

FROM SOUND TO WAVES TO TERRITORIES

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Abstract

This paper explores the debate around environmental humanities through the lens of sound and recent examples of sound art. Taking the emergence of ecocriticism as a point of departure, it discusses sound as a conceptual interface in our technologically mediated relationship with the environment. The notion of “shared sonic spaces” is employed to address the shift that is occurring from a “poetic of authenticity” to a “poetic of responsibility” at the intersection of culture, technology and ecology.

Keywords: Shared sonic space, radio, dolphins, ecocriticism, sound art, poetics, ecology, electronic media

In the era of the Anthropocene and globally connected ecological challenges, we clearly depend on science driven models and simulating systems that allow us to make a picture of what is happening around us. In his discussion of current affairs in eco-criticism, the literature scholar Greg Garrad draws the following distinction in regards to our contemporary “lebenswelt” and their associated poetics: “The poetics of authenticity assumes, against the evidence of ecology, that there is a fixed eternal standard we ought to try and meet. The poetics of responsibility recognises that every inflection of Earth is our inflection, every standard our standard, and we should not disguise political decisions about the kind of world we want in either the discredited objectivity of natural order nor the subjective mystification of spiritual intuition”[1]. Garrad's weighting of a “poetics of responsibility” over a “poetics of authenticity” points to the core of the question about the technologically mediated nature of our relationship with our environment. In this article I want to approach the debate presented here by Garrad through the lens of art and in particular of sound art practice.

As the title of this article indicates, I am interested in sound and its territorial transitioning, and in how we position ourselves in these territories through sound. The waves in my title not only refer to the movement of sound in space through media, like air or water, or via media technology like radio. The term also points to a political dimension, alluding to social waves and their group dynamics, and the way in which we respond to the challenges we face and the existential territories we shape for ourselves. Here I refer to philosopher Félix Guattari's concept of the existential terri-

tory. In *Chaosmosis*, Guattari foregrounds subjectivity over the subject and argues for a “heterogenetic image of being”. Instead of speaking about instances of the self and of transference, Guattari prefers to talk about existential territory as a relational process that produces subjectivity at the nexus of milieu, socius and incorporeal ecological dimensions, including media [2]. Existential territories for Guattari allow emerging forms of subjectivity to become detached from the subject or the person and ultimately could lead to new forms of subjectivity detached from the exclusively human[3].

The current environmental debates around, for instance, the rapid decline of biodiversity or global warming stress the fact that the problem does not only pertain to existence in a human subjective way but is more explicitly about co-existence within an ecological system which includes non-humans. In these debates we often hear about responsibility – let it be our individual responsibility, for instance, as a consumer in a market society, or responsibility imagined more globally that applies to us a species in an ecological sense. If we look at the etymological root of the word responsibility, it derives from the Latin word *respondere*, as in “answer to, promise in return.” It stresses the notion to be in response to someone or something, however this does not necessarily only suggest the direct response, as in a verbal exchange. To me it also opens up a notion of a terrain or space in which this is happening. This correlates with the spatial quality of sound and its need for space within which to resonate to be perceivable, as well as the sensorial quality of listening and how it positions us in the world, which differs from our sense of vision.

Moving on to contemporary art practice, in *Conversation Pieces* art historian Grant Kester addresses recent developments in socially engaged contemporary art practice, which he calls dialogical art. For Kester, one of its main characteristics is to sensitise us to the social fabric of interpersonal encounters. Dialogical art expands here the philosophical concept that, for instance, Habermas outlines of dialogical encounter and the public sphere as discursive contest. Interestingly, while Kester remains focussed in his elaborations on the domain of human dialog, he refers to Gemma Corradi Fiumara, who stresses “the long-suppressed role of listening as a creative practice”[4]. Kester integrates this into

what he calls a procedural form of knowledge or connected knowing, which he defines in the following terms: “First, it is concerned with recognising the social context from which others speak, judge and act. ... The second characteristic of connected knowing involves the redefinition of the discursive interaction in terms of empathetic identification” [5]. In *Speaking into the Air: A History of the Idea of Communication*, the media scholar John Durham Peters observes that media technology in the twentieth century has already opened up the social circle of our communication routines by inviting not only machines and animals but even the dead to join the conversation [6].

