

Ecological Sound Art

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Abstract

The years since the turn of the millennium have seen an increasing number of sound artists engaging with contemporary environmental issues such as biodiversity loss, sustainability, and climate change through their work, forming a growing movement of environmentally-concerned sound art; however, their work has yet to achieve the recognition enjoyed by comparable environmentalist practices in almost every other art form. This paper argues that this increasingly significant area of sound arts practice should be recognised as a distinct field in its own right, and proposes that it be termed ‘ecological sound art’, reflecting its equivalent in the visual arts. After establishing its current absence from both ecocritical and sound arts scholarship, it proceeds to outline some of the core approaches which characterise works of ecological sound art, as the first step toward its establishment as a coherent field of practice. The final section draws from key works of contemporary ecological theory, examining the fundamental accord that exists between the new modes of thought they propose and the ways in which we experience and relate to sound art, demonstrating that ecological sound art represents not only a significant new field of sound arts practice, but a uniquely powerful ecological art form.

Keywords

Ecological sound art; ecology; environmentalism; acoustic ecology; ecomusicology; ecocriticism; eco-art

Introduction

In recent years, environmental issues such as biodiversity loss, pollution, sustainability, global environmental justice, and particularly climate change, have grown to become some of the most significant socio-political – and, many would argue, moral – issues of our time; however, it is generally acknowledged that humankind is still failing to respond to them with the necessary degree of urgency. In a 2005 article on climate change, leading US environmentalist Bill McKibben argued that this problem of inaction was fundamentally a cultural one, and that the arts could play a crucial role in facilitating our ability to tackle contemporary environmental challenges, noting that “[a]rt, like religion, is one of the ways we digest what is happening to us, make the sense out of it that proceeds to action,” and asking “[w]here are the books? The poems? The plays? The goddamn operas?” [1] Far from being a lone ecological voice crying in a cultural wilderness, however, McKibben’s call-to-arms coincided

with the beginning of a huge surge of interest around arts and ecology – a fact which he acknowledged in a follow-up piece four years later, in which he reflected that at the time he wrote his article, “[c]learly there were lots and lots of people already thinking the same way, because ever since it’s seemed to me as if deep and moving images and sounds and words have been flooding out into the world.” [2]

This surge in ecological engagement has been evident in every area of the arts; and sound art is no exception, with an increasing number of artists using sound as a medium to creatively address a wide variety of contemporary environmental issues. In October 2006, Joel Chadabe and the Electronic Music Foundation evidenced this trend with the staging of *Ear to the Earth*, a five-day festival of environmentally-concerned sound art in New York – an event which would continue to be held annually for the next seven years, and which today operates as “a global community of environmental sound artists responding to climate change” [3]; while in 2008, Matthew Burtner established *EcoSono*, described as “an activism network advocating environmental preservation through experimental sound art,” [4] through which he has staged an annual educational ‘EcoSono Institute’ for the creation of new environmentalist sound works.

Ecological Sound Art: A New Term for a Growing Movement

The exponential increase in environmentally-concerned sound arts activity over the past decade clearly demonstrates the existence of a significant contemporary movement; however, this movement has yet to achieve the recognition enjoyed by environmentalist works in almost every other art form. Perhaps most fundamentally, there currently exists no generic terminology with which to identify, define, or describe this movement – something which is a prerequisite for any field if it is to gain a coherent identity, and become part of a meaningful discourse. In this respect, today’s environmentally-concerned sound art is still stuck in a situation that was resolved within the visual arts a quarter of a century ago, when the 1992 exhibition *Fragile Ecologies* collected together thirty years’ worth of environmentalist art and recognised it for the first time as a distinct movement in its own right, which it called ‘ecological art’ – terminology which, either in full or in its abbreviated form of ‘eco-art’, is now in common usage, a fact demonstrated by its entry in the Oxford English Dictionary.

Just as the last twenty-five years have seen ‘ecological’ or ‘eco-’ art gain widespread recognition as a specific movement of environmentalist works within visual art, there is now a pressing need for the same to happen for today’s environmentalist sound art. Reflecting the established terminology within the visual arts, I would therefore propose that ‘ecological sound art’ might be adopted as the most suitable term with which to identify this important contemporary movement.

