



# THE UNIVERSITY *of* EDINBURGH

This thesis has been submitted in fulfilment of the requirements for a postgraduate degree (e.g. PhD, MPhil, DClinPsychol) at the University of Edinburgh. Please note the following terms and conditions of use:

This work is protected by copyright and other intellectual property rights, which are retained by the thesis author, unless otherwise stated.

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge.

This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the author.

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given.



THE UNIVERSITY  
*of* EDINBURGH

Practising immanence: (still) becoming an  
environmental education academic

David A.G. Clarke

Doctor of Philosophy

University of Edinburgh

2018

## Own Work Declaration

I declare that the thesis has been composed by myself and that the work has not been submitted for any other degree or professional qualification. I confirm that the work submitted is my own, except where work which has formed part of jointly-authored publications has been included. My contribution and that of the other author to this work has been explicitly indicated below. I confirm that appropriate credit has been given within this thesis where reference has been made to the work of others.

Some of the work presented in Haecceity 2 has been published as a Call for Papers for a Special Issue of *Environmental Education Research* titled *New Materialisms and Environmental Education* by myself and Jamie Mcphie. I am the sole author of the elements of that Call for Papers that are presented in this thesis.

Some of the work presented in Haecceity 3 has been submitted for inclusion in the book *Outdoor Studies and Research Methods* (Routledge, 2019) as *Post-qualitative inquiry in Outdoor Studies: A radical (non-)methodology* by myself and Jamie Mcphie. I am the sole author of the elements of that submission that are presented in this thesis.

Some of the work presented in Haecceity 3 was published during my studies in *Environmental Education Research* as a book review of Eve Tuck and Marcia McKenzie's *Place in Research: Theory, Methodology, and Methods*, and was authored solely by myself.

Most of the work presented in Haecceity 4 was published during my PhD studies in the book *Reimagining Sustainability in Precarious Times* (Malone, Truong and Grey, 2017) as the chapter *Educating Beyond the Cultural and the Natural: (Re)Framing the Limits of the Possible in Environmental Education*, and was authored solely by myself.

Some of the work presented in Haecceity 5 has been accepted for publication as a paper in *Environmental Education Research* as *Nature Matters: Diffracting a Keystone Concept of Environmental Education Research – Just for Kicks* by myself and Jamie Mcphie. I am the sole author of the elements of that submission that are presented in this thesis.

Some other parts of the work presented in Haecceity 5, and some parts of the work presented in Haecceity 8, have been submitted as a paper to *a/b: Auto/Biography Studies* as *Ecobiography, posthuman-postnature? Immanent life writing in the Anthropocene*, authored solely by myself.

Most of the work presented in Haecceity 6 has been submitted as a paper to *Environmental Education Research* as *The diffractive practitioners: collaborative writing-thinking-doing with students, concepts, and Walney Island (and aliens)* by myself and Jamie Mcphie. Each authors' contribution is clearly identified in Haecceity 6.

Signature: ..... (David A. G. Clarke) Date: 10.09.2018

## Abstract

This thesis is located between. It is not quite about outdoor environmental education. It is not quite about research methodology. And it is not quite about the author's learning. These delineated categories exist on a different plane to the thesis, at least, to what the thesis becomes - is becoming. The thesis is thus a haecceity, a certain thisness that is no other. This is not meant to be a grand claim to the contribution or originality of the thesis. It is a statement about the nature of being that 'I' have been moved towards in exploring what practice might be in a world that is 'post' environment and 'post' methodology, and where the separation of theory and practice dissolves.

The thesis is constituted of eight haecceities. The starting place is my concern, as (becoming) an outdoor education academic, for finding a pedagogy that might help mitigate environmental degradation. The search for this pedagogy takes up new materialist inclinations and particularly the concept of immanence as described by Deleuze and Guattari (2004). This in turn changes the thesis, and leads it to an exploration of various post-qualitative informed 'fuzzinesses' of research methodology; where methodology becomes a pedagogy and the notion of an educational practice that is separate from my life, *a* life, is troubled. From here, the thesis takes up an increasingly 'post' autoethnographic lilt to explore becoming a post environmental education academic. This exploration is carried by writing, and collaborative writing, as forms of inquiry by which various stories are told; stories in which the boundaries between environments, theory, practice, learning, and research become unclear.

Throughout the thesis various concepts are created to help explore these tensions. These include the concept of the *haecceitical self* as the occurring process *of*, rather than a self being connected or in relation to something; the concept of *becoming alien*, as an attempt at unhumaning ourselves. i.e. to raise awareness of our belonging to something else, rather than the stable and quiddital (*whatness*) of the concept of the human; and lastly the concept of *environing education*. Environing education is difficult to define, but it is at the least the process of learning to live more ethically in response to the contradiction of caring about environmental degradation, whilst at the same time questioning the category of the environmental. The concepts are not monolithic and not necessarily transposable to other situations. Rather they live in their use within the thesis.

Whilst the thesis originates from a place of trying to advocate for the environment, through the process of writing the 'environment' becomes troubled as a conceptual category, thus troubling the environmental as a category of moral value. Instead, towards the close of the thesis, I explore the competing lines of desire that function to produce the thesis, in the search for an immanent ethics. This ethics of affect is co-constitutive in the writing of the haecceities, to aesthetically explore post human/environment tensions of becoming an academic, and acknowledging the personal struggles that this entails. The contribution of the thesis lies in its exploration of writing an immanent ethics, given the destabilising effects of an immanent ontology on prevailing ethical orientation towards transcendent notions of the 'environment'. In this way, the writing is a form of post-ecobiography, whereby the contribution of the thesis is also its affective process, for me and (possibly) for the reader.

## Lay Summary

This thesis makes a philosophical contribution to theory and inquiry in environmental education by attempting a form of inquiry that at once troubles the idea of 'nature' and the human 'self'. The reason for this attempt is to respond to recent philosophical turns towards 'new' materialisms and the practical philosophy of Gilles Deleuze and Felix Guattari in educational research, as well as what I see as the impact of these theories for prevailing ethical orientations in environmental education and my own practice as an educator and researcher. The thesis unfolds through eight haecceities rather than chapters. A haecceity is a philosophical concept forwarded by Deleuze and Guattari which prioritises the *thisness* of a thing or event, rather than considering a thing as assignable to pre-given delineated sets depending on its *whatness* (quiddity), or identifying characteristics. This move allows a novel methodological approach whereby the haecceities act as sites of variation on the themes of the thesis. These themes include: the self as unstable and posthuman; the environment as everything (immanent) rather than as other, romantic or a green version of nature; and the tensions that these moves create for ethical orientations in my practice as an outdoor environmental educator and a becoming academic. Throughout the thesis various concepts are created to help explore these tensions. These include the concept of the *haecceitical self* as the occurring process *of*, rather than a self being connected or in relation to something; the concept of *becoming alien*, as an attempt at unhumaning ourselves - i.e. to raise awareness of our belonging to something else, rather than the sovereign and quiddital (*whatness*) concept of the human; and lastly the concept of *environing education*. *Environing education* is difficult to define, but it is at the least the process of learning to live more ethically in response to the contradiction of caring about environmental degradation whilst at the same time questioning the category of the environmental. The concepts are not monolithic and not necessarily transposable to other situations. Rather they live in their use within the thesis. Towards the close of the thesis I reflect on the nature of an immanent ethics for my practice, as well as the teaching that this form of inquiry has enacted.

## **Acknowledgements**

Thank you...

Gemma, for your infinite patience.

Fen, for bringing what only you bring.

Mum, Dad, and Chris, for helping me in so many ways, and for bearing with me when I asked for strange books for Christmas.

Jamie, you know what for.

My supervisors, Robbie Nicol, John Telford, and Ramsey Affifi, for new friendship, for being constant and solid throughout this process, for being generous with your help, and for pushing me to think harder.