Taking Kester's concept of dialogical art and connected knowing and Peter's notion of a technologically expanded arena for interaction, I am interested in the role of sound as interface in the technological mediation of our relationship with our environment, and in asking what it can contribute to Garrad's call for a poetics of responsibility in the wider environmental discussion instigated by ecocriticism. I am particularly interested in the domain of sound because when we talk about environmental issues and in particular on a global scale the metaphors being used are mostly invested in the visual domain. To counterbalance this I want to explore the notion of what I call shared sonic spaces.

Sound: Resonance with the World

In *Nature, Sound Art, and the Sacred* the composer David Dunn writes: “When we look at the world, our sense of vision emphasizes the distinct boundaries between phenomena. ... In contrast, the sounds that things make are often not as distinct, and the experience of listening is often one of perceiving the inseparability of phenomena. While we often see something as distinct in its environment, we hear how it relates to other things”[7]. He offers, as an example, the sounds of ocean surf or the rush of wind in trees. When talking about techno-interventions, simulation and the realm of sound, one of the first things that comes to my mind is Murray Schafer's critique of the schizophonic, which in his view entails a disconnect from nature [8]. Once sound is being recorded, it gets split from its environment and once it is played back, it loses its reference system and therefore its environmental information value. Schafer, who was clear-

ly not in favour of this loss of “authentic” information, nevertheless engaged with electronic media, as his radical radio project shows. Here microphones were placed in nature in order to have nature broadcast its sounds back – ideally with as little programming and formatting interventions as possible from the radio station[9]. According to Dunn, the deep ecology philosopher Arne Naess takes a more pragmatic stance on this matter. For Naess, the increasing fragility of the ecosphere no longer allows for any kind of extensive human encounter with nature and therefore new media will have to play a crucial role in providing ecological representations to engage with the wider public, while reducing the pressure on our actual environment[10]. Dunn concludes that “technology must be seen as a logical consequence of a co-evolutionary dance”[11]. Technology needs a critical engagement however, according to Dunn, it serves an ecological perspective in two beneficial ways: Firstly, “it can be a means for ecological self-correction by eliminating errors in our relationship to specific ecologies”[12]. Dunn refers, for instance, to the work of artist Paul Ryan [13] and his ecochannel design proposal for a community TV station in New York [14]. Secondly, it can provide “an expansion of human language into the domain of the non-human”[15]. In his own compositions and performances, Dunn uses technology to create sound driven systems that are nested in bigger environmental contexts: “My belief is there is an important role for the evolution of an art form that can address the phenomenon of sound as a prime integrating factor in the understanding of our place within the biosphere’s fabric of mind”[16].

Ecocriticism: Remembering the Earth and Renegotiating Reality

In contrast to that, eco-criticism emerged in the early 1990s as a field of critical literature studies [17]. As Heise describes, eco-criticism has a “triple allegiance to the scientific study of nature, the scholarly analysis of cultural representations, and the political struggle for more sustainable ways of inhabiting the natural world”[18]. It arrived in literature studies strangely delayed, when environmentalism had already turned into a vast field of converging and conflicting projects and given rise to two other sub-disciplines in the humanities: environmental philosophy and history. Having

entered the humanities, ecocriticism critiqued the humanities' preoccupation with race, gender and nation while neglecting the fact that there is something like a planet and an environment upon which we depend to live. It also critiqued the dominating discourse of language and deconstruction in humanities.