The Absence of Ecological Sound Art from Current Critical Discourse

In most areas of the creative arts, the explosion in engagement with environmental issues has been reflected by growing bodies of both academic and popular literature, with an abundance of ecocritical texts in the fields of visual art, literature, film, theatre, and music. Such scholarship serves an important purpose in recognising, consolidating, and promoting common bodies of environmentalist practice within these art forms, providing critical analysis, evaluating their significance, and enabling their incorporation into the wider critical discourse surrounding the cultural response to contemporary environmental issues. In surveying this extensive canon of ecocritical scholarship, however, sound art is notable by its absence.

While we might perhaps expect to find ecological sound works incorporated into the extensive critical discourses surrounding either eco-art or ecomusicology, all existing texts in the former field limit their coverage to the visual arts, while the latter remains confined to the ‘note-based’ musical genres of popular, folk and classical music. The few texts within sound arts scholarship which engage with the links between the environment, environmental sound, and sound art, meanwhile, invariably view such issues through the lens of acoustic ecology; and while many of its core principles are of undeniable importance to ecological sound art, the fundamental fact that acoustic ecology is by definition a field concerned with the *acoustic* environment means that it only tends to engage with contemporary environmental issues to the extent that they impact the environmental *soundscape*, largely bypassing the contemporary ecological issues such as biodiversity loss, environmental justice and climate change that are of such urgent importance in the 21st century.

Thus seemingly neither ‘visual’ enough for eco-art, nor ‘musical’ enough for ecomusicology, and with acoustic ecology-based sound arts scholarship largely failing to engage with the contemporary environmental issues which are its central concern, the growing movement of ecological sound art is in danger of silently disappearing through the cracks, making it imperative that it be recognised as a significant field in its own right.

Common Approaches Within Ecological Sound Art

As a first step towards establishing it as a coherent field of practice, I will now proceed to outline some of the core

approaches that characterise ecological sound art, through a summary of some of the key works in the field. This brief list is offered here merely as an initial step towards defining a dynamic and growing field, and should by no means be taken to represent the full extent of its possibilities; nor should these approaches be understood as mutually exclusive categories, since a number of them may be (and often are) combined within a single work.

Enacting Metaphors which Facilitate a Personal Connection with Ecological Issues

Perhaps the most common approach within ecological sound art is the enactment of artistic metaphors which facilitate a heightened awareness, deeper understanding, and, most importantly, a personal connection with contemporary environmental issues. Some examples include *Suspended Sounds*, created for the inaugural *Ear to the Earth* festival in 2006, which featured works by six sound artists composed from recordings of extinct and endangered species which were diffused to create an immersive sound environment; Katie Paterson’s *Vatnajökull (the sound of)* (2007/8), in which a phone line connected callers to a microphone buried in an Icelandic glacier, and her related work *Langjökull, Snæfellsjökull, Solheimajökull* (2007), in which recordings of the melting sounds of three glaciers were pressed onto records made from their own refrozen meltwater, and played until they melted; and Graciela Muñoz Farida’s *El Sonido Recobrado* (‘Sound Recovered’) (2014), which took recordings of the Baker, Chile’s largest and most powerful river and one of many in danger of being illegally dammed and drained by hydroelectric companies, and played them back over speakers set in the dry bed of the Petorca, a river which suffered a similar fate in the 1990s.

Articulating the Harmonious Coexistence of Humans, Technology, and the Natural World

Other works use sound as a medium for the investigation and articulation of ways in which human beings and our technologies can coexist harmoniously with the rest of the natural world. This includes works such as David Monacchi’s *Integrated Ecosystem* (2009), composed from field recordings from areas of primary equatorial rainforest, and which uses a projected spectrogram analysis to demonstrate Bernie Krause’s Acoustic Niche Hypothesis, which Monacchi enacts by confining his own improvised electronic part to the remaining available acoustic niches; the numerous electronic compositions which comprise Walter Branchi’s *Intero* (‘Whole’) (1979-present), which he describes as ‘integrated’ or ‘eco-’ music, and which are designed to integrate with the soundscapes of specific environmental locations in order to nurture the listener’s sense of embeddedness within the network of interdependent relationships in the environment; and David Dunn’s works, such as *Entrainments 1* (1984), *Sonic Mirror* (1986-7), and *Autonomous Systems* (2003-5), in which automated electronic systems create sonic feedback loops shaped by the interaction between the technological system and the living ecosystem.