The Transcultural European Outdoor Studies and Outdoor Experiential Education Masters students and Dr Colin Wood, for their kind permission to let me think a little with their words and emails in this thesis.

All the *thisnesses* that engender thinking-feeling.

## Contents

Haecceity 1: A middle.....	1
Asterism.....	14
Becoming a diffractive practitioner.....	16
Writing the thesis.....	20
Voices and images.....	24
Haecceities to come:.....	27
Haecceity 2: New materialisms and this thesis.....	30
<i>His</i> story of materialism.....	32
What's so <i>new</i> ?.....	40
Object Oriented Ontology.....	44
Feminist New Materialism.....	45
Material Ecocriticism.....	47
Deleuze, and Deleuze and Guattari.....	49
New materialisms and outdoor/environmental education.....	52
Haecceity 3: Research fuzziness: making the thesis.....	58
Fuzziness 1: Post-qualitative research and politics in environmental education ..	58
Fuzziness 2: Practice and research and data.....	67
Fuzziness 3: Autoethnographic/assemblage/ethnography/non/collaborative writing as inquiry.....	71
Fuzziness 4: Ambulant science, problems, infinite learning, affect.....	77
Fuzziness 5: Thinking <i>with</i> , and diffractive analysis.....	80
Fuzziness 6: Inquiry as making.....	84
Fuzziness 7: Methodology as pedagogy.....	89
Fuzziness 8: Language.....	93
What to do <i>after method</i> , machines, and matters of concern.....	97
What follows and precedes and is.....	101
Haecceity 4: Becoming rocked.....	103
Turning the Anthropocene.....	106
Veering away from 'nature': shallow, deep, dark and flat ecology and environmental education.....	111

Mapping haecceitical ‘selves’: (re)framing the limits of the possible with students .....	119
A middle: .....	124
Haecceity 5: Practicing environing education: affects, concepts, practice .....	126
Environing education .....	127
A drenching .....	130
Non-worlds, in between worlds.....	132
Practice as concepts, concepts as practice.....	135
Holyrood Park time .....	140
Becoming aware .....	143
Transcendental empiricism of the book .....	145
‘A long trip to Scotland...’ .....	148
Becoming-Seal .....	153
Practicing a life.....	154
Oak trees and emails.....	156
Haecceity 6: The diffractive practitioners - collaborative writing-thinking-doing with students, concepts, and Walney Island (and aliens).....	165
Sifting through the till .....	167
An invitation to write .....	173
Post-script on diffractive practice.....	196
Haecceity 7: practicing immanent ethics .....	199
‘Good’ problems.....	199
Immanence and ethics .....	204
Some alien lines.....	209
Haecceity 8: Another, different, middle.....	244
Affectively becoming an academic .....	244
Contributions? .....	258
References .....	265

## Haeceity 1: A middle

In the spirit of plateaus, I was tempted to suggest that you need not start here (how could you<sup>1</sup> *start* here? You were already *there* before you arrived. At least, you were already something, and many things). I was going to suggest that maybe it would make more sense to start at Haeceity 3. There you will find some discussion and justification of the (non)methodology of this thesis. Then I thought, maybe it would make more sense to start at Haeceity 4. There you can learn something of the problems I<sup>2</sup> am facing in my field of practice; outdoor and environmental education. Perhaps in that haeceity you might find some semblance of a research problem that will give everything else a bit more *sense* as you read on, though I'm not sure I state one plainly, and I don't know about sense. I was also going to suggest that, if neither of these things interest you, you might prefer something heavier; to be a fly on the wall through a schizoethical episode; a voyeur to a thousand Daves arguing about what to *do*. Haeceity 7 will offer you this. And then I wondered some more about

---

<sup>1</sup> There you are, for the first time. Who are you? Rowland Barthes suggests the two of us may not be as simple as we seem, now we are involved in text:

On the stage of the text, no footlights: there is not, behind the text, someone active (the writer) and out front someone passive (the reader); there is not a subject and an object. The text supersedes grammatical attitudes: it is the undifferentiated eye which an excessive author (Angelus Silesius) describes: "The eye by which I see God is the same eye by which He sees me." (Barthes, 1975, p.16)

It is not straightforward to say I make demands on a reader (after all, this is a writing-and-reading, not something written and read.

<sup>2</sup> And here I am. I want you to keep in mind that:

'There is no 'I' that exists outside of the diffraction pattern, observing it, telling its story. In an important sense, this story in its ongoing (re)patterning is (re)(con)figuring me. 'I' am neither outside nor inside; 'I' am of the diffraction pattern. Or rather, this 'I' that is not 'me' alone and never was, that is always already multiply dispersed and diffracted throughout spacetime(mattering), including in this paper, in its ongoing being-becoming is of the diffraction pattern.' (Barad, 2014, 181-182).

you: why are you here? Maybe, just possibly, you've read some of my work with my colleague Jamie Mcphie. I was going to offer you Haeceity 6 to follow this interest. There Jamie and I talk back and forth, not alone but with an island becoming alien. And then I thought, 'maybe you should start at the end!'. Conclusions are useful to read if you're in a hurry, and in all honesty, I can't claim that you will get more by reading the whole thing than you will by jumping to the end. What do I know about you, after all? Besides, there's something transgressive about reading conclusions first. However, there are no solid conclusions here, but Haeceity 8 might provide you with thoughts about control, power and becoming an academic. Then I thought of another suggestion: you might prefer to feel the bracing North Atlantic and swim off the west coast of Scotland, or get lost in a book or two, or wander around Holyrood Park in Edinburgh. There are students there, and they are thinking with place and theory. Haeceity 5 would have been the place to go if you had found these options tempting. And then, as another possibility, I thought of Haeceity 2. There I struggle with exploring materialist theory and environmental education.

And yet, after all this, I changed again and, although you *can* jump in when and where you like if you prefer, starting from here and following with me as I grow through the thesis will offer you a perspective that *is* a particular thesis. There is a *thisness* of it, as it grows from here as a haeceity. And, in any case, you will see that I do a fair bit of jumping around for you as I go.

\*\*

I look down the long brown canal from my canoe. The students are paddling off in different directions. J-strokes are practised, brambles crashed into, swans avoided and gawked at. I pull my hat over my ears and watch my breath cloud in the cold January air. What am I doing here? I'm enjoying myself. And the students seem to be too. But, is there something else? I think of origins at this point. I think of ways of existence, my existence, and what thinking about ways of existence might do. I place

the blade of my paddle in the water, purposefully making no noise. I watch the shaft jolt at an angle in refractive encounter with light and the water and me. I think of becoming an ontologist.

This is not autobiography  
But rather a turn in me  
to perform a vibrational artistry,  
to become an ontologist of vibrational force.

(Patricia Clough, 2013, p.69)

Sometimes, when you pull on your paddle just right, the shaft vibrates in resonance with the water. You should hold your paddle lightly, but pull it forcefully. It's a balancing act. A tricky technique that is impossible to define or instruct. It's something you feel, and you know when you've got it. You just know. Am I trying to draw an analogy between sitting in a canoe and getting a paddle stroke right, and the skill of writing something not-quite-autobiographical and not-quite-fiction? I don't know. I'm not sure about analogies. I don't want to draw them, though I probably do. I think the resonance you aim for, in canoeing, or anything for that matter, is what you aim for in writing as well. They are both physical tasks of the world where you try to perform a vibrational artistry. To hook up with the world in its becoming.

