

“When it Comes, the Landscape Listens” – Listening as Place Through Binaural Sound

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ABSTRACT: In this paper I will argue that despite the numerous challenges it poses, anthropomorphism is a viable means by which to empathise with place without resorting to a wholly homocentric perception of it. Beginning with a discussion of the principal motivations for anthropomorphism and its aforementioned criticism, I will then make suggestions as to how binaural sound can enable a merging of self and place. Holly Owen and Kristina Pulejkova’s film *Fram* (2015) is discussed as an example of an artwork that facilitates such a merging through its use of an anthropomorphised snow head to record the testaments of individuals living in areas most susceptible to climate change. The latter half of the paper discusses the practicalities of fostering placial empathy through binaural sound, making specific reference to my own project *If Walls Could Hear* (2014–) and the challenges it face by trying to give the city of Liverpool a pair of ears. It concludes by asserting that although the act of listening as place is difficult to facilitate, binaural sound possesses the capacity for us to listen *with* it.

KEYWORDS: binaural, anthropomorphism, art, place.

1. The 'more-than-human'

When it comes the landscape listens, Shadows hold their breath.

(Dickinson, 2016, 39)

Emily Dickinson's poem *There's a Certain Slant of Light* (1861) presents a dialectical relationship between place and our inner selves, culminating with a description of the landscape possessing the capacity to listen intently. Writing in first person plural, Dickinson troubles the romantic gaze of the individual self in relation to landscape, gesturing instead towards a sense of merging of them that manifests just before it tragically ends. It reflects the aim of this paper, in which I will argue that despite the numerous challenges it poses, anthropomorphism is a viable means for artists to encourage empathy with place. Binaural sound in particular possesses the capacity to sidestep some of the homocentric trappings of anthropomorphism by affecting a sense of merging between self and place that is 'more-than-human' (Woynarski 2015, 24).

Beginning with a discussion of some of the principal motivations for anthropomorphism and its aforementioned criticism, I will cite some of the artists and performance makers who defend its utilisation. This recognition of the human will then lead to an examination of binaural sound recording and its ability to map the sonic imprint or 'spectral watermark' of a recordist onto a listener (Barnard 2010, 39). The latter half of the paper discusses the practicalities of fostering placial empathy through this recording technology and its use by non-human recordists. Specific reference is made to Holly Owen and Kristina Pulejkova's film *Fram* (2015) and my own project *If Walls Could Here* (2014-)¹. The paper concludes by asserting that although the act of listening as place is difficult to facilitate, binaural sound possesses the capacity for us to listen through it.

Anthropomorphic observation broadly concerns our ability to infer human qualities in the nonhuman. Animals, spiritual deities and even technologies continue to be ascribed human characteristics whether fleetingly or enduringly. According to an often cited survey of the field conducted by Nicholas Epley, Adam Waytz and John T. Cacioppo (2007), our ability to anthropomorphise begins primarily during childhood as a desire to understand the world around us. The motivation for this is initially egocentric (in which we look for the characteristics that remind us of ourselves), but eventually becomes more homocentric (as we accrue knowledge of and experiences with other human beings). As adults, instances that prompt us to lapse into anthropomorphisms occur when our immediate environment does something out of the ordinary and we try to reason with it as if it were a human being (ibid 873). Crucially though, our tendency to anthropomorphise increases when we feel

1. www.ifwallscouldhear.wordpress.com

we lack the capacity to socially connect with others of our own species, prompting us to humanise nonhuman alternatives (ibid 866). As will be discussed later, this need for human interaction could be one of the principal triggers for the utilisation of anthropomorphism in art works that seek to draw attention to ecological threats.

Anthropomorphism's inherent emphasis on subjectivity has invariably courted major criticism, particularly within animal behaviour studies. Georgette Leah Burns (2014), a scholar of Wildlife and Habitat Management, presents an informed discussion of the varying merits and limitations of anthropomorphism with specific reference to the study of animals. Burns suggests that whilst it allows humans to perceive access to the thoughts and feelings of the non-human, these are obviously only interpreted from a human perspective (7).

This argument is a common one, demonstrating how anthropomorphism runs the risk of becoming selective empathy, in which we choose to identify only with the perceived human qualities of a non-human agent.

