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The Materiality of Water

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Abstract: Recordings of water have been an important focus for composers and sound and video artists. Works by Wendy Carlos (*Sonic Seasonings*), Jane Grant (*Fathom*), Annea Lockwood (*World Rhythms, A Sound Map of the Danube*), Hildegard Westerkamp (*Talking Rain*), Frances White (*Walk Through Resonant Landscape*), Jana Winderen (*Surface Runoff, Evaporation, Aquaculture*), and video works by Véréna Paravel (*Leviathan*), Pipilotti Rist (*Pickelporno, Supersubjektiv, Rain Woman*) feature the sounds of water as prominent sonic components. Whether similar qualitatively, water sounds have also preoccupied male composers from John Cage to Chris Watson. It's likely that there are acoustic features developed in these compositions that constitute a kind of listening that is different from what is experienced through other compositional approaches. This retrieval of frequently unmanipulated natural sounds accommodates what is offered up by one's environment and implies an ecology of matter distinct from other experimental sound practices. Luce Irigaray's concept of liquidity as a condition of movement and equivocation in 'The Mechanics of Fluids' has been cited to articulate a feminist dimension to Rist's videos, yet what other kinds of materialities are delineated by artists having recourse to an acoustics of fluids? If characterizing these as gendered soundscapes over-essentializes the work and restricts women's participation in sound production, what draws these respective composers to the properties of water's materiality as these are accessed by its sound?

I'm struck by the number of recent works, many by women composers, focusing on water for its sound quality and its function in local ecosystems. What are these about and do they achieve anything? What was happening when their source material was recorded and what is happening now that the sound of water is a digital file. At its source, recordings of water are vital parts of an ecosystem, but are these relationships still apparent as the sound is processed

all the way through to its point of consumption as a CD or download? What ecosystem does the recorded sound belong to now and does it have anything to do with the ecosystem of the locality where it originated?

I'll be discussing composers Annea Lockwood, Hildegard Westerkamp, and Jana Winderen. These composers make soundscapes, a term whose application may have since broadened beyond functionality, but was first associated with the World Soundscape Project, started by R. Murray Schafer in the early 70s alongside other Vancouver composers, including Westerkamp. In 2002, Westerkamp tried to instil meaning into this term by defining it as 'the study of the inter-relationship between sound, nature, and society', where '...its essence is the artistic, sonic transmission of meanings about place, time, environment, and listening perception.'

Conceptual structures recur in ecological thought. Westerkamp's interrelationship of sound, nature, and society corresponds to Jane Bennett's appeal for greater *horizontality* in the relationships between us and things so as to prompt environmental awareness, and in Felix Guattari's insistence on transversal thinking to critically interconnect divergent ecosystems—algae in the Venice lagoon with cultural pollution on TV, for example. But how operative are these concepts when describing relations between humans and non-human entities like water, and how do they affect the sound compositions discussed here?

In solving environmental conflicts, horizontality should draw all affected constituencies towards negotiations on an equal level. With water provision and logging issues, for example, granting similar negotiating rights to powerful and disenfranchised partners alike can help avert years of conflict. Typically however, confrontations have arisen because inter-relational thinking has been precluded from the start by policies insensitive to local history and ecosystem. Fierce populist opposition against water provision contracts awarded to foreign companies has been provoked by neoliberal policies allowing dispossession of public assets. One of the most successful such oppositions occurred in 2000 in Cochabamba, Bolivia, when a well-organized mass uprising regained public ownership of supply and effected the expulsion of contractor International Water. Such outcomes rarely occur because, as Erik Swyngedouw remarks, 'Water embodies, simultaneously and inseparably, bio-chemical and physical properties, socio-economic and political characteristics, and cultural and symbolic meanings. These multiple metabolisms of water are structured and organized through relations of power, that is, relations of domination and subordination, of access and exclusion, of emancipation and repression.'¹

The sound compositions under discussion here try to cut through such hierarchically oppressive relations transversally by modifying field recordings to reveal complex ecosystems in which human impact is embedded. Lockwood intersperses interviews with Danube residents between sounds of the river, while Westerkamp includes the distant sound of a chainsaw in one forest composition. Less instrumentally, these aqueous soundscapes reveal tempo-

ralities of endurance within ecosystems that oppose the short term thinking of much natural resource exploitation. There's thus some connection here to Virginia Woolf's *The Waves*, which employs descriptions of sea sounds to slow down time to the point where its movement is felt as repetitive, like the waves crashing onto a beach. Each of ten interludes describes sonically the movement of the sea: '... the concussion of the waves breaking fell with muffled thuds'... and so on. With a material detail in excess of normal human perception, these scenes are written as if a non-human animal's consciousness is surveying a post-human environment.

