, and ourselves, can more conveniently and effectively reflect on what was actually recorded, and not necessarily on the recording itself, which will always be a mediated sample of the world. The interest of the recording lies in what we can do with the material obtained, and in listening with the most conscious attention possible, in order to be able to share this intimate experience and not simply the more or less anecdotal details of how we obtained it. One of the creative fields that is increasingly making references to soundscapes is documentary, which, by its nature, is linked to the media context and particularly to the Internet in all its forms. More so now that so-called Web 2.0 technologies make customisation, collaboration, publishing and storage even more accessible. It's not surprising to see so many websites spring up as sound portals, and it's even less surprising that social movements such as the Arab Spring, Occupy Wall Street and the 15M⁵ movement have [their own sound recordings](#). Things happen when they can. Moreover, in an essentially statistical phenomenon like

4 Michel Foucault addressed this issue at length in regard to *La Trahison des Images and Aube à l'Antipode*, by René Magritte. Michel Foucault, *Ceci n'est pas une pipe*, Fontfroide-le-Haut, Fata Morgana, 1973.

5 www.sonoscop.net/acampadas/

the web, the probability of those things not actually happening tends to zero over time. In any case, the Internet has come along way in giving visibility to the content it hosts, although it hasn't gone far enough. In particular, it should do more towards improving audibility. The use of audio compression tools has a dramatic effect on soundscape recordings, because field recordings potentially have much a greater dynamic range than those of conventional music products. In spite of technical problems – which will improve as bandwidth increases – I believe that art and soundscapes benefit from the dynamics of social networks, habits of sharing, widespread participation, the free publishing of content, and the accessibility of all types of tools. Nevertheless, these dynamics need to focus much more emphatically on introspection, analysis and self-criticism, without loss of audio quality. And this needs to happen now more than ever, because if particular sounds gradually disappear from our recordings we may end up losing our ability to listen to that world directly, as we place more and more barriers, interfaces and filters between its signals and ourselves.

Technological media have made a great contribution to the development of musical ideas, but they are not without perversions. For example, the transfer of the sphere of attention on the object of our interest, sound, to the visual domain. Before graphic interfaces came along, we had a more immediate relationship to sound, although the disadvantage of text interfaces and tape recorders was that you had to listen very carefully to identify a particular point in the flow of sound, and everybody knows how difficult it is to pay attention for an extended period. Now it has become much quicker to identify a particular point with certain characteristics within the flow of a sound document by looking at the graphic properties of the sound wave. This quality is very much in tune with the still paradoxically increasing demands for speed in the neoliberal world. But at the same time, it tends to push the acoustic experience of the sound into the background. Similarly, the ability to pinpoint the location where samples were recorded on a map is very useful for contextualising them geographically, but this same feature could be a deterrent to more detailed descriptions and considerations. This is also highly desirable from the ideological viewpoints that back unbridled growth. I imagine that the people at Google must be thrilled that their geolocation API is so widely used, and not just for marking the position of field recordings. I understand the fascination with being able to geo-tag samples from our lives on a map. It's a matter of empathy, and this justifies the fact that sound maps have done so much to spread basic ideas

relating to soundscapes and acoustic ecology studies. [The same goes for face-to-face projects](#) for disseminating these ideas, which usually take the form of workshops. In this regard, educational entities have an almost completely untapped and constantly renewable market within their reach. The ability to geo-tag your activities, sound recordings, travels, or whatever on maps that are accessible to the human community in general has the invaluable power to arouse empathies. But after almost a decade of using these tools, I am not convinced that geolocation initiatives, introductory workshops on methods of recording, editing and processing audio, or the use of Google, SoundCloud or the Flash player APIs, for example, are of much interest beyond their media-related advantages. As an aside, I do sometimes wonder whether by using these products – which to some degree entail transferring our copyright to the supposedly common domain – we may be fuelling the powerful companies that seem to exist only to suck us dry. Along these lines, I hope that the new open soundscape projects, regardless of whether or not they employ the Internet or maps, will finally manage to overcome the paradigm of the *objet trouvé*, which is almost a hundred years old now, and start to generate more cultural products. Knowledge rather than information. Interpretation. Content. I think that rather than simply promoting the rise in field recordings of dubious quality, sometimes but not always made with semi-professional means, it is now time to focus on the production of new content related to soundscapes. To stimulate debate and give visibility to artists who generate genuine content and ideas. While those beginners' workshops for discovery and dissemination driven by the initial fascination do not have to stop altogether, they have to make way for a stage based on seminars. We need to think, so 'what we need is silence'.⁶ After all, simply marking the spot where a recording was made, or publishing sounds and soundscapes on a website, does not really provide much information. A map can certainly contribute to what we know about a territory, but it seems pertinent to remember the statement by Alfred Korzybski that Gregory Bateson liked so much: 'The map is not the territory and the name is not the thing named.'⁷