Allowing us to Experience Normally Inaccessible Aspects of the Environment

Ecological sound art can also allow audiences to experience aspects of the environment they would not normally have access to. Some works which do this include David Dunn's *The Sound of Light in Trees* (2006), which highlights the pine bark beetle's decimation of piñon pines in New Mexico by allowing us to hear the destruction going on inside the trees; Jana Winderen's works, which provide a sonic window into underwater ecosystems, such as in her recent project *Silencing of the Reefs*, which explores the changing soundscapes of the earth's remaining coral reefs and how they are being negatively impacted by human actions; and Holly Owen and Kristina Pulejkova's film *Switching Heads – Sound Mapping the Arctic* (2015), shown at the COP21 climate summit in Paris, in which an ice sculpture of a human head with binaural microphones planted in its ears bears witness to the ways in which climate change is affecting the Norwegian island of Tromsø, bringing a tangible and experiential dimension to the issues being discussed in theoretical terms at the summit.

Communicating Environmental Data Through Sound

Some ecological sound works utilise sonification as a means to achieve an experiential understanding of ecological dynamics and processes. Such works include Andrea Polli's *Heat and the Heartbeat of the City* (2004), based on sonifications of projected temperature increases in Central Park caused by global warming, and her *Sonic Antarctica* (2009), which utilises sonifications of data concerning climate change at the Antarctic; John Luther Adams' *The Place Where You Go To Listen* (2004-6), a sound and light installation involving the real-time sonification of geophysical and climatological data from the surrounding Alaskan ecosystem; and Matthew Burtner's many 'ecoacoustic' works, such as *Auksalaq* (2012), a multimedia 'opera' which sonifies the effects of climate change in a number of different ways.

Facilitating Community Engagement with Ecological Issues

Finally, some works of ecological sound art move beyond the one-way 'artist-to-audience' dynamic to engage communities as active participants and collaborators, facilitating a direct and personal engagement with the environmental issues that most affect them. Leah Barclay has realised many such projects, including *The Dam(n) Project*, which saw Barclay working with communities in India's Narmada valley, using sound art as an activist tool to respond to the destructive damming projects which threaten their water supplies; *Sonic Explorers*, which engages young people in ecological sound art; and *Biosphere Soundscapes*, which uses sound as a means of understanding the environmental health of UNESCO biosphere reserves.

The Ecological Agency of Sound Art

The five approaches outlined above serve to demonstrate just a few of the ways in which ecological sound art is helping audiences to engage with contemporary environmental issues. However, it still remains to address perhaps the most vital question of all: that of whether ecological sound art can be regarded as a significant and effective means of approaching today's urgent environmental issues. To answer this question, the final section of this paper will draw from three key works of contemporary ecological theory, examining the parallels that exist between the new modes of thought they propose and the ways in which we experience sound art, and which reveal it to be a uniquely and inherently ecological medium.

The Ecological Thought: Sensing the Mesh of Vibrant Matter

One of the fundamental pillars of contemporary ecological theory is the principle of interconnectedness between the different elements within the earth's ecosystems, our understanding of which Timothy Morton describes, in his book of the same name, as 'the ecological thought.'. Morton uses the term 'the mesh' to describe the network of interconnections between everything, noting that "[t]he mesh of interconnected things is vast,...Nothing exists all by itself, and so nothing is fully 'itself'," [5] and that "each being in the mesh interacts with others. The mesh isn't static. We can't rigidly specify anything as irrelevant." [6]

In *The Spell of the Sensuous*, David Abram states that the only way to truly internalise this principle of ecological interconnectedness is through the cultivation of our sensorial perception of the world around us, since to do so is to "enter into a sympathetic relation with the perceived... Perception, in this sense, is an attunement or synchronisation between my own rhythms and the rhythms of the things themselves, their own tones and textures." [7] Becoming sensorially attuned to the world in this way, argues Abram, will result in an embodied understanding of our place within the earth's biosphere:

As we return to our senses, we gradually discover our sensory perceptions to be simply our part of a vast, interpenetrating webwork of perceptions and sensations borne by countless other bodies... It is, indeed, nothing other than the biosphere – the matrix of earthly life in which we ourselves are embedded. Yet this is not the biosphere as it is conceived by an abstract and objectifying science... it is, rather, the biosphere as it is experienced and *lived from within* by the intelligent body – by the attentive human animal who is entirely a part of the world that he, or she, experiences. [8]