\*  
\*\*

But the world gets in the way, and makes you stumble. Or you get in the way. Something always gets in the way. I just deleted some writing above. I had something else in mind I wanted to write, so I copied the line (cmd+c). I wrote what I wanted, and then I went to paste the line (cmd+v). Nothing. The line didn't appear. Something went wrong. Something cropped up and got in the way. I forgot what I wanted to write, and I thought of intervention, of intention, instead. But this isn't the whole picture either. Because then I thought about the fact that I thought about

intentionality. The thought arose, got thrown up, and then became my thinking. I didn't do it (or anything?) on purpose.

Now it's several hours later and I can't recall why I stopped writing the above. Things make things happen. Not humans. It really doesn't feel like there's a solid centre of consciousness writing this. Perhaps the thesis is about this? This thesis is amorphous, but it is, at the least, about intentionality and learning. Or perhaps the thesis is no longer '*about*'. There is no 'whatness' for it to be about. It is rather a thisness. A withness. What Deleuze and Guattari (2004) call a haecceity. Or, perhaps it's something of an inbetween. A struggle to move between. A middling, if you like.

Yes, I don't think this thesis is about environmental education. It's more *with* environmental education, with (non)methodology, with my becoming. A lived environmental education. You'll see this struggle. In a moment I'll try and tell you what the thesis is *about*.



This thesis is about becoming an academic who works on the topics of outdoor and environmental education. I don't know if it is *about* outdoor and environmental education. I think that depends on you and whether you plug it into your practice. As a becoming academic, I am beginning to take part in the key academic practices of teaching and research. My topic being environmental education, I am interested in how to teach for the environment (i.e. to do environmental education) and how to teach prospective educators to teach for the environment. Nonetheless the thesis does not produce ideas for these practices in a straightforward manner. The thesis features reflections (what become diffractions) on the life of academic practices in environmental education while I struggle with theory that questions essentialist renditions of the environment and the human subject. Additionally, I am interested in how best to research these topics. For instance, the kind of research questions that

interest me are those concerned with the type or form of educational theory and philosophy that might best inform my practice. And so, the thesis also draws on theory *as data*, as a way of influencing thinking throughout, rather than as a base upon which to build or as a framework to apply.

Given all this, I have another problem. I can't get immanence out of my head<sup>3</sup>. This is particularly odd/problematic, as I find immanence hard to pin down. Yet it has me. It has caught me. And it won't let go. By immanence I mean in the Deleuzian sense. Immanence is the field of desire. It is desire making space. Forming strata both geological and social. Immanence seems to be the statement about the ways the world is carved up. And the potential for thinking new ways of thinking the world. A good example of the way this impacts environmental education is by considering some of the straightforward ways we talk about practice. For instance, if I take a group outside, say to a park or to a city centre, then it seems straightforward enough to say that I am doing outdoor learning, rather than indoor learning. But then I read something like this:

The field of immanence is not internal to the self, but neither does it come from an external self or a nonself. Rather, it is like the absolute Outside that knows no Selves because interior and exterior are equally a part of the immanence in which they have fused (Deleuze and Guattari, 1986, p.156)

So, if I assume immanence, I'm assuming something *like* an *absolute* outside, which is actually both inside and outside. So, my indoor learners are really outside all along. In which case, what sense is there in talking of outdoor learning? As if there is something preordained and significant to the category 'outdoor'. A category that is itself in immanence. Unstable and fleeting. Is there actually *anything* that can be said

---

<sup>3</sup> What a telling phrase this seems to be! How do you get immanence out of your head? I think it is the ground upon which ideas like 'inside' or 'outside' of my head is founded – because that is what immanence is! Transcendence is always placed on immanence. But I'm so used to thinking that thinking is inside my head, like there is a transcendent inside/outside divide that is pre-given. But this reminds me of Anselm's ontological argument for the existence of God.

to link one ‘outdoor’ experience to another? Is ‘outdoors’ actually in our heads? You’ll notice I put ‘outdoors’ in inverted commas here. The reason for this is that I no longer trust the term, having thought of it a category that is put onto the world, rather than one that exists *out* there. Some authors, (Heidegger and Derrida, for instance) put words under erasure to demonstrate that they are problematic yet necessary. You’ll see that I do this at times. I don’t feel like I’ve arrived at the ground that renders the term ‘outdoor’ necessary yet, so for now I will just signal that I find it problematic, with inverted commas. You may find these inverted commas cropping up in my writing in this way.

I look up.

It’s eerie here. The front room is dark brown with light. Brown light is eerie in a room that is usually lit well. The brown glow comes from the street lights, tinted as it travels through the curtains. The eerie light combines with or compounds an eerie sensation. I don’t normally do this. Get up at night and write. I feel like I’m having some kind of affair with immanence. It creeps at the edges of my day. Always there, coming to mind in a conversation with a friend. In the spaces left by the tasks of the day, when my mind throws up thoughts, immanence haunts my thinking. The light of the room. The silence. The cold. And the need to write. To get *it* out. The birth of *it*. They come together in a strange otherness. It makes this feel like a place out of time. I check my watch. I’m writing this at quarter to midnight having just left my wife asleep with my baby boy. But I had to write about immanence. It’s like I lust for it. It totally has me. What is it? It’s just a word, but it sends my mind thinking in so many directions. As Deleuze would say, I plug it in to whatever I am thinking of, and I get taken somewhere different. Often somewhere troubling and puzzling. This can make me feel like I don’t understand immanence properly. But then, I’m sure Deleuze said something about it not being about *getting it*, but about seeing if it works for you. This isn’t that consoling either, as I’m not sure immanence is working for me. Yet it’s still there. Its claws are deep. Even the sound of the word as I say it without opening my mouth. Immanence. It seems immense. Everything. Power. Ocean. Potential. EVERYTHING. No ‘things’. Immanence.

In any case, there is a pure plane of immanence, univocality, composition, upon which everything is given, upon which unformed elements and materials dance that are distinguished from one another only by their speed and that enter into this or that individuated assemblage depending on their connections, their relations of movement. (Deleuze and Guattari, 1986, p.255)

Oh gosh. What am I supposed to do with this? When there is no 'I' even. Just speeds. How do you research this? How do you talk about anything? How do you teach anything? How do you write anything?

Perhaps you do it something like this. With a groping. With an attempt. Perhaps rather than doing immanence justice, or environmental education research or teaching for that matter, you just have a go. You practise. When I did my first degree (a BA Hons in Adventure Education) I remember a lecturer telling the class "you've heard 'practice makes perfect', but actually; practice makes permanent". The message was that if you practise something the wrong way, it may stick, and you may just keep doing it wrong. I feel that is a risk here. Maybe I'm already doing it wrong. Maybe I've been doing it wrong for years. If I do have immanence wrong, then what? I've kept thinking of it in the same way. It's become my body. And more. *A life*<sup>4</sup>.

Do you mind if I quote Deleuze and Guattari, and not always explain? It helps me think. Even if the clarity isn't there. I'm sorry if I don't dissect the quote. If I don't

---

<sup>4</sup> *A life*. I struggle with this more in Haecceity 6. Deleuze and Guattari (1986) use the phrase 'a life' to distinguish their approach from that of talking of 'my life' as experienced on a transcendent plane, where subjects exist, to the empirical before all of life as experienced on an immanent plane. This is where *a life* is lived. *A life* is the singularity of an event. A haecceity is *a life*, rather than a person as defined by a set of characteristics that are human. *A life* is only ever its thisness. Accordingly, I am my 'longitude and latitude, a set of speeds and slownesses between unformed particles, a set of nonsubjectified affects. [I] have the individuality of a day, a season, a year, *a life* (regardless of its duration)—a climate, a wind, a fog, a swarm, a pack (regardless of its regularity). Or at least [I] can have it, [I] can reach it' (Deleuze and Guattari, 1986, p.262).

tell you what it means. Tell you, perhaps, what you want to hear, and what you want to be told. Maybe you don't. Maybe you're happy to let yourself feel a way into it.