The philosopher Kate Soper in *What is Nature?* put it this way: “It is not language that has a hole in its ozone layer”[19]. In light of the fact that this is a neat way for Soper to illustrate her point, and that it has been quoted widely, Garrad points out that hole and layer are themselves in this case strictly metaphorical and cultural and scientific constructions[20]. Philosopher Freya Mathews stresses that in the time of the current environmental crisis “the science of ecology, ... has defined the first phase of the re-negotiation of our relationship with reality” but that this must be followed by a second phase “of what can no longer be termed merely an environment movement, but must be revisioned as a revolution in the very context of meaning for human cultures”[21]. An interesting case in the wider ecocritical discussion is the work of the Worldwatch Institute, which generates environment related computer models and alternative future scenarios, informed by a vast array of sources, including satellite feeds, which monitor ecological developments on a global scale to. In the view of the political scientist Timothy Lukes, Worldwatch's quest for sustainable modernisation deprives Earth of its character as a wild, mysterious place. It rather turns it into “an ensemble of ecological systems, requiring human managerial oversight, administrative intervention, and organizational containment”[22]. In addition, he notes that no critique of global capitalism as such and its “basic logic of commodification and exchange that causes ecological destruction” is being pursued [23]. By summarising this discussion Garrad agrees that it is crucial to consider systemic critique as articulated by Lukes but at the same time this discussion shows at a fundamental level the “failed promise of authenticity”[24] in our conception of the planet in ecological and political terms. Or, in the words of geographer David Harvey: “The final victory of modernity ... is not the disappearance of the non-modern world, but its artificial preservation and reconstruction”[25]. Garrad continues to argue that, “the inflection of Earth as a static, fixed image is shown to be terribly misleading. Perhaps the Earth is better seen as a pro-

cess rather than an object. ... The irony is that a future Earth-oriented system of values and tropes will have to acknowledge contingency and indeterminacy at a fundamental level, but this only increases the scope of our liability as the most powerful species on the planet”[26]. According to literature theorist Timothy Morton “[re]framing our world, our problems and ourselves is part of the ecological project”[27]. In *The Ecological Thought* Morton seeks to provide intellectual tools to come to terms with the impermanence of evolution apart from fixed and stereotypical notions of nature[28].

Art and the Poetic of Responsibility

Coming back to the earlier raised question of which role does an art practice play in this discussion, it occurs to me that one of the pressing challenges in the current time of ecological crisis is “to renegotiate our relationship with reality”, and that this involves, according to Garrad, a conceptual shift from a “poetic of authenticity” to a “poetic of responsibility.” It is obvious that contemporary art production plays a pivotal role in creating a discursive public space to address, in Mathews' terms, the “revolution in the very context of meaning for human cultures”, which has to happen in order for us to adapt to our current environmental situation. Within this discursive space, art should also be to negotiate the boundaries of technological intervention and sensual capacities and explore modes of “connected knowing” in wider ecological constellations.

John Cage neatly summed up the relationship between art and technology in a conversation with Daniel Charles, pointing at an ashtray: “It’s in a state of vibration. ... But we can’t hear those vibrations. ... I’m going to listen to its inner life thanks to a suitable technology, which surely will not have been designed for that purpose”[29]. Matthew Fuller takes this way of thinking a bit further, when in *Art for Animals* he departs from an anecdote about philosopher Deleuze and the intellectual pleasure he had describing the sensorial world of a spider. Even if a juicy fly were to be placed right in front of it, it wouldn't care. It would only be interested in a “few small twitches on the far reaches of the web”[30]. For Fuller, art practices that, for instance, engages with animals does exactly this, it sends “a tingle along the edges of what we take for granted as our

current capacities. It suggests that we search out and test the discontinuities and overlaps between our sensual and intelligent capacities and those of others. ... They are paths of becoming, gravitational lodes of traction which pull the human out of its skin, and pull the singular animal into the multiplicity of packs, of evolution and of ecology”[31]. Looking at it from this angle, Dunn reflects about his electro-acoustic composition practice: “Perhaps music is a conservation strategy for keeping something alive that we now need to make more conscious, a way of making sense of the world from which we might refashion our relationship to nonhuman living systems”[32].