As attempts at grasping the non-human through human practices and thought, these recordings might be on the edge of creative ecological practices, able, as Guattari wrote, 'to forge new paradigms that are instead ethico-aesthetic in inspiration'.² Perhaps this is the case with Winderen who uses ultrasound recordings to capture the sounds of ice cracking, the sonic communications of fish, or the noise of water as boaters move across a pond's surface. Bennett hopes that 'This sense of a strange and incomplete commonality with the outside may induce vital materialists to treat non-humans—animals, plants, earth, even artifacts and commodities—more carefully, more strategically, more ecologically', but what kind of recordings do these need to be to ensure this happens?³

Composers themselves raise concerns about the outcome of soundscape recordings of non-human life. Drawing on Susan Sontag's proviso that photography allow its subject to remain 'in itself', Frances White asks whether listeners' engagement with the world would be more attentive if sounds were left much as they were found. White's invitation to respect borrowed source material is one model for an ecology of sound. She discourages borrowing from exotic cultures that wrench sound from its context, as Stockhausen's *Telemusik* does, but she sanctions sampling one's own culture, provided its original form remains audible, like Luc Ferrari's *Presque Rien*. White is less comfortable with recordings of sounds generated by entities that we did not create, since their character is ultimately unencompassable.

'They do not owe any human being for their existence', she says, 'but are in many ways completely foreign to us, and to any aesthetic designs we might have on them... they have an identity and character independent of human interpretations of them, and that in some ways they are forever unknowable to us.'⁴

By contrast, this unknowability stimulates Winderen whose marine biology background provides her with a different threshold of accounting for sounds retrieved from the water. She is more accepting of separation and classification, determined, for example, to identify courtship sounds produced by the bladder of male cod, or the croaking of shoals of hunting pollock. With similar conviction to biologists who are convinced that cures for disease are disappearing with the felling of rainforest, Winderen believes that the ocean's

sonic environment, developed by marine animals over millennia and suffering itself from sound pollution, holds vast potential for human cognition. She also feels it is important to modify her source material both for dramaturgic effect, as she puts it, and for a richer, more audibly layered sound. In a 2011 talk, Winderen explained,

‘I’m not just using the recordings as they are... I always work on three levels, where I have first the atmosphere of the place, ... this whole kind of open space. And then the second level where I’m going closer to the habitat of the area... And then the detailed sounds that will be more like the individual fish... And that layer I very often leave... much as it is, though it needs to be tidied...’⁵

Although Winderen freely identifies the source of her recorded sounds in her talks, she resists this in her recordings where she says it would impede the listener’s experience of the soundscape environment she has formed.

Westerkamp finds such approaches troubling. In her 1998 article ‘Speaking From Inside The Soundscape’, she requests composers to connect their finished sound products to sound ecological practices. She asks,

‘How do we avoid the very real danger of simply creating yet another product, a CD with yet more amazing sounds? Let’s be clear that when we hear animal sounds from, say, the Amazon on a CD, we are listening to sounds that have been frozen into a repetitive format and medium and have been imported into our soundscape... We must ask whether we... bring our listeners closer to a place or situation or whether we are... inadvertently assisting in the place’s extinction.’⁶

These differences are hard to reconcile. White requests an ecological moratorium on invasive sounds from other cultures with the expectation that any sampled sounds remain unmodified; Westerkamp requires a finished composition’s explicit accountability to the ecosystem where its sounds originated; while Winderen doesn’t sense this alienation between her sounds sourced from the most diverse locations—Greenland, Thailand, Korea—and their amalgamation into gallery-based immersive acoustic installations or distribution on CD or vinyl.

Let’s consider one work in detail to see if any clarity can be found amongst these divergent positions. Westerkamp’s seventeen-minute long composition *Beneath the Forest Floor*, from 1992, is exceptionally thick with timbres, as its intermittent churning bass pulse, made by slowing down a raven’s call, feels more like black metal than experimental sound. The piece has been extensively modeled in the studio post-recording to better approximate the experience of being immersed in the forest, where its sound components originate. Westerkamp justifies working with the material this way given the microphone’s limitations in comparison to an actual listening experience.