6 John Cage, 'Conference on Nothing' (1959), in *Silence. Lectures and Writings*. London: Marion Boyars Publishers, 1985. Cage is like the I-Ching: when you go to his works you always find a reflection that applies to the reality of your moment.

7 Alfred Korzybski, *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics*. 5th ed. International Non-Aristotelian Library. Fort Worth: Institute of General Semantics, 1933.

Making field recordings of soundscapes or their components, and then geo-tagging and describing them on the Internet is an excellent activity for schools and beginners. But beyond the basic practice, profound paradoxes come into play. In his lecture *Phonography or the Art of Being Late*, at the [Zeppelin 2010 Soundscape Seminar](#), Xabier Erkizia talked about his extensive experience with recording sounds and soundscapes. It is very difficult, almost impossible, he claimed, to choose the moment of recording; you never get there at the right moment. No matter what you record, it is always contingent. This is why field recordings, even more than other types, require one to make the most of the moment, and it seems reasonable to think that the best way to do this is by paying attention to the tiniest detail. Sound recording requires time. It may sound simple: you go, you position the mic where you see fit, connect it to the recorder, push the button, and you're done. Now that many recorders come with built-in microphones, it seems [even easier]. Child's play. I recently heard a musician talking about how pleased he was with a recording he had made using one of these semi-professional recorders. 'You put it down in front of you, you play, and straight to the record,' he said. This faith in the optimum behaviour of the machine, without the need for anybody to expend energy on monitoring the situation, is widespread among all kinds of sound artists. I don't know what that musician heard when he listened back to the recording, but I'm sure that he wasn't sensitive to the details of a recording with personality. Blind faith in technology encourages us to leave quality control to automatic processes, so that while the results may be adequate, they will only be so in terms of standards, and even that is difficult to affirm. Recordings made in this way – without selecting optimum frequency ranges, without a proper choice of the type of microphone and its direction, or an appreciation of the depth of layers or the way sound bounces against the boundaries of the spaces, without paying attention to fluctuations of levels or to the possible presence of masking sources – are unlikely to limit error production, and even less likely to add value to the listener's enjoyment of a musical performance. It is similar to the case of photography using an automatic camera: the only opportunity that remains for personal expression is the choice of framing and the moment of pressing the shutter. Everything else, the light, the depth of field, focus, colour temperature and so on, can only be considered contingencies. That is certainly one of the options available for expression, but it is not the only one and, in any case, it reduces the total spectrum of possibilities. In the case of sound recording it is clearly a path to the decline of the value of music products.

Sound recording is generally acknowledged to require careful, self-critical listening: the person making the recording must constantly question whether or not the material being recorded matches the details of the reality that he or she wants to express, in that particular context. And also whether or not the equipment is responding adequately to the needs of that specific moment.⁸

At the heart of it lies simultaneous listening, outwards and inwards; the self-aware analysis of the way in which we perceive sounds. The ultra-fine detail of soundscapes, which I feel inclined to think about in terms very similar to those of Acoustic Ecology. Perhaps I would expand its scope to include other species, in which case a soundscape could be defined as the overall acoustic experience linked to the space-time coordinates of an individual of any species endowed with the sense of hearing. As such, at least in regard to the sounds of living nature, soundscapes are subject to evolutionary processes, and given that evolution moves in line with the arrow of time, these tend to be irreversible. Once a particular state has been reached, the probability of turning back is really quite negligible. Sound heritage is irreversibly constantly changing. Always. With or without human intervention. With or without sounds created by humans. Nonetheless, the process is probably much faster when humans are involved: certain human-induced increments in the speed at which the soundscape changes prevent or hinder the evolutionary adjustment of other sound elements to new global situations occupying the spectrum. According to [Francisco Varela](#), one of the traits that sets our species apart is our ethical ability,⁹ which largely stems from another, lower-level cognitive contingency that is closer to biological mechanisms: the disconcerting capacity to observe ourselves. It is only natural that we should be interested in listening to the way in which we are changing the soundscape, and doing so can help to determine whether some of these changes can be considered to be a consequence or a symptom of environmental changes that we are clearly responsible for, in spite of ultraliberal denials. Given that we seem to be inexorably headed towards the destruction of natural resources unless self-control mechanisms are brought into play, I believe that using sound equipment to record the soundscape at selected points and then publishing the recordings on the Internet in almost real time, without