Sometimes I see a bit of writing by Deleuze and Guattari and think 'well that works so well to help me think about this problem'. Here's an example:

The resulting danger of a worldwide labor bureaucracy or technocracy taking charge of these problems can be warded off only to the extent that local struggles directly target national and international axioms, at the precise point of their insertion in the field of immanence (the potential of the rural world in this respect). (Deleuze and Guattari, 1986, p.446).

Now, I'm not sure what preceded this quote, or what came after it. I was just searching for the term 'immanence' in *A Thousand Plateaus*. But when I read it I thought about environmental education, because that's something I think *with*.

\*  
\*\*

Aside.

I use the phrase 'think with' a lot in the thesis. I borrow it from Jackson and Mazzei (2012) who use it to demonstrate the productivity of working different theoretical perspectives to the same set of data. The term *with* captures much in the process oriented and non-hierarchical philosophy of Deleuze and other process theorists. It draws the subject out into the world in participation, rather than having them view the world outside from within, or above.

In relation to his art installation of reflective (diffractive) cubes around a university campus, David Rousell notes:

Rather than being the phenomenological object of my own intentionality, each cube is an objectile that exceeds my intentions and refuses to correlate with my thought. Put another way, the cube is a thing to think *with*, rather than a thing to think *about*. (2018, p.217)

Objectile is a term which replaces objects as static things, rather objectiles are in a process of becoming and in this becoming have a prehensive facet. Cubes, theory, books, people, walks, thoughts, research papers, events and practice, such as environmental education (and this thesis). These are all things to think *with*.

This is not a phenomenology.

Now, let's return.

\*  
\*\*

Thinking *with*. It just happens. I can claim it is hard work to think with, but that doesn't mean I could do other than I am. If I do 'hard work' it sounds like there's an I that made some kind of choice. But the 'hard work' is actually distributed of events, not localised in a single me. In which case, is anything actually 'working'? Or, to turn it around, what does labelling something as 'work' do? For Deleuze and Guattari (1986, p.490-491) 'labor performs a generalized operation of striation of space-time, a subjection of free action, a nullification of smooth spaces, the origin and means of which is in the essential enterprise of the State, namely, its conquest of the war machine'<sup>5</sup>. So, if I want to remain free, unhomogenised and unstriated (indeed, unhuman) perhaps I should avoid labour, and be more leisurely instead<sup>6</sup>. I

---

<sup>5</sup> Deleuze and Guattari use the figuration of the war machine as the vanguard of nomadic thought. The war machine is a means to overcome striation and so, the State apparatus would have done with the war machine. Deleuze and Guattari suggest that writing can bring the freeing aspects of the war machine together with lines of escape, or flight, that may be productive for overcoming the constantly rehearsed images of thought of the state: 'Writing weds a war machine and lines of flight, abandoning the strata, segmentarities, sedentarity, the State apparatus' (Deleuze and Guattari, 1986, p.4).

<sup>6</sup> This feels like it talks to the nature of undertaking a PhD. You put in the 'hard work' and gain the label, the category, the code: 'Dr'. In this position, you can be put to work. You become homogenised, by and for the State, through your hard work.

should avoid putting myself to hard work. But that's not quite right either. Leisure sounds like it is set up as the opposite of work, and in this binary produces privilege away from 'labour'. Further, both seem like humanist endeavours. Maybe I want to get outside of both. Artfulness and playfulness. There is activity in these terms. They produce. But there is also subversive potential. To overturn and to create the new. To perform iconoclasm. Something more creative and involved. Something like what Jonathan Wyatt calls 'creative-relational inquiry'.

Creative-relational inquiry takes up not (only) the common-sense understanding of creative – notions of making<sup>7</sup>, of 'being artistic', etc. – but the radical creative opening-up-to-what-maybe, an opening-up within "an encounter [that] is not a confrontation with a 'thing' but a relation that is sensed, rather than understood" (Jackson, 2017, p. 669, emphasis in the original). (Wyatt, 2019 forthcoming, p.2)

This feels more like thinking with. Thinking *with* doesn't mean understanding. Thinking *with* doesn't feel like work, it just seems to happen as the embodied practice-theorising of this event. For instance, the quote from Deleuze and Guattari, above, made me wonder what we take as axiomatic about environmental education – in research particularly – what a 'world wide labor bureaucracy or technocracy' might look like in the context of environmental education scholarship...I don't know, perhaps publishing corporations? Globalising education agendas, like UNESCO? State national curricula? Who knows? Pick one. Now, what are the axioms at work? What are the assumptions that are lived? What do we think we know so well that we don't even think about whether we think we know it or not? Again, I don't know, but it makes me wonder. Now, what's this about 'danger' and warding these things 'off'? And where? Only in the local, not at larger scales, where these axioms exist. When I read 'local' here, I read it as 'micropolitical' or molecular - a few more terms from the Deleuze and Guattari glossary. Both seem to be about ethics on the ground. Lived and nuanced. This kind of quote hits me in a sweet spot of a call to arms and descriptions of the unfolding nature of events at a meta level. It

---

<sup>7</sup> I like this idea of research as making. I talk more about this in Haeceity 3.

suits me to think with this level. That's all I wanted to say. It's a form of introduction. To me, to methodology, to writing, to how I think with theory.

\*  
\*\*

The little sensations before feeling and thought. The tug in my knee. The nearly something like dinner smell in the air. The drill. How long has that drill been going? Digging deep into my writing and affecting it before I even noticed its dull hum backgrounding the bird song and occasional passing car? Each and every thing is difference. Difference in itself. These things - drill, smell, bird song etc, - only become these things as they are pushed and pulled from the plane of consistency through the grill of desire that constitutes me. It is the process that constitutes me. Desire takes up difference and constructs the plane.

Everything is different on the plane of consistency or immanence, which is necessarily perceived in its own right in the course of its construction: experimentation replaces interpretation, now molecular, nonfigurative, and nonsymbolic, the unconscious as such is given in micropereceptions; desire directly invests the field of perception, where the imperceptible appears as the perceived object of desire itself, "the nonfigurative of desire." (Deleuze and Guattari, 2004, p.284)

I wonder what that made you think of? It doesn't mean anything. It makes things happen, or it doesn't. There is no understanding. It's an event. Actually, it's happening now. What did it make me do? 'Everything is different'. Everything is other. Including me. I love this idea of thinking that I don't know myself. That I am an alien. That everything is alien, if only I can get past the point where 'the imperceptible appears as the perceived object of desire itself'; of everything I've ever thought or encountered being other than I think. Trying to see the alien in the ordinary seems a sure way to stave off complacency. Rather than a Freudian id and super/ego to me, like a series of voices in my head that represents the me to me, there

are a thousand little stories to be created in events of encounter. It's hard to fight desire. Desire wants to tell you that there's a laptop in front of you. *Use it to write. Check your email. Check Facebook.* Fight desire. On the plane of immanence<sup>8</sup> there isn't a laptop that affords these things. There is only difference that can become other. Other things. Keys. Letters. Dust. A stain. The stain. What can it do?

\*\*

I can't claim that I am Deleuzian. It's not in my bones. Perhaps then, I am not Deleuzian. Perhaps it is not possible *to be* Deleuzian. It is always something you are practicing. It is always something you are attaining. As Kathryn Strom (2018, p.210) says:

...what does it mean to 'be Deleuzian' anyway? Once it has been labeled as such, would not that constitute what Deleuze would recognize as a molar category—a 'domesticated multiplicity'? Does not this idea—that a scholar would be Deleuzian, in that they would follow all the ideas of Deleuze to the letter and apply them in every word, thought, action—also contradict Deleuze's request that with his work, we not ask what something means, but what it does and how it works? So then, would it not make more (non) sense to *do* Deleuze—to plug in, experiment, and use his ideas, see how they work—rather than seek to *be* Deleuzian? If we are zeroing in on what something means, exactly, and evaluating whether or not someone is applying it *properly*, then we are stuck in the realm of meaning and *what is*. The verb 'to be' has been imposed—to *be* Deleuzian—and we are once again back reproducing dichotomous thinking: you *are*, or you *are not*, Deleuzian.