‘Processing recorded sound later in the studio’, Westerkamp writes, ‘...is perhaps the technological equivalent to our ear’s selective capacity. That is, our aural perception of the soundscape and our experience of it can potentially be built into our compositions by virtue of the available sound processing tools.’⁷

A section in Westerkamp’s MA thesis (she graduated as a mature student from University of British Columbia in 1988) anticipates the experience of *Beneath the Forest Floor* made only a few years later. She mentions listening in a ‘Hi-Fi Soundscape’, a term Schafer used to designate an environment so quiet that even the slightest sounds remained identifiable. She quotes the early 20th-century Canadian painter Emily Carr, who wrote,

‘The silence of our Western forests was so profound that our ears could scarcely comprehend it. If you spoke your voice came back to you as your face is thrown back to you in a mirror. It seemed as if the forest were so full of silence that there was no room for sounds.’⁸

This may feel at odds with a piece that is quite noisy, but it helps to grasp what Westerkamp meant in her thesis by the desire to listen. ‘The hi-fi environment’, she writes ‘creates a desire in us to use our ears in an active way. It is the desire to connect to the place we are in that motivates us to listen. We desire to “be of that place”, to interact with it.’⁹

How successfully does this recording engage us with the ecosystem of its source? Does it stimulate a stronger identification with the need to minimize human impact on the environment? Westerkamp’s *Beneath the Forest Floor* was recorded in Vancouver Island’s Carmanah Valley forest, a resource she desperately wanted protected. The piece should be understood in the context of the Clayoquot Sound protests over unregulated logging of old-growth forests that began in 1979 and they intensified in 1993 as the island’s First Nations residents, local environmentalists, and Greenpeace activists got involved. The arrest and prosecution in 1993 of 800 out of some 10,000 demonstrators exposed the unusually close relations between the British Columbia administration and logging companies. An international boycott of British Columbia lumber ensued and by 1995 the government’s forestry and environment ministers agreed to recommendations that greatly restricted logging in the area.

Interestingly, Westerkamp introduces the idea of balancing what is heard from the environment with what is heard from the noise we ourselves make in that place. Our noise adds to the acoustic delineation of the location and it is our responsibility to maintain the balance between the sounds we bring to the place with those we receive there. In *Beneath the Forest Floor*, noises added by Westerkamp to those recorded on location must be taken as a model for responsible comportment in the Carmanah Valley, a plea by sonic example for the logging companies to desist. Though it took several more years, the British Columbia administration eventually resolved the twenty-year logging

conflict by allowing disempowered stakeholders a decision-making role. In a sense rival parties were persuaded to listen to noises in the forest, including their own, that they had not heard up to that point.

Virginia Woolf's water-time motif from *The Waves* returns in Westerkamp's forest piece where the sound of water is taken as a geo-biological timepiece, measuring time in the way it forms the landscape, bringing life to its vegetation, its acoustics mocking attempts to use the forest's resources for short term gain. The microcosmic motif Woolf interjects in the temporalities of her six characters is the water drop—'a drop has fallen; another drop. Time has given the arrangement another shake.' The paradox of scale is telling. Momentous changes in human lives are marked off indifferently by drops of water, by the age of the old-growth trees, by the depth of silence in the forest.

Swyngedouw and other ecology researchers envisage overlapping sectors of interest—constellations, assemblages, or networks—as the most effective way to understand the complexities of water. Such networks should extend to political histories of the locality and to the impact of pollution or exploitation of water. In relation to these, Lockwood's *A Sound Map of the Danube* shows water as having its own needs, its own agency, and its histories, all of which must be understood and cared for along its path by the ecosystem's other participants. In this way, Lockwood fulfils what geographer Karen Bakker asks of researchers who, in trying to indicate how the behaviour of water impacts our social relations, should show what it does to people's lives.¹⁰

In *A Sound Map of the Danube*, which Lockwood finished in 2005, short interviews of people living and working on the river intersperse longer recordings of water. In this way Lockwood documents the sense of place created by the experience of water in the lives of people inhabiting the river region. I take the meaning of 'sense of place' in the manner intended by Arne Naess, the Norwegian philosopher who contributed to the concepts of the deep ecology movement and built, as his 'place', a wood cabin located perilously far above the tree line of Hallingskarvet mountain, in a location everyone else considered uninhabitable. Such a place gave, Naess wrote,