However, in recent years a growing defence is mounting for a more considered usage of anthropomorphism, particularly in the wake of anthropogenic climate change. In *Vibrant Matter: A political ecology of things* (2010), Jane Bennett, chiming with philosopher Bruno Latour, argues that maybe 'it is worth running the risks associated with anthropomorphising [...] because it oddly enough, works against anthropocentrism' (cited in Woynarski 2015, 28). Bennett describes this relationship between human and non-human as a 'cord' which has the potential to dissolve the binary. This leads to a recognition of what ecodramaturg and performance maker Lisa Woynarski refers to as the 'more-than-human' (2015, 24) – a term borrowed from David Abram's *The Spell of the Sensuous* (1997). What is particularly affecting about a 'more-than-human' perspective is that it does not prioritise our species over landscape nor does it delineate between them. Establishing this though is difficult due to the series of tensions between humanity and the landscape as observed by cultural geographer John Wylie (2009, 278). Yet Wylie, echoing the same paradox recognised by Bennett, describes an overcoming of this divide, which can lead to 'a sort of sublimely de-personalising tuning-into or becoming-with: phenomenal coincidence of self and landscape' (2009, 278). This would seem to suggest that the aforementioned perceived merging of self and place is one based on a chance synchronisation, in which the former momentarily overlooks themselves in a bid to 'become-with'.

Wylie is conscious of the emphasis on 'looking' within landscape studies, and this has been reflected also in the work of many artists interested in global ecological issues. Malcolm Miles (2010) argues that the emphasis on image in some art works can undercut their own intention by creating a 'gap between consumption of the spectacle and the step to personal action' by their audience (31). Rather than creating a merging of the two, such works 'capture' their audience, in which, for example, 'disintegrating ice becomes as beautiful as suffering in Renaissance paintings of martyrdom' (ibid, 32). The natural is framed as spectacle, and

Miles argues that art must go beyond the depictions of nature in mass media and change the conditions in which it is produced (ibid, 24).

One alternative form of production lies in the expanding field of ecomusicology, which ‘focuses on the ways in which music and sound can reflect, confront and affect ecological issues’ (Pezanoski–Browne 2015, 9). In “The Tragic Art of Eco–Sound” (2015) Alison Pezanoski–Browne discusses Jana Winderen’s *Silencing of the Reefs*, which draws attention to the hidden sounds of this underwater environment which are ‘usually imperceptible to human hearing’ (11). For Pezanoski–Browne, Winderen ‘adopts a decidedly non–human–centric perspective’ which ‘allows listeners to perceive tragic environmental loss from the imagined vantage point of sea creatures’ (ibid 12). The selection and editing of the subsequent recordings evidences that the ‘human perspective’ Leigh Burns refers to will always be present. However, it is Winderen’s capturing of the invisible, of something impossible for humans to hear and experience without these recording technologies that invariably dehumanises them. The emphasis in these recordings is not so much on how Winderen interprets this landscape but on how our own landscape can be interpreted from a non–human perspective. It is this ‘imagined vantage point’ that I will now address with specific reference to binaural sound.

2. Intimate Distance

Binaural sound enables a listener wearing headphones to be seemingly surrounded by the echoes of a recorded place from the past. Two microphones housed within the ears of a human or artificial head essentially humanise the sound, by offering ‘the listener the perspective of the performing artist, rather than the perspective of a detached audience or observer’ (Simpson 2017). The distance between these two microphones is particularly important, duplicating the interaural time difference (ITD) between our ears that enables us to locate ourselves in a place. However, it is not just the distance between our ears that helps humanise such a recording. Our ‘external ear, the pinna,’ contains distinct contours whose topography acts as a ‘spatial filter that changes the frequency content of sound depending on direction’ (Blessner and Salter 2009, 188). According to Barry Blessner and Linda–Ruth Salter (2009), it is the pinna that helps the listener to determine the orientation of sound in the median plane – ‘front, above, behind, or below’ (188). The differences between pinna sizes in the human population are quite noticeably large, meaning that replacing the ears of the recordist with an artificial pair can still create ‘significant auditory errors’ (ibid, 188). As will be discussed later with reference to my own ongoing project, such discrepancies are useful in cultivating a more–than–human perspective as it acknowledges just enough of the non–humanness of the recordist.