In *Vibrant Matter*, Jane Bennett argues that it is our failure to acknowledge the vitality and power of nonhuman matter which "feeds human hubris and our earth-destroying fantasies of conquest and consumption... preventing us from detecting (seeing, hearing, smelling, tasting, feeling) a fuller range of the nonhuman powers circulating around and within our bodies... [and impeding] the emergence of more

ecological and more materially sustainable modes of production and consumption.” [9] Like Abram, Bennett advocates “a cultivated, patient, sensory attentiveness to nonhuman forces” [10] as the key to enhancing our perception of their agency, arguing that “[s]uch a newfound attentiveness to matter and its powers...can inspire a greater sense of the extent to which all bodies are kin in the sense of inextricably enmeshed in a dense network of relations.” [11]

Sensing Ecological Relationships Through Sound

Sound’s unique ability to reveal the network of dynamic relationships that exists between things in the world is, of course, a fundamental pillar of acoustic ecology: in *Acoustic Communication*, Barry Truax states that “[l]istening is the primary interface between the individual and the environment,” and that “the interlocking behavior of sound, the listener, and the environment [is understood as] as a *system* of relationships, not as isolated entities...With sound, everything interacts with everything else.” [12] More recently, in *Sonic Possible Worlds*, Salomé Voegelin notes that “[s]ound is the invisible layer of the world that shows its relationships, actions, and dynamics...[and] augments, expands and critically evaluates how we see the world and how we arrange ourselves to live in it.” [13]

In *The Tone of our Times*, Frances Dyson argues that only a new sensibility, grounded in the direct sensing of the dynamic, vibrant world around us, can hope to furnish us with the true ‘common sense’ which is the necessary foundation for a heightened ecological consciousness:

What this implies is a need to understand, to sense, and to form common sense differently - not through discourse or information, no matter how compelling, but through sensing; and this is where sound and listening play a pivotal role...Sound’s ephemeral and atmospheric nature is, like the environment, something that circulates outside of exchange, and refocuses attention on the space and the environment of the subject rather than the subject per se...[that] offers some entry into the dilemma of how to hear the world and in hearing, also be able to act, with the aim and existential condition of the ‘in-common’. [14]

Turning to ecomusicology, we find many parallels in its statements on the ecological value of listening to music, which are equally applicable to sound art: in *Music and the Skilful Listener*, Denise Von Glahn argues that the fact that sound “surrounds us and enfolds us in space simulates our relationship within the all-embracing natural world,” [15] and observes that the act of listening encourages a particular mode of being in the world based on “growing into an environment rather than insisting upon reshaping it” [16]; while in *The Jukebox in the Garden*, David Ingram explores the notion of ‘eco-listening, which holds that “the sense of hearing overcomes the limitations of sight by enacting the fundamental ecological principle of holistic interconnectedness,” (Ingram 2010: 59) and concludes

that “music is the art form best suited to fostering the ecological self...[since] the sense of hearing overcomes the limitations of sight by enacting the fundamental ecological principle of holistic interconnectedness.” [17]

Sonic Possible Worlds

To move towards genuine and lasting ecological change, however, requires not just the attainment of more ecological ways of thinking and being in the present, but that we are able to conceive of alternative futures: to re-imagine how things could be. In *Eco-Aesthetics*, Malcolm Miles states that “art inflects life, just as life inflects art. Representations of ideas establish them,” [18] and reflects “[p]erhaps I *am* lost in a dreamworld if I imagine a postcapitalist, environmentally just and sustainably joyful society, yet unless I can imagine it I have no way to contribute to it...art...is an imaginative as well as an interruptive project, requiring a re-visioning of the world’s value structures.” [19]

The power of sound art to realise such a re-visioning – or, perhaps more correctly, a *re-listening* – of the world is, Salomé Voegelin argues, the key to its immense potential for socio-political agency: she states that to experience a sound work is to become submerged in a ‘sonic possible world’, which “allows us to challenge the singularity of actuality and articulate a different sense of place and a different sense of self that lives in those possibilities and shows us how else things could be.” [20] Furthermore, when we emerge from this possible world, we do not do so into the world we previously inhabited, but into “a different actuality linked to and infected by new possibilities.” [21] For Voegelin, this has “not only an aesthetic but also a social and political significance in that it has an impact on ideas about what the world and what the subject is presumed to be and what else they could be.” [22] Thus to listen to a sound work is to create not only a new possible world, but a new possible listener with a renewed relationship with the world that is inherently ecological; as Voegelin explains, “the listening subject inhabiting the sensorial sense of the work is not a humanist subject but a post-humanist subject who lives in equivalence and reciprocity with her environment and understands her role as one of responsibility instead of superiority.” [23]

Sound art is thus revealed as an inherently ecological medium which embodies and ties together the fundamental principles of contemporary ecological theory outlined by Morton, Abram, and Bennett: providing a sensuous experience of the interconnectedness of our own agency with the agency of vibrant matter, as part of the dynamic and shifting mesh of the earth’s ecosystem.