Two brief Examples: Shared Sonic Spaces

Following from Dunn's notion of sound as a factor in “understanding our place within the biosphere's fabric of mind,” and the idea that sound is a conceptual interface for a techno-environmental mode of communication as well as intellectual curiosity, I want to conclude this article with two brief examples of what I like to term shared sonic spaces. The examples are interrelated but are sitting at the retro end of the current technology spectrum. The first case would be the radiophonic space. Marconi is meant to have believed until he died that sound actually never dies – in the sense that it diminishes endlessly. Curtis Roads wrote in *Micro-Sound*: “Perhaps the last traces of human existence will be radio waves beamed into space, travelling distances before they dissolve into noise”[33]. I am not aiming at the apocalyptic spin that can be read into Road's statement, especially from a current environmental perspective, but rather wish to emphasise certain technical idiosyncrasies that come with terrestrial radio. In addition to the one already mentioned I want to draw attention to two additional qualities that interest me in the discussion of shared sonic spaces.

Radio waves have the longest wavelengths in the electromagnetic spectrum. Having said that, objects in space, such as planets and comets, giant clouds of gas and dust, and stars and galaxies, emit light at many different wavelengths. Some of the light they emit has very large wavelengths. These long waves are in the radio region of the electromagnetic spectrum. Many astronomical objects emit radio waves, so by tuning into the

radio dial we actually can hear the Universe moving. When discovered, this fact, led astronomers to develop sophisticated systems that allow them to make pictures from the radio waves emitted by astronomical objects otherwise know as radio telescopes.

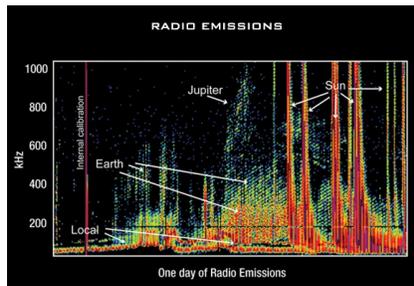


Fig. 1. Source:
http://missionscience.nasa.gov/ems/05_radiowaves.html

The other quality that I see in terrestrial radio technology is that it provides an open standard and communication protocol in comparison to most current digital standards. A similar take is chosen by the SETI institute, which is dedicated to the search for extraterrestrial intelligence and the study of life in the universe.

SETI is interested in broadcast radio as a means to detect “evidence of technological civilizations.” Its website states: “In terrestrial radio practice, narrow-band signals are often called “carriers.” They pack a lot of energy into a small amount of spectral space, and consequently are the easiest type of signal to find for any given power level. If E.T. is a decent (or at least competent) engineer, he'll use narrow-band signals as beacons to get our attention”[34].

The SETI initiative goes back to the research work of radio astronomer Frank Drake and his Drake Equation, which sought to calculate the number of civilizations in our galaxy that could potentially communicate with us. In 1961 a number of scientists gathered at the Green Bank Observatory to discuss specific factors thought to play a role in the development of “technological civilizations” or at least to stimulate “intellectual curiosity about the universe around us”[35]. Among those scientists was John C. Lilly, who is renowned for his communication research with dolphins and with the tursiops truncatus in particular. At the height of the Cold War Lilly belonged to a generation of scientists deeply concerned with human world affairs and he decided to focus on inter-species communication with the hope that any success in this field might have an impact on human communication