Matthew Barnard (2010) refers to this unique imprint that the recordist makes on a binaural recording as a ‘spectral watermark’ (39), implying that in addition to establishing

a sonic map of a place, binaural sound also presents a map of the recordist. In binaural recordings, the spectral watermark of the recordist acts as the foundation for the listener's construction of what educator and artist Peter Salvatore Petralia labels 'headspace' (2010, 97). It is a term in common usage, but here denotes the internalised architecture built by immersive audio performances which 'subvert physical space' (ibid, 97). Petralia insists that headspace is 'not merely imagination [...] but the kind of sight we have with our eyes closed' when the world bleeds in and mingles with an internalised sense of space (ibid, 97). In the same way we can infer unobservable human characteristics in the nonhuman, binaural recordings can enable us to perceive structures and spaces that hang only on a sound.

The two different places (the recorded and the present) have the capacity to coexist relatively comfortably, depending upon their degree of perceived temporal or geographic synchronicity. Dallas Simpson (2017), who has extensive experience as a binaural sound artist, suggests that the listener adopts either a detached or attached perception to such works depending on their attitude. I would argue that these respective perceptions are not fixed for the listener and that they oscillate between them. This 'attitude' of the listener that Simpson refers to echoes the sense of chance synchronicity discussed earlier in relation to the 'becoming-with' of human and landscape expressed by Wylie. The sense of immersion afforded by binaural recordings creates an attached perception, but the often inability of the listener to match what is heard with what is seen is what detaches them. Invariably then, the listening experience is not dominated by either of these two perceptions, and Simpson (2017) himself acknowledges that, through his work, he is 'striving to establish a complete artform'. It is in this incompleteness and the pleasing ambiguity garnered by binaural technologies that have made them a popular medium for artists, driven by 'romantic ideas about the intimacy of the individual and senses of place' (Emam 2013, 2).

A notable example of this with regards to fostering empathy with place is Holly Owen and Kristina Pulejkova's film *Fram*² (2015), which is the first in a series of films entitled *Switching Heads – Sound Mapping the [...]*. It was prompted by the artists' desire to 'go to the arctic before it melts' and bring back the sounds and sights of it to an urban audience (Owen and Pulejkova 2017). In the making of this film, they documented the perspectives of various individuals who live in places most susceptible to climate change. These responses and conversations were 'heard' by a snow sculpture of a head with binaural microphones in its ears. Named 'Geoffrey', this recordist acted as a voyeur, confidant, silent spectator and archivist and was made from the snow of the landscape in which he was recording (Owen and Pulejkova 2017). By relocating the microphones to a non-human recordist, the artists invert Simpson's definition of binaural sound by presenting 'the perspective of a detached audience or observer' (2017). Consequently, listening through the ears of Geoffrey is quite

2. Norwegian for 'forward'. It is named after a ship which explored both the Arctic and Antarctic in the late 1800s.

an eerie experience when juxtaposed with the film, as you try to ascertain the anthropomorphic hooks to humanise him whilst conscious of the inherent fragility within such a shared headspace. The anthropomorphic process is constantly suspended because one cannot ignore the slow melting away of Geoffrey's spectral watermark.

Owen reveals that the erosion of the recordist was intentional, as it draws attention to its own increasingly finite existence and subsequently that of landscape in which it has been sculpted from (ibid). 'It's got this whole narrative of its own' (ibid) and with the binaural microphones in its ears this implicitly becomes the overarching 'narrative' underpinning all of the recordings it captures. At instances the global intersects with the local, in which some of the interviewees speak directly into the ears of Geoffrey and 'breathe the life into it' (ibid). The nature of this anthropomorphism is affected through wry humour and a sense of irony, in which Geoffrey is playfully provoked into responding. For the listener, our inability to respond through Geoffrey highlights the landscape's own powerlessness to engage within the debate to decide its own future.

Owen and Pulejkova (2017) state that 'one can find empathy for a place, but only if it is anthropomorphised. We need to have our human point of view in order to empathise with something'. This resonates with the recent granting of human rights to a river in New Zealand. Aside from its symbol as an ancestor to the local Maori tribe, lead negotiator Gerrard Albert argues that

treating the river as a living entity is the correct way to approach it, as an indivisible whole, instead of the traditional model for the last 100 years of treating it from a perspective of ownership and management.
(2017 cited in Ainge Roy)

In *Fram*, 'the human point of view' was the stories of the people they spoke to, aided by the intentionally humorous anthropomorphising of their snow sculpture. But it is also the short-lived life of Geoffrey himself which brings the global threat of climate change and a need to counter the 'empathy-extermimating mind-set' of its deniers to the forefront (Klein 2014, 48). In *Fram*, Geoffrey literally melts away the binary between human and non-human, becoming an 'indivisible whole' himself.