---

<sup>8</sup> In my reading, Deleuze and Guattari (1986) refer to the 'plane' of immanence to highlight its physical, material, and Earthly nature. Thinking of immanence as a plane; as a steppe, forest, ocean or the living room that I am sat in right now, evokes its spatial aspect, its terrestrialness and everydayness, its ordinaryness and yet strangeness. Its 'to-handness'.

And so, I am not *very* Deleuzian. But I practise. I attempt as best I can<sup>9</sup>. My writing always falls back to old ways of explaining. You'll see this, if you read on. You'll see that my voice has changed. I am writing this later, after, towards the end. There are, perhaps, more comfortable voices to come. Voices slip around. This one is in the middle of a transition. I feel like I'm transgressing. Like I'm taking a risk. It has a foot in my old world of academia, and a tentative toe in a new way of writing, for me. You'll see that sometimes I risk more, the event risks more, whilst in others – and more often – there's an 'I' that hunkers down in ways of explaining I think I understand. I realise now that this is the risk, the old way. Trying to convince, and trying to convey. It's not that I'm not brave enough to constantly experiment. It's more that I slip back. Or maybe I've run out of time. Out of space, even. And there seems to be a lot of skill involved in inventing the world as it happens. I couldn't write *Finnegan's Wake* or *Ulysses* and, besides, don't I have to say something about environmental education and being an academic, even as both those concepts escape into the sofa beneath me?

Or, perhaps they come up, from the sofa in some way? Or from somewhere else? Where did the thought come from? From a fear in my gut about what I'm supposed to write? Is it fear? Or did it become 'fear' when I had to find a word? It was more like something before fear. But something *always-there*. The embodied–envirning thesis.

---

<sup>9</sup> Why should I place 'faith' in Deleuze in this way? I don't agree that the concepts offered by Deleuze are somehow more doctrinal or religious in nature than the State philosophy that dominant academic critique lives within. A philosophy of immanence is entirely untheological. It is grounded within the world, rather than transcending it by appealing to stable concepts of the subject or God. Rather, Deleuzian concepts are tools that live, nothing more or less. They either work for you or they don't. They are means to think ourselves out of dominant modes of thought. And they help me think about concept creation. I could offer traditional critique of them, but that would not serve to help me think the environment, ethics, or my subjectification differently. I am not trying to present the whole picture as the one truth, by poking holes, I am, rather, trying to put concepts to work. This process entails acknowledging that I do not always know, that I have not 'figured it all out', and that I can attempt to work with concepts in my life, whilst still trying to understand them. Indeed, these processes may be one and the same. I discuss the difference between traditional critique and this, more immanent, form of critique in Haecceity 3.

When I think them - environmental education, being an academic - in this eerie brown light, I think them *of* the space I find myself of. This event of writing them. The milieu. The agencement as an event. Who is writing, after all?

Who writes? It is not that the writer is dead but that “the writer” is “a writing,” a writing that lives in viruses and the weather and potatoes. Everything that might have been supposed to be outside the writing (dinosaurs, for instance) is internal to it. (Harley, 2017, p.277)

‘A writing’. Of course. They are here with me, both. Cold is also a part of this. I didn’t put anything on, when I got out of bed. And now I’m cold. I’ll save this, and come back tomorrow. When everything’s different.



## **Asterism**

Asterism: a group of stars. I’ve been searching for a device to demonstrate a change of scene. A change of angle or a change of wind. A change of mind. Sometimes a spatial change – in geophilosophical terms. Sometimes a temporal change - something to demonstrate the syuzhet to the fabula<sup>10</sup> of the thesis. A conceptual change. Or an affectual<sup>11</sup> change. In any case a change in writing. Perhaps I’ve gone

---

<sup>10</sup> Syuzhet and fabula are terms from Russian theatre and concern the depiction of time. Fabula is the linear chronology of events; syuzhet jumps back and forth along this line. In this thesis, time occurs non-linearly. For instance, this opening section was written at the end, and I am making this clear. However, other haecceities contain jumps in time. Asterisms are used to make these jumps more prominent, however they may also depict a change in scene, etc. Sometimes it is difficult to know where you are in time, this can be disorienting and confusing. Christopher Nolan’s *Dunkirk* enacts just such jumping about. The scenes are out of time, and yet the effect is somehow more for this disorientation.

<sup>11</sup> Affect is not the same as emotion. It is the preconscious perception of a body and in this way is pre-personal (Clough, 2009). An emotion, by contrast, ‘is a subjective content, the socio-linguistic fixing of the quality of an experience which is from that point onward defined as personal’ (Massumi, 1995, p.88). Affect comes before the subject is formed, emotion comes after. Massumi (1995) suggests that each term requires different logics.

away and come back different. Perhaps I am different at the same time. Perhaps I immediately became different. Perhaps the writing that comes after actually came before. Nonetheless, I found myself pressing return twice. Or leaving dots in the middle of the page. What are those dots called? A suggestion from Wikipedia: Asterism. Not dots. Stars. They're stars. A constellation. According to Hudson (2010, p.396) an asterism 'indicates minor breaks in the text'. I like the plurality of 'breaks'. For me it indicates an asterism as a constellation of potential directions. A multiplicity<sup>12</sup>, rather than a single end to a scene. I also like the politics of a 'minor break'. From my work currently editing a Special Issue of Environmental Education Research, I know several scholars re beginning to articulate the importance of a minor politics in thinking with Deleuze and Guattari's work in environmental education. A minor politics calls for small, playful alterations and digs at the majoritarian order. This is because too large a signifying break can be easily taken over. So, while we're alive, we should all 'make tiny changes to Earth'<sup>13</sup>. An asterism is also sometimes used when the author of something like a piece of music is not known or wishes to hide their identity. Perfect! Who's the author anyway? Ah! It's \*\*. This being the case I hope my use of asterisms reminds the reader that there is no essential subject of Western humanism authoring this text. Instead it's written

---

<sup>12</sup> Multiplicity is a term used by Deleuze and Guattari to demonstrate the instability of any given object, concept, or category. A multiplicity is a thing that is also many other things, including its constituting flows. Multiplicities make up the plane of immanence. According to Deleuze and Guattari (1986, p.8) 'Multiplicities are rhizomatic, and expose arborescent pseudomultiplicities for what they are'.

<sup>13</sup> 'While I'm alive, I'll make tiny changes to Earth'. This lyric was written by Scott Hutchison of the band Frightened Rabbit. It's from the song Heads Roll Off. That song, and the album it's taken from, *Midnight Organ Fight*, has affected my life hugely. For instance, while I was wrestling with postgraduate study in the late 2000s it helped me. It's a lyric that speaks to the micropolitics of Deleuze and Guattari. Scott ended his own life in Edinburgh in early May, 2018, just as I come to the end of another 'attempt'. These events, the rememberings and the losses, push me to wonder at making joyous tiny changes to Earth. Another lyric, 'To enemy, is pointless to anybody that doesn't have faith' reminds me of the freeing ethics of immanence, where faith isn't placed on transcendent principle that blocks you up and shuts you down. The educational resonance of the song, the manner in which, as one commenter on the music video on YouTube put it, the children in the classroom 'have their own rhythm their own dance' reminds me to do the same. The video can be found here: <https://www.youtube.com/watch?v=nBcbDS5AGnk>

by a multiplicity. An event. This does not make it politically neutral. The event has a history.

An asterism is also used on meteorological charts to indicate moderate snowfall. Which I like.