Conclusion

In recent years it has become inarguable that the serious environmental crises we face require urgent action on an unprecedented scale; however, as Naomi Klein points out, “[f]aced with a crisis that threatens our survival as a species, our entire culture is continuing to do the very thing that caused the crisis, only with an extra dose of elbow grease behind it.” [24] Given this situation, perhaps

the most critical question of all is how we might begin to reimagine our relationship to these environmental crises in order to overcome this state of fatal inaction: as Bill McKibben notes, “[w]e can register what is happening with satellites and scientific instruments, but can we register it in our imaginations, the most sensitive of all our devices?” [25]

In recent years, an increasing number of artists have been using sound as a medium to help us to do exactly that. I have argued that this growing area of sound arts practice must be recognised as a significant contemporary movement in its own right if it is to be afforded the same recognition as that currently enjoyed by comparable ecological movements in other art forms; I have outlined some of the core approaches that characterise this movement; and argued that, following the precedent set within the visual arts, it should be distinguished by the terminology ‘ecological sound art’. The importance of doing this is further highlighted when we recognise that the fundamental characteristics of how we experience and relate to sound art directly embody the new modes of thought proposed by some of today’s leading ecological theorists, revealing it to be a uniquely and inherently ecological medium which, in the words of David Dunn, might perhaps serve as “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...[and which might] provide us with clues to our future survival – and that is a responsibility worth pursuing.” [26]

References

- [1] McKibben, B. (2005). *What the Warming World Needs Now is Art, Sweet Art*. Retrieved from <http://grist.org/article/mckibben-imagine/>, accessed 14 March 2015.
- [2] McKibben, B. (2009). *Four Years After my Pleading Essay, Climate Art is Hot*. Retrieved from <http://grist.org/article/2009-08-05-essay-climate-art-update-bill-mckibben/>, accessed 14 March 2015.
- [3] Ear to the Earth. (2011). Ear to the Earth is a global community of environmental sound artists responding to climate change. Retrieved from <http://twitter.com/ear2earth>, accessed 14 December 2015.
- [4] Burtner, M. (2011). EcoSono: Adventures in Interactive Ecoacoustics in the World. *Organised Sound* 16(3), 234.
- [5] Morton, T. (2010). *The Ecological Thought*. Cambridge, MA: Harvard University Press, 15.
- [6] Morton [5] 29-30.
- [7] Abram, D. (1996). *The Spell of the Sensuous*. New York, NY: Vintage Books, 54.
- [8] Abram [7] 65.
- [9] Bennett, J. (2010). *Vibrant Matter: A Political Ecology of Things*. Durham, NC: Duke University Press, vii-ix.
- [10] Bennett [9] xiv.
- [11] Bennett [9] 13.
- [12] Truax, B. (2001). *Acoustic Communication*. New York, NY: Ablex Publishing, xviii-xix.
- [13] Voegelin, S. (2014). *Sonic Possible Worlds: Hearing the Continuum of Sound*. London: Bloomsbury, 2.
- [14] Dyson, F. (2014). *The Tone of our Times: Sound, Sense, Economy, and Ecology*. Cambridge, MA: The MIT Press, 149.
- [15] Von Glahn, D. (2013). *Music and the Skillful Listener: American Women Compose the Natural World*. Bloomington, IN: Indiana University Press, 6-7.
- [16] Von Glahn [15], 322.
- [17] Ingram, D. (2010). *The Jukebox in the Garden: Ecocriticism and Popular Music Since 1960*. Amsterdam: Rodopi, 59.
- [18] Miles, M. (2014). *Eco-Aesthetics: Art, Literature and Architecture in a Period of Climate Change*. London: Bloomsbury Academic, 11.
- [19] Miles [18] 29-30.
- [20] Voegelin [13] 22.
- [21] Voegelin [13] 31.
- [22] Voegelin [13] 2-3.
- [23] Voegelin [13] 141.
- [24] Klein, N. (2014). *This Changes Everything: Capitalism vs. The Climate*. New York, NY: Simon and Schuster, 2.
- [25] McKibben [1].
- [26] Dunn, D. (2009). Nature, Sound Art, and the Sacred. In D. Rothenberg and M. Ulvaeus (eds.) *The Book of Music and Nature*, 2nd edition. Middletown, CT: Wesleyan University Press, 97.