The ability of humans to empathise with place has been critiqued in Paul Bloom's recent book *Against Empathy: The Case for Rational Compassion* (2017). Within it Bloom argues that empathy paradoxically encourages indifference towards anthropogenic climate change, in which citizens are swept away by the individual isolated stories made close to us as opposed to the larger future story of the planet, which exists often as a series of projected statistics and data sets. What is particularly effective about the *Switching Heads* series is that the binaural technologies 'capture' the listener, but it is the presence of Geoffrey as recordist who ensures that they are not swept away by these stories but instead bear witness to them.

Owen and Pulejkova hope that it is the immersive quality of the sound recording that ‘will hopefully create empathy’ and prompt people to ‘start raising the issues around global warming and climate change’ (2017). In a bid to do so, the work has been presented at events that engage with climate change, such as Time to Act (2015) in Brighton and the ArtCOP21 (2015) festival in Paris. This latter event occurred in response to the United Nations Climate Change Conference which also took place in Paris at that time, with over 550 different events seeking to signal to delegates that ‘climate is culture’ (Artcop21, 2017). During this event, Owen and Pulejkova took to the streets dressed in their arctic clothing, with *Fram* on a small screen on the back of one of their rucksacks and two pairs of headphones hanging either side. Although such a viewing setup was ‘quite unique’, the work attracted a lot of audience who watched the film in its entirety (Owen, 2015). In the artists’ online account of the project at that time, Owen queried to what extent audiences are actually making a connection between the icebergs in the film with ‘our endangered polar landscape’ (2015). It is a valid question and echoes an observation made by Alison Pezanoski-Browne (2015) in relation to ecomusiological works risking style over substance through a “greenwashing” of their audience (9). However, responses to *Fram* have been ‘overwhelmingly positive’, suggesting that audiences have largely understood the film’s function as an archive of ‘a moment within the evolution of climate change’ (Owen and Pulejkova, 2017).

3. *If Walls Could Hear*

In a similar vein to Owen and Pulejkova, my own practice has also sought to engage with place through binaural sound. *If Walls Could Hear* (2014–) began with quite a simple and naive premise: listening to what place hears. Initially, this concerned merely affixing a pair of Roland CS 10EM binaural microphones to different objects, and trying to detect their spectral watermark in a bid to achieve a shared headspace. It has its roots in works such as Bruce Nauman’s *Amplified Tree Piece* (1969) and *Untitled Piece* (1970), which respectively brought the sounds of the inside of a tree and a mile into the earth’s surface into the gallery space. Akin to *Fram*, *If Walls Could Hear* is concerned with placing the listener in a location sonically that they could never occupy physically.



Figure 1. Lamp post on the Christmas Steps, Bristol (2014).

Since its beginnings, I have collaborated with a range of nonhuman recordists including: a lamp post in Bristol (Figure 1), a wind turbine in Wales, a tree in Liverpool and a rocking horse in Brazil. The quality of these early recordings revealed the difficulties of trying to capture the headspace of a nonhuman, the omnidirectionality of the microphones and the absence of an outer ear, made it difficult to locate oneself within the soundscape. The ‘ears’ themselves felt decoupled from each other and lacked the appropriate degree of humanness to gesture towards something that bordered on the anthropomorphic. As a means to try and strike a balance, synthetic ears were introduced to the microphones, which immediately humanised the sounds heard. This modification highlights the challenges of affecting the aforementioned necessary tension between self and place which can determine the more-than-human perspective for the listener.

The most ambitious iteration of the project was to attach a pair of ears to a whole city. Working with colleagues and students from the Department of Drama, Dance and Performance Studies at Liverpool Hope University, we attempted to capture what Liverpool heard. Since its founding in the late 12th century, the city has accrued a rich history and culture that has been at the centre of world trade and industry. Each of its thirty wards has a distinct character and through its recent process of regeneration, different histories intertwine. Its distinct sound, ‘Merseybeat’ or ‘Liverpool Sound’ was purveyed by the music of The Beatles amongst others and represented ‘the first time in the history of British popular music when a sound and a city were bracketed together in this way’ (Inglis 2010, 11). Conscious that such a diverse and richly textured history could not be fully expressed in my recording, I

instead opted to create a platform for a host of possible Liverpools to be ‘bracketed together’ between these two ears. With a spectral watermark of 111.8 km², such a large distance invariably presents a challenge for a listener who has to marry together two often very different soundscapes, particularly if they are being recorded 11 miles away from each other. It charges the listener with essentially an impossible task, of building a headspace large enough to accommodate an entire city of roughly 478,000 people.