globally and beyond, as in the case of SETI. Lilly chose the tursiops truncatus for several reasons: Firstly he observed a complex form of communication behaviour among themselves as well as an interest in exchanges with humans. Secondly, they possess a brain that in mass is only a little bit bigger than the human one. Lilly hypothesised that inter-species communication could be achieved but it would need to happen as equals among equals. He concluded that because of the rather small acoustic frequency range humans share with dolphins, it would be easier to teach a dolphin to speak English than a human to speak Dolphinese. And given that dolphins can use the two channels of their blowhole independently from each other, which allows them to communicate to each other in stereo – so to speak – when human communication in comparison is in mono. So far there is no breakthrough reported on this end and current research have shifted towards the study of the complex communication behaviour among dolphins. Other researchers like Diana Reiss, a former stage designer who has become one of the leading scientists in this area, recalls Lilly as a very inspiring person although she remarks that some of his projects might have lacked long-term scientific rigour[36]. My interest in Lilly's research work lies less in the scientific legacy and more in the cultural practice, which presents a concrete and fascinating architectural manifestation of a shared sonic space.



PLATE 11. Facility Changes for the 26-Month Experiment. Margaret lives in with dolphin (Peter) in new flooded area. The outside flooded balcony is above the sea pool. Maximum allowable door loadings allow three feet of water (wall height). The outflow regulator is in upper right, just above spiral staircase entrance to sea pool walk. Margaret and dolphin Peter are on balcony, dolphin Sissy is seen in sea pool, 16 feet below.

Fig. 2 Source: John C. Lilly, "Lilly on Dolphins" (Garden City, N.Y.: Anchor Books Edition, 1975)

Figures 2 and 3 show the experimental setting for one of his experiments. For 10 weeks in 1965, Lilly's female research associate, Margaret Howe, lived with a dolphin named Peter at the Communication Research Institute, Virgin Islands, US. The two shared a partially flooded, two-room house and a connected deep water pool. In the flooded rooms the water was just shallow enough for Margaret to wade through and just deep enough for Peter to swim. Microphones and hydrophones were installed, which allowed a two-way communication from air to water. Margaret and Peter were constantly interacting with each other, eating, sleeping, working, and playing together. Margaret slept on a bed swimming in saltwater and worked on a floating desk, so that Peter was free to come and go. The imagined ideal long-term scenario was never realised. It would have provided free access from the sea for the dolphin and more of a wider family life situation for the human in the house.

Fig. 3 Source: John C. Lilly, "Lilly on Dolphins" (Garden City, NY: Anchor Books Edition, 1975)



Conclusions

In his fourth Gifford Lecture *The Anthropocene and the Destruction of the Image of the Globe*, Latour states that the unique situation of the Anthropocene has made it very obvious that while we can't do without science and its model simulations, science on the other hand has not become the final authority in the discussion. It is instead about to provide means to renders us "sensitive" to what is happening around us. Becoming responsible, then, for Latour means "to cocoon ourselves within a great many

loops so that progressively, thread after thread, the knowledge of where we reside and on what we depend for our atmospheric condition can gain greater relevance and feel more urgent"[37]. He refers to Sloterdijk, who points out that it is only once humans see pollution coming back at them that they begin to really feel that the Earth is indeed round. Sensitivity then applies for Latour to all the agencies able to spread their loops further and to feel the consequences of what they do come back to haunt them. For him aesthetics according to the old meaning of the word means "being able to 'perceive' and to be 'concerned,' that is, a capacity to render oneself sensitive, a capacity that precedes any distinction between the instruments of science, of art and of politics"[38]. Latour stresses that such responsible aesthetics can only truly be a "post-global" one as the image of the globe is for him misleading to say the least, as it suggests, "that the world has been unified once and for all." But the public debate around climate change shows that this has clearly not yet happened. In conclusion, I would like to state that in this "new cosmo-political situation" artistic explorations into sound -amongst other endeavours- do provide engaging angles to further explore these new modes of sensitivity, and to steer towards existential territories that provide a more "heterogeneous image of being" than a narrow anthropocentric and rather short-term perspective. Lao Tzu is meant to have said to know and not to act is not to know. And keep listening to "those vibrations" ...

References and Notes

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