8 'Non sempre o quasi mai la nostra identità personale coincide / col tempo misurabile dagli strumenti che abbiamo' stated Eugene Montale in 'Miraggi', *Quaderno di quattro anni*. Milán: Mondadori, 1977.

9 Francisco J. Varela, *La habilidad ética*. Barcelona: Debate, 2003.

restrictions, could contribute to self-regulating environmental aggressions. For example, a microphone placed at a great distance can easily detect the use of machinery in low-saturation contexts. The original Sonidos en Causa project proposed setting up a network of stations and laboratories for ongoing listening to the soundscape (RedEsLab), comprising a series of microphones streaming over the Internet in real time from several acoustically sensitive locations. But this part has been postponed due to a lack of funding, and the project has started to make recordings of the sound heritage of various locations, in the hope of better times ahead. Which will probably be a long time coming.

Although it has been decades since soundscapes ceased to be simply a basic conceptual tool and became a genre in their own right, mannerisms are starting to abound. There are even a large number of seasoned listeners and followers. This is good news: when that happens, it means a discipline has reached a significant level of development. For those who prefer virgin territories however, it is a sign that it's time to find new paths to explore, although not necessarily by making a clean break. Given the state of the new media available for creation, we can go back to aspects that may have been lost along the way. In particular, it now makes sense to go back and recover the influence of scientific thought on arts production and ways of thinking about art, in view of the current paradigmatic situation of communication and knowledge sharing. For this reason, I'd like to draw attention to the scientific roots of the World Soundscape Project, which embarked on its activities in the late sixties as an educational and research project. For example, [the Five Villages Soundscape](#) is an in-depth analysis of the soundscapes of five European villages, in which Ray Murray Schafer [displays his scientific spirit](#). He and his then-young followers were essentially driven by artistic passion, but it was science that flowed through their veins. Exploring further, we should also mention that the author of *Acoustic Communication*,¹⁰ Barry Truax, is also the creator of the PODX sound synthesis software, which began synthesising through frequency modulation, and was the first computational device to carry out granular synthesis in real time. Now that programming musical software almost seems like a game, it is difficult to grasp the extent to which conceiving and carrying out this project between 1973 and 1999 required not only the special artistic sensibility that would drive you to build the ideal instruments for your music, but also a significant

10 Barry Truax, *Acoustic Communication*. Norwood NJ: Ablex Publishing, 1984.

scientific background.¹¹ But Barry Truax and Ray Murray Schafer were not the first musicians with overtly scientific attitudes. And neither were the composers from the Darmstadt School, many of whom introduced highly rigorous methodologies in the composition of their works, nor Pierre Schaeffer, whose *Traité des Objets Musicaux*¹² uses acoustic language as freely as the language of phenomenological research. Nor was John Cage, who devised rigorous processes and even more rigorously applied fully fledged algorithms to generate the random structures that were behind the decision-making processes of all his works from 1951 onwards, precisely a period that was marked by the discovery of profoundly disturbing, paradoxical realities such as Werner Heisenberg's Uncertainty Principle, Alan Turing's Machines, and Kurt Gödel's Incompleteness.

Although the details vary in each culture, the roots of the connection between Art and Science lie in the essence of human thought; they are born with us. There have always been artists who are extremely rigorous in the way they work and think, and scientists whose beautiful intuitions had undeniable artistic value. But I think that it is now a good time to introduce scientific approaches into Art, and perhaps even more importantly, the reverse: to goad Science out of its self-absorption and into adopting some of the characteristic approaches of Art. Better still: to urge Science to acknowledge that it has always had room to move beyond strict rigor, that chance does not just exist in certain case studies such as genetic recombination, the quantum world and the limits of computation.