Divided into two groups, we each took an ear to one of the edges of Liverpool. The right ear (Figure 2) was located at the tip of Fazakerley, site of the Royal Ordnance Factory which produced munitions for the Second World War (Tulloch 2011). Located within this specific spot is one of the main roads into Liverpool, running almost parallel with the railway line. It is a place of speed, humming with the noise of traffic, replete with retail parks and winding neighbourhoods of small semi-detached redbrick houses.

The left ear (Figure 3) was positioned at the edge of Speke-Garston, a settlement older than Liverpool which eventually became absorbed by it to become a crucial site for shipping and docks (ibid 2011). Here at the southernmost point of the city, not far from the airport, the atmosphere is a more relaxed one of marshland and dog walkers. Birdsong is the primary sound, peppered with the occasional drone of a landing aircraft.



Figure 2. Right Ear (2017).



Figure 3. Left Ear (2017).

For the first time in the project, I decided to incorporate mobility into the recordings by having the ears mounted on a portable staff to be held by each of the two recordists. This was decided upon principally to reflect the enormous sense of scale of the recording, but

also to counter this with the 'human point of view' of the sounds of footsteps. As already mentioned, the tensions between human and non-human have to be readily established for the listener to dissolve them through anthropomorphism and hopefully occupy that of the more-than-human. My recordings of Liverpool sought to echo artist Janet Cardiff's own utilisation of binaural sound as a means 'to breathe and walk in synch with the virtual body', but this 'body' was that of the city itself (Christov-Bakargiev cited in Bussman 2007, 84).

Not surprisingly, once the two recordings were aligned with each other the ensuing soundscape illustrates a marked difference between the right and left ear. It begins with a brief dialogue between North Ear recordist Silvia Battista and myself in the South, conversing as if just a few feet away from each. The reason this was left in the final recording was to establish, at least initially, a recognisable headspace for the listener. Upon completion of the conversation, the two ears begin to walk, allowing this headspace to expand and dehumanise into an 'imagined vantage point'. There is no concrete sense of completeness in the ensuing soundscape, but significantly there is not the sense of discordance one would expect. This evidences the effectiveness of the binaural microphones and the synthetic ears, but also our brain's ability to seek correlation between the sounds our ears hear. Unfortunately in the final recording this effect is largely disrupted by the mobility of the ears themselves, which, rather than acting as a means to humanise the sound, at instances draw attention to the artifice of the recording setup. Consequently, it often masked the sounds of the footsteps and the landscape, revealing how tenuous the connection between the ears actually was.

4. Listening through Place

If one of the principle triggers for anthropomorphism lies in our inability to connect with others of our own species, its utilisation by artists engaged with ecological issues is very telling. In Dickinson's poem, the sense of imminent calamity occurs with the landscape developing human-like qualities, almost in a final attempt to reason with humanity in a homocentric manner. The continued resistance by some to acknowledge anthropogenic climate change has led to a quashing of placial empathy and paucity for anthropomorphism.

The initial aim of *If Walls Could Hear* was naïve but what it has led to is an interrogation of the trappings of anthropomorphism and the selectivity of empathy. This requires a human presence to provide a degree of familiarity in order for the listener to anthropomorphise, but this needs to be tempered by a sensitive monitoring of the weight of such a presence to avoid the trappings of anthropocentrism and the over-empathising that Paul Bloom discusses. To hear as a city or as a head of snow is of course an impossible task, but it is our *attempt* to do so that could allow the more-than-human to occur through a perceived merging of them. Such a merging between self and place is possible, but it is only as structurally sound as the headspace envisaged by the listener. It requires not only anthropomorphism of place but in

essence a placialisation of the self, necessitating this ‘tuning-into’ of landscape and body to make them both an ‘indivisible’ whole. Yet this process of ‘tuning’ is never fully realised, with the aforementioned ambiguities of binaural recordings allowing for constant slippages between the binaries of past/future, body/place and local/global. It is this suspended listening experience that can make seemingly distant global ecological issues intimate encounters. Given the challenges it presents to the listener, I am not sure that *If Walls Could Hear* has yet managed to successfully facilitate a perceived sense of listening with place, but at the very least it does offers a means to listen through it.