Above all I use asterisms as a demonstration of a middle. A rhizomatic<sup>14</sup> juncture. A place of pause and deliberation for the reader. A place of departure and arrival. When you reach an asterism you can consider what has come through for you, if anything. Where does your thought go now? And, if nothing has come through, try another book<sup>15</sup>. Or try another asterism. Bring your constellations to mine. There are different ways to read a text. Barthes (1975) posits reading as a form of pleasure or bliss. Neither of these are as straightforward as they sound, but Barthes makes the point that reading is an activity in which the reader is constituted, depending on their approach to the text.

### **Becoming a diffractive practitioner**

When I initiated this PhD, or when it initiated me, before, I was interested in trying to provide a broad overview of the implications for what I considered ‘new’ theory (new materialisms, posthumanism, a broad range of theory and points of view in these emerging discourses). I approached the thesis in a cause and effect manner. I walked into my first supervisory meeting with a point by point plan. I had the thesis sewn up, I just had to write it. I thought that emerging theory questioned the nature/culture distinction in a manner that wasn’t very present in outdoor

---

<sup>14</sup> The rhizome is a figuration (practical philosophical concept) described by Deleuze and Guattari to contrast with arborescent organisations of things. Arborescent thought is organised from a central stem. It is a pervasive manner of thinking that often doesn’t allow for new connections to be made. Rhizomatic thinking crosses established categories and works to connect things in a subterranean manner, it allows new cartographies or maps to develop, rather than relying on tracing the image of thought of the tree. In a rhizome thinking can be messy and unordered, it can jump about and establish new relationships; ‘any point of a rhizome can be connected to anything other, and must be. This is very different from the tree or root, which plots a point, fixes an order’ (Deleuze and Guattari, 1986, p.7).

<sup>15</sup> There are different ways of reading, after all. Deleuze and Guattari (2004) suggest that you might find another book, if nothing comes through.

environmental education discourse, and I wanted to provide an overview, and discuss implications. I wanted to provide solutions to the problem. I have really struggled to do this. Rather than gaining this overview, and becoming the expert that a PhD suggests you become, I found myself becoming less sure of things. Perhaps I thought I was already an expert? Perhaps this thesis has been about falling apart? Breaking up? The result is this thesis, which is a palimpsest. Rather than a straightforward telling in one voice, the thesis is a place where different emerging ‘me’s have left their mark. The result is writing that contrasts and juxtaposes. Yet ‘juxtaposes’ sounds too intentional. Perhaps it jars instead? I’ve been told it does, in places. Finding something jarring isn’t necessarily bad. For instance, Benozzo, Carey, Cozza, Elmenhorst, Fairchild, Koro-Ljungberg and Taylor (2018) take up the feminist figurations of the cyborg (Haraway, 1985) – to tackle nature/culture dualisms - and the earthworm (Barad, 2014) – to move beyond reflexivity to ‘returning’– in their writing. For Benozzo et al. these conceptual tools ‘disturb binaries present in the practicings of academic life. However they are put to work ...not to produce a smoothness but to *jar*, disturb and blur the un-sense of writing’ (p.5, emphasis added).

I’m sure there is a jarring in my writing. No doubt you’ve experienced it already. Am I sometimes over confident? Smarmy? Sometimes too doubting? Self-deprecating? There is also an ontological struggle. The struggle between transcendence and immanence. The writing is the event, by the way, it is not a writing up. As a result, I’m afraid I often get lost. For instance, I was persuaded by arguments such as Massumi’s, here, towards the middle of my studies, just as things were becoming more unstable:

This is what process-oriented exploration does: complexify its conceptual web as it advances. It tries not to reduce. It tries not to encapsulate. It does not end in an overview. Rather, it works to become more and more adequate to the ongoing complexity of life. This means that it does not arrive at any final answers. It does not even seek solutions. It seeks to re-pose the problems life poses itself, always under transformation. The goal is to arrive at a transformational matrix of concepts apt to continue the open-ended voyage of thinking-feeling life’s processual qualities, foregrounding their proto-political

dimensions and the paths by which it comes to full expression in politics (taking the world in the plural). (Massumi, 2015, p.xi)

And yet I also struggled to do this. I struggled to not reduce. To not attempt to provide solutions and to simplify. This is present in the palimpsest of the thesis, a geological record of different voices. Different 'me's. Both the getting lost (immanence) and the staying found and grounded (transcendence) of *a* life.

\*  
\*\*

This thesis is perhaps one iteration of what the PhD process, as an education, has done. It is not the only thing it has done, however. It has left affectual torrents that I cannot adequately express here. On my body, but also on the bodies of people close to me (and other bodies, not necessarily human). That is not to say that this thesis is a representation of the PhD process. It is rather to say that the whole process is dispersed, here on this screen or page, but topologically dispersed across other bodies also. It has increased my affectual capacities, by allowing me to think and creating opportunities to affect others, but it also feels as if it has limited my capacities to affect in some ways. As I have said, sometimes I feel more unsure of myself. Less confident. I feel I know myself less. Or that I know myself as potentially – but not quite - more, but don't recognise what I now know. The alien me. I am undergoing a posthuman education that doesn't stop with this thesis, which is only a middle. There are plenty of questions left unanswered. Or rather, the many questions are answers themselves, and so require thought.

So, this thesis is becoming concerned with me, my subjectification, my ethical capacities, my practice as an outdoor environmental educator and 'liver' of theory, and troubling the borders that separate these things. It's becoming concerned with the problems that each of those words (me, subjectivity, ethical capacities, outdoor environmental educator, experience, theory) raise, and dissolving them through each

other. Perhaps it is a type of troubling autoethnography. Whilst not prominent in the higher ranked educational research journals (Gannon, 2017) autoethnographic approaches to research are prominent in reflective practice, and there are a number of examples of researchers employing autoethnography in their doctoral studies (e.g. Lake, 2015; Richards, 2015; Stanley, 2015). And yet, as I discover in time, reflective practice is not really what this thesis is about. It is an attempt, rather, to be more diffractive. To change difference; to attempt a *diffractive practice*<sup>16</sup>. Further, the writing is a form of inquiry itself. Like Laurel Richardson (2001, p.35), ‘Writing was the method through which I constituted the world and reconstituted myself. Writing became my principle tool through which I learned about my self and the world. I wrote so I would have a life. Writing was and is *how* I come to know’, and how I come to be(come). Scratch that. How ~~–~~ come to be. Scratch that. How becoming becomes. The study isn’t ‘about’ one thing. Years of academic training has taught me that I should be clear. That the first sentence in a piece of academic writing should be ‘The purpose of this study is to...’. Well, the purpose of this study is to attempt to undo some of that training. To become more unsure. More unhuman. This isn’t easy. I seem to grope for certainty.

All this to come. For now the thesis is pragmatic, in that it is concerned with how environmental education is configured for me, and how it *might* be configured, both for me, and perhaps people yet to come, in light of a swelling of post-green environmental literature and discourse across a myriad of disciplines. I have been inspired, for instance, by what are being described as the ‘new’ materialisms by authors who have enacted, and are enacting, post-qualitative renderings of a world through novel modes of enquiry, and by various ‘prismatic’, rather than green, takes on ecological thinking. I am interested in my own attempted escape *from* and *to* romantic conceptions of nature. Gilles Deleuze and Felix Guattari are companions in this writing.

---

<sup>16</sup> For more about diffractive practice as method of inquiry see Haecceity 6: The diffractive practitioners.