'[the] capacity to furnish the basis of a life of simplicity of means and richness of ends', and invited the questions 'What would the place require of me? What kind of lifestyle, activities, and ceremonies would be appropriate for this place? What would be a life worthy of Hallingskarvet and in solidarity with, and respect for, the other life-forms?'¹¹

Lockwood's Danube work is particularly valuable for repeatedly asking the same question of herself and those she meets—'What is your relationship with the river?' Bulgarian Vania Hinkova answers

‘... the river is the one thing which keeps me attached to this city, to this land... When I am sad, I go to the river and cry. I tell it all my pain and troubles and I think it understands me, and it’s sad with me, and I feel so calm and good... when I die I want my ashes to be spread over the river... That’s the way to be forever with this town and this river.’¹²

In a world of increasingly precarious ecosystems, this work of Lockwood’s turns to water as if proposing how subjectivities might open onto the non-human and initiate a collective identification with, and absorption into, its materiality—an action that Guattari at one point calls ‘heterogenesis’ and ‘a praxic opening-out’, the expression of desire and self-transformation in relation to one’s environment, so well-articulated by Lockwood’s interviewees.¹³

The Danube recordings are one of three river works so far completed by Lockwood. They form part of the ongoing enquiry that for Lockwood concerns ‘... the special state of mind and body which the sounds of moving water create when one listens intently to the complex mesh of rhythms and pitches’.¹⁴ Lockwood doesn’t process her recorded material much at all. Some of the reasons for this restraint become clearer from Tara Rogers’ interview in *Pink Noises* where Lockwood speaks of her unease in the 1960s at the lifelessness of the electronic sounds she had been assembling.

‘So then I had to ask myself what, for me, constitutes life in a sound?... I won’t know until I focus on sounds which satisfy me and then figure out what satisfies me about them... water was one of the most interesting... because I never yet feel that I can hear every last component of any one stretch of water sound and hold it all together in my mind.’¹⁵

Lockwood seems to say that the more sound is processed, the more the life of the primary recorded sound recedes.

For his conception of a ‘mental ecology’ Guattari drew extensively on Gregory Bateson’s essays and talks from 1969-70. Bateson’s tendency towards a populist turn of phrase at least gave his research some reach. His formulation ‘The creature that wins against its environment destroys itself’ neatly inverts Prometheanism to show us embedded in environments we need to protect, an implication Arthur Tansley first made in 1935 when he introduced the term ‘ecosystem’ into biology.

In ways distinct from each other, these composers generate sound maps revealing the condition of ecosystems at a particular instant. There are significant geocultural and generational differences underlying their achievements. Lockwood left New Zealand in the 60s for experimental music circles in London and New York, only to pioneer her own practice of environmental sound-work. In the 70s Westerkamp emerged from the hermeticism of fiercely independent Vancouver artist-led initiatives to craft her own remarkable voice and sound ecology out from under the leadership of Murray Schafer and Barry

Truax of the World Soundscape Project. Winderen indicates that prospects are changing for composers of radical acoustic work, for she is part of a younger group of sound artists taken up by international biennale circuits and art sponsors. Perhaps Winderen's globalized recording schedule and her polished Bandcamp site with self-marketed downloads are inevitable propellants for this kind of career in sound. It's worth reflecting on whether this is also a factor in the apparent rootlessness of Winderen's soundworks, in the way they float free of explicit connection to location when compared to the specificity of Westerkamp's and Lockwood's recordings.

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NOTES

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| 1. Swyngedouw 2002. | 8. Westerkamp 1988, 8. |
| 2. Guattari 2000, 37. | 9. Westerkamp 1988, 15. |
| 3. Bennett 2010, 17-18. | 10. Bakker 2012. |
| 4. White 1990. | 11. Naess 2008, 54 and 56. |
| 5. Winderen 2011. | 12. Lockwood 2008. |
| 6. Westerkamp 1998. | 13. Guattari 2000, 53. |
| 7. Westerkamp 2002. | 14. Lockwood 1989. |
| | 15. Rogers 2010, 117-118. |

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