ACKNOWLEDGEMENTS. The author would like to thank Annalaura Alifuoco, Silvia Battista, Oliver Smyth and Hannah Turton from Liverpool Hope University for their assistance with recording the city. Secondly the author thanks Holly Owen and Kristina Pulejkova for providing additional details about their work. Finally the author wishes to extend special thanks to Veronika Pramukova who has been an inspirational sounding board.

REFERENCES

- Ainge Roy, Elinor.** “New Zealand river granted same legal rights as human being.” *The Guardian*, March 16, 2017, accessed April 2, 2017, <https://www.theguardian.com/world/2017/mar/16/new-zealand-river-granted-same-legal-rights-as-human-being>.
- Artcop21.** “About.” *Artcop21*, 2015, accessed April 2, 2017, <http://www.artcop21.com/about/>.
- Barnard, Matthew.** “The Sounds of Displacement: A Portfolio of Binaural Compositions.” PhD diss., University of Hull, 2010.
- Bennett, Jane.** *Vibrant Matter: A political ecology of things*. London and Durham: Duke University Press, 2010.
- Blessner, Barry and Linda-Ruth Salter.** *Spaces Speak, Are You Listening?: Experiencing Aural Architecture*. London: MIT Press, 2009.
- Bloom, Paul.** *Against Empathy: The Case for Rational Compassion*. London: Random House, 2017.
- Burns, Georgette Leah.** “Anthropomorphism and animals in the Anthropocene,” in *Engaging with animals: interpretations of a shared existence*, edited by Georgette Leah Burns and Mandy Patterson, 3–20. Sydney: Sydney University Press, 2014.
- Bussman, Klaus.** *Contemporary Sculpture. Projects in Münster*. Berlin: Verlag Gerd Hatje, 1997.
- Dickinson, Emily.** *The Selected Poems of Emily Dickinson*. New York: Chartwell Books, 2016.
- Emam, Tariq.** “The Philosophy of Binaural Music”, Paper presented at the Symposium for Acoustic Ecology, University of Kent, November 8–9, 2013.
- Epley, Nicholas, Adam Waytz and John T. Cacioppo.** “On Seeing Human: A Three-Factor Theory of Anthropomorphism.” *Psychological Review* 114 (2007): 864–86.
- Inglis, Ian.** “Historical approaches to Merseybeat: delivery, affinity and diversity,” in *The Beat Goes on: Liverpool, Popular Music and the Changing City*, edited by Marion Leonard and Rob Strachan, 11–27. Liverpool: Liverpool University Press, 2010.
- Klein, Naomi.** *This Changes Everything: Capitalism Vs. The Climate*. New York: Simon & Schuster, 2014.
- Miles, Malcolm.** “Representing nature: art and climate change.” *Cultural Geographies*, 17 [1] (2010): 19–35.
- Owen, Holly.** “Icewatch Paris Vs Greenland.” *Switching-Heads*, December 3, 2015, accessed April 2, 2017, <http://www.switching-heads.com/expedition-blog/december-03rd-2015>.
- Owen, Holly and Kristina Pulejkova.** Interview with author. February 13, 2017.

Petralia, Peter Salvatore. "Headspace: Architectural Space in the Brain." *Contemporary Theatre Review*, 20 [1] (2010): 96–108.

Pezanoski-Browne, Alison. "The Tragic Art of Eco-Sound." *Leonardo Music Journal*, 20 (2015): 9–13.

Simpson, Dallas. "Aspects of Environmental Performance." *Dallas Simpson*, 2017, accessed April 2, 2017, <http://www.dallassimpson.com/statement.php>.

Tulloch, Alex. *The Little Book of Liverpool*. Stroud: The History Press, 2011.

Wojnarski, Lisa. "A house of weather and a polar bear costume: ecological anthropomorphism in the work of fevered sleep." *Performance Research* 20 [2] (2015): 24–32.

Wylie, John. "Landscape, absence and the geographies of love." *Transactions of the Institute of British Geographers* 34 [3] (2009): 275–89.