## Writing the thesis

The style of writing the thesis changes from when I initially began, in late 2015, to me writing this now in the summer of 2018. As I have said, I didn't 'write up' this thesis. I started writing it when I started my studies and consider the change in writing style a testament to the learning I have undergone. In some ways the change *is* the thesis. The text here is a worked thing. A process of making. Many sentences have been written and rewritten. There is much discarded text. However, I have retained earlier writing, especially in Haecceity's 2 and 3, to demonstrate the manner in which my writing has changed through my learning. What at first is a more analytic and traditional approach in these two Haecceities gives way to something that (at the time) I considered more 'practice' focused in Haecceity 4, something more aesthetic and contemplative in Haecceity 5, something collaborative in Haecceity 6, something fractured and uncertain in Haecceity 7, and something that returns to the title of the thesis in Haecceity 8. The writing itself has helped me to learn, to understand the topics I am interested in. In this way, the writing has been the mode of inquiry. I talk more about writing as inquiry in Haecceity 3, for now I want to add a little on how Speedy (2005, p.63) notes that 'writing as inquiry...assumes and articulates a reflexive, situated researcher stance, but does not necessarily dwell there'. Through the process of writing I attempt to leave the dwelling space of 'reflexivity' and reflexive practice, to instead enact something more diffractive. Again, more on this in Haecceity 3, and particularly in Haecceity 6.

A further point that Speedy (2005, p.63) makes is that writing as inquiry:

...assumes and expresses a curiosity or even a thirst for knowledge about the contents of the study, but has no illusions that this might speak for itself. It leaves much unsaid, uncertain, and incomplete. It is, at best, a balancing act between form and content. It is often playful, often poetic, often experimental and often fictionalised. It tends towards distillation and description rather than explanation or analysis. Above all, it attempts to provide sufficient substance to contribute towards scholarship in the field as well as sufficient space to engage the reader's imagination. (Speedy, 2005, p.63)

I hope I get better at this ‘balancing act’ as I write. Certainly, there are different voices in the thesis: the earlier, more analytic voice, and the voice I become in exploring more affectively. At times these voices crop up within each others’ speech. If there is a hope in the thesis, it is to achieve this. It might be obvious by now that the thesis is not a traditional qualitative inquiry, at least as I understand it. This thesis is written differently so that you might ‘plug in’ and have something different come through for you. It embraces an ontology of becoming which attempts the production of something different, something new. Not for its own sake, but to escape molar forces. Honan and Bright (2016, p.3) draw on Gilles Deleuze to argue that this is an imperative in thesis writing:

Our argument, following Deleuze, is that it is imperative for doctoral students *not* to adapt their thinking and writing to what is required precisely because:

The problem is not to direct or methodically apply a thought which pre-exists in principles and in nature, but to bring into being that which does not yet exist (there is no other work, all the rest is arbitrary, mere decoration). To think is to create – there is no other creation – but to create is first of all to engender “thinking” in thought. (Deleuze, 1994, p.147)

If we take the problem of educational research writing to be one of creation rather than application of the pre-existing, then what is required is a style and structure that eschews the already thought; a writing that is against style and structure.

I like to think of the thesis as both art and science; art, in that it is performing an aesthetically appreciable event whilst also being political and ethical, and science in that it is engaged in the production of knowledge in a wholly pragmatic way. Sitting, as I think it does, in between these two, it is yet also, and necessarily, a very specific

inaction of the real. An event. *A* life. A haecceity. It is philosophy as understood by Henri Bergson. Elizabeth Grosz (2005, p.4) describes Bergson's understanding:

For Bergson, philosophy brings to knowledge that which the sciences must necessarily leave out, the continuities and connections that the sciences cannot see in their focus on closed systems and definable and isolatable terms. He articulates that which the arts express more directly than the sciences but can articulate only through an absolute and ungeneralizable singularity: the continuity of the real, the immersion of life and matter in the real, the force and effect of duration. Neither science nor art can stimulatingly grasp both the relentless universal force of difference, and its absolute specificity: as each touches upon one it elides the other. Philosophy functions somewhere 'between' these approaches, seeking the two-faced movement of universalization and particularity, of generalization and individuation, through that which united them: the dual force of duration, the double duration of past and present, the virtual and the actual, which is the movement of difference.

The philosophy enacted here is a pragmatic and aesthetic one. Three strands run *and* converge and impact in the writing. They are three, yet they are a multiplicity also. This is a three-way (but multiple) diffraction<sup>17</sup> drawing on broad new materialist literatures, environmental education theory/research discourse and post-structurally informed post-autobiographic/ethnographic inquiry, drawing on my work as an outdoor and environmental practitioner and practicing researcher. Like Van der Tuin and Dolphijn (2012, p.14) the argument is 'not "built up" in this book: its chapters are not dependent upon one another for understanding their argument...there are many different transversal relations between them'. In terms of precedents in

---

<sup>17</sup> Diffraction is the effect of things coming together and being worked through each other: 'Diffraction is an iterative practice of intra-actively reworking and being reworked by patterns of mattering. A diffractive methodology seeks to work constructively and deconstructively (not destructively) in making new patterns of understanding-becoming' (Barad, 2014, p.187).

environmental education research, Affifi's (2008) attempt to explore thesis writing as a form of environmental education perhaps comes closest. Affifi (2008, p.2) writes:

I realized that I continue to teach as I continue to live, and that an "environmental education" (EE) curriculum was emanating at all times from my actions, whether I wanted it or not. I realized that there were some things I could do to make this curriculum more "educational", and even though I had no idea how, I thought I should begin to make my very act of researching and writing this thesis better environmental education.

This thesis thus moves to become a form of environmental education which acknowledges that environmental education emanates 'at all times', including now in this writing and your reading. However, and in distinction from Affifi's (2008) work, this thesis attempts to move beyond what I perceive as green ecological renderings of the environment, to acknowledge that the environment is all (including concepts and human produce), and that, for me, this comes to have troubling implications for the ethics upon which to base environmental action and pedagogy. I'm not sure I succeed at this. It doesn't seem like something you finish.

There is a degree of 'auto-citing' in this thesis that may seem more than the norm for academic work. There is a danger that this might be perceived as arrogance, but I hope it isn't read as such; it is rather another means of highlighting the 'subject' of the thesis; the 'me-thesis' becoming. I cite my previous work, often work done with Jamie, to highlight my becoming an academic; to demonstrate where threads of my thinking have developed from and are headed to. It is the same for an email exchange I include, where another academic reaches out to discuss a paper I co-authored. I don't dwell on the thanks, but rather explore the affective nature of what my writing might do. Similarly, and again later in the thesis, I dwell for some time on an unpraiseworthy blogpost that a senior academic wrote about some of my work.

## Voices and images

One of my supervisors has asked how I use voice in my writing. I agree with Mazzei and Jackson (2016) who in turn echo Gilles Deleuze and Spinoza – the universe is ontologically univocal. When ‘I’ speak in this paper, ‘I’ am not really speaking (ontologically) alone, ‘my’ voice being historicised, embodied, and material-discursive. ‘I’ cannot be asking the reader to take what ‘I’ say ‘at face value’ – the face is already decentred. Likewise, when I include other ‘voices’ –Mazzei and Jackson, or Deleuze for example - I am thinking *with* (intra-relationally), rather than *against* or *for*. This is a movement in both ontology and the nature of academic critique; towards the gathering (Latour, 2004; Ivakhiv, 2014) or what Taylor (2016a) calls a generous critique.

We move toward positing voice in qualitative educational research as a thing that is entangled with other things in an assemblage (Deleuze & Guattari, 1987) that acts with an agential force (Bennett, 2010b). We do this by (re)configuring voice: we refuse the primacy of voice as simply spoken words emanating from a conscious subject and instead place voice within the material and discursive knots and intensities of the assemblage. Thus, we do not ‘calibrate’ voice to the human, nor do we attend to voice as ‘either pure cause or pure effect’ (Barad, 2007, p. 136) via human intentionality. Rather, we account for voice as a material-discursive practice that is inseparable from all elements (human and non-human) in an assemblage (Mazzei and Jackson, 2016, p.1).