Change and diversity also reside in thought, a conviction that would probably be seconded by Paul Karl Feyerabend,¹³ who warned us that our insufficiently critical attitude to scientific standards may be obscuring valuable knowledge acquired by other forms of knowledge.¹⁴ Nothing responds to any reason. We just do our best, even though we tend to think that we control our own actions and desires. We think we are the authors and players of our own lives, but we shouldn't be so sure. The will to do something is an emotion. So are knowledge and understanding, and also ignorance and the inability to completely grasp something. The truth is that we don't really understand, and we don't really

11 Toru Iwatake interviews Barry Truax, 1991 www.sfu.ca/~truax/barry.html

12 Pierre Schaeffer, *Traité des Objets Musicaux*. Paris: Editions du Seuil, 1966.

13 V. M. Fontes Gonçalves, *Do racionalismo crítico au anarquismo pluralista: uma ruptura na transformação do pensamento de Paul Feyerabend*. www2.dbd.puc-rio.br/pergamum/tesesabertas/0210601_04_pretextual.pdf

14 Paul Feyerabend, *Against Method: Outline of an Anarchistic Theory of Knowledge*. New York: Verso, 2002.

fail to do so. What we know is and always will be partial, and this keeps us from fully understanding the sources of our perceptions. Understanding is a dream;¹⁵ it is a limit, just like the relationship between cause and effect that we have such faith in, as a way of understanding the links between our urge to create, our desire, and the results of our actions. To see us, anybody would think that we are unaware of our own nature and our direct connection to the world as beings subject to biological contingencies. We are survival machines.¹⁶ Perhaps the most complex ones we know of to date, but machines nonetheless, whose mission is to transmit and perpetuate the gene load that we carry in our cells. The relatively sophisticated brain that characterizes us is not particularly well adapted to accepting itself for what it is, and this may end up leading us to become deaf and blind, in spite of looking at and listening to everything. Overcoming the drift towards unconsciousness requires all kinds of strategies. One of these could be radical listening, which is a way of paying attention to the world and to ourselves. A means to heighten self-awareness.

15 José Manuel Berenguer, *Luci, Sin Nombre y Sin Memoria*. Camallera: Nau Còclea, 2007, pp. 73–81.

16 Richard Dawkins, *The Selfish Gene*. Oxford: Oxford University Press, 1989.

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01. Blackout representation, transformation and de-control in the sound work of Yasunao Tone

Roc Jiménez de Cisneros

02. Cuaderno de Yokohama

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04. The road to plunderphonia

Chris Cutler

05. Processes and systems in computer music; from meta to matter

Dr Tony Myatt

06. From the soundscape meme to self-awareness

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Colophon

From the soundscape meme to self-awareness

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About the author

Intermedia artist, composer, teacher, curator... The many labels that can be applied to the career of José Manuel Berenguer (Barcelona, 1955) reflect the multidisciplinary drive that has always guided his professional activities. Aside from producing his own body of work, the dissemination of electroacoustic music and sound art have also led Berenguer to work closely with numerous cultural institutions, festivals and organisations. He co-founded the Orquestra del Caos and Còclea, with Clara Garí, and he directs the Música13 Festival at Nau Còclea. Berenguer collaborates with the Institut International de Musique Electroacoustique in Bourges, France, and he conceived and was the founding director of the Sound and Music Lab run by the CIEJ, Caixa de Pensions. As a teacher, he has imparted classes at the Conservatoire de Bourges and the Master's Degree in Sound Art at the University of Barcelona. He is also a former President of the Spanish Association of Electroacoustic Music and current Honorary President of the ICM-UNESCO International Conference of Electroacoustic Music, as well as a member of the Academie Internationale de Musique Electroacoustique/Bourges, the ICM-UNESCO National Council of Music Academy, and the MISAME Experts Committee.

Taking the term soundscape as a starting point, this essay by José Manuel Berenguer addresses a number of concerns relevant to understanding the listening experience within art and everyday life. Tackling questions such as phenomenology, cognition, new media, aesthetics and the overlap between art and science, Berenguer engages in a critical analysis of recent sound art practices, using both significant historical examples and his own experience.

QUADERNS *Quaderns d'àudio* **10/AUDIO**

Audio Notebooks is a collection of publications of texts related to RWM (Ràdio Web MACBA) programming. The objective of these publications is to complement RWM's lines of work through a collection of unpublished texts and with the critical edition of hard-to-find texts that are important for understanding and delving into sound art in the fields of both music and contemporary art.