There is a form of collaborative writing at work here then, that moves even beyond the authors I draw on, for, like Deleuze and Guattari (2004), I understand myself as multiple and, like Speedy (2013), bodies and environments are co-authors here. On this plane ‘my’ free will to choose the direction and nature of my writing is located not in my being, but in *a* doing (Jackson, 2013), which is already an assemblage.

In this regard, Deleuze and Guattari (1980/1987) explained that the material/linguistic distinction does not work in their ontology, “There is

no longer a tripartite division between a field of reality (the world) and a field of representation (the book) and a field of subjectivity (the author)” (p. 23). The hierarchy that enables the privileging of the material in the material/textual dualism is not thinkable in their ontology, and the “just textual analysis” distinction doesn’t make sense. (St. Pierre, 2014, p.12)

This is what I am attempting, at any rate. When I use a quotation, such as the one above, I am hoping to be generative, rather than representational. I am hoping that they speak to the reader. That they perform as data. Perhaps they can be perceived in the same way as participant interviews, or field notes, gathered from the world and inserted here for the reader. Another way to think of them might be as the material-discourse with which the thesis is crafted, and the crafted thesis as the thing that only becomes when it is read. Deleuze and Guattari imagine texts as operating in a performative sense:

...the way *A Thousand Plateaus* is written is very intuitive and kinetic. it's very unlike most other philosophy writing: D&G don't really try to explain in plain language what they are doing. rather they just keep going round and round on this one concept. improvising around a theme. it's like jazz.

it's supposed to affect you more than tell you things. (Lin, 2016, n.p.)

This is a difficulty I struggle with in the thesis. The line between attempting to affect -the reader, myself - and the constant urge to represent, to give an answer, to work out the problem. This is the becoming of the thesis, perhaps. The becoming ‘post’. And then there is the problem of becoming. This going ‘round and round’ on a theme. I hope this becomes a felt refrain. Like a rhythm or a hum. Deleuze and Guattari suggest that the refrain wards off music. I understand this as the refrain constituting an oscillation *before* identity. That is what this thesis is.

The performativity of text is not limited to quotations. Bridges-Rhoads (2017) puts it this way:

Movement happens as quotations from texts I've read, words someone said earlier that day, memories of a time I thought something similar yet different materialized for me to think with. Easy separations between thought, content, form, and process crumble in favor of an entangled mess that affirms the not-yet-thought. (2017, p.4)

Because of this, a number of elements repeat themselves across the haecceities. I don't want to isolate separable themes, but there is a certain (re)turning to the eventing nature of the process of writing, to practise as lived, to the question of immanent ethics, and relating each of these to attempting to overcome nature as distinct from culture. This is never a full repetition, as such a thing is impossible. I am with Sellers (2009, p. 8) when she states:

The (ad)venture has been to make all these plateaus work singularly and together, acknowledging a refrain of ideas risks repetition, although as circles of convergence each (re)connecting is in different space-times of thinking and brings with it other concepts interrupted, such 'repetition' opens (to) other understandings.

These repetitions are like refrains that emerge from the process. This isn't a weakness, they offer 'other understandings' at each juncture. There is something of a progression in the writing as well; narratives from my personal life as a voice somehow detached from the theory are slowly brought together in the writing. These voices are sometimes given different fonts and sometimes different page justifications to subtly suggest differences and relationships.

Images operate in a similar fashion in the thesis. Deleuze was not a great fan of the photograph. He thought it a manifestation of a representational image of thought. I rather hope that the few photographs that are in the thesis perform and help the

reader make connections for themselves in their becoming with the thesis. To this end I often leave photographs unlabeled.

### **Haecceities to come:**

The thesis is constituted by haecceities, rather than chapters. A haecceity is a philosophical concept forwarded by Deleuze and Guattari which prioritises the *thisness* of a thing or event, rather than considering a thing as assignable to pre-given delineated sets depending on its *whatness* (quiddity), or identifying characteristics. This move allows a novel methodological approach whereby the haecceities act as sites of variation on the themes of the thesis. A brief description of each haecceity follows below.

*Haecceity 2: New materialisms and this thesis.* In this haecceity I begin by writing back to myself from nearer the end of the thesis. At least, I do this initially. This haecceity details philosophical materialism, and new materialisms, as approaches to contemporary theorising and inquiry, and discusses how they have been taken up in environmental education to date. However, the voice from the end of the thesis critiques the manner of this writing. Through this juxtaposition, I explore my becoming an academic writer through the thesis process. The voice from the end of the thesis, realising that a judgmental critique is not an immanent critique and may not leave space to grow, leaves the dominant voice to continue its journey through the thesis.

*Haecceity 3: Research fuzziness: making the thesis.* In this haecceity I inquire into the type of inquiry I am enacting in this thesis. The terms ‘fuzzy’ and ‘fuzziness’ seemed to fit in describing something present yet indistinct. Deleuze and Guattari (2004) use ‘fuzzy’ to describe an opposition to axiomatic approaches, where the taken-for-granted is operationalised. For them ‘the axiomatic manipulates only denumerable sets, even infinite ones, whereas the minorities constitute “fuzzy,” nondenumerable, nonaxiomizable sets, in short, “masses,” multiplicities of escape and flux’ (Deleuze and Guattari, 2004, p.519). These ‘fuzzinesses’ thus try not to

take method for granted. They also move across ‘denumerable sets’, or pre-given categories to posit vague problems and directions of methodological consideration that have influenced the thesis.

*Haeceity 4: Becoming rocked.* In this haeceity I juxtapose some stories of my practice as an outdoor environmental educator with coming to understand new materialist and Deleuzian critiques of Nature. I begin with climbing with students in Fontainebleau forest in France and move through critiques of the Anthropocene and various takes on ecology as either shallow, deep, dark, or flat. I discuss a particular excursion on Mount Tryfan in North Wales, and posit that a flat ecology could allow educators to experiment with notions of the real with students, particularly with the idea of mapping *haeceptical selves*.

*Haeceity 5: Practicing environing education: affects, concepts, practice.* In this haeceity I draw further events of practice through each other. Twist them together. Juxtapose them. Or jar them. I take instances of practicing environmental education to see what writing, experimenting, and iteratively re-turning to events of environmental education as I experience it as a becoming academic pushing at the borders of subjectivity does. I explore the affective becoming of these immanently-lived environmental educations - becoming *environing education* - with other aspects of my life. *A* life. For instance, I write with the sea and snorkeling in the north west of Scotland. I write with a day out with postgraduate students in Holyrood Park, Edinburgh. And I write with the book *Pure Immanence: Essays on A Life* by Gilles Deleuze (2005). These three narratives rise and fall in this haeceity. They bob against each other, providing the opportunity for the reader to make connections where they see them. I do this in an attempt to enact a drawing of concepts, practice and affects through each other. I attempt to write transversally, cutting across the boundary of difference between theory and practice to instead create theory-practice and practice-theory.

*Haeceity 6: The diffractive practitioners.* In this haeceity my colleague, Jamie Mcphie, and I perform collaborative writing as inquiry to write-think-do environmental education as *environing education*. We present a dialogical exchange

enacting diffractive practice, where the events of a day of outdoor environmental education with a group of postgraduate students on Walney Island, Cumbria UK, are passed back and forth between the authors to trouble stratified notions of environmental education practice. Through thinking with each other, our places of encounter, interactions with students, educational and philosophical concepts, and Walney Island, we arrive at a kernel of something new; a becoming alien.

*Haecceity 7: Practicing immanent ethics.* In this haecceity I struggle with the aliens within and the ways I am an alien without. Scratch that. The aliens that lie, transversally, across any fictitious boundary of the Self. By alien, I don't mean little green men, but rather the others that I already am and that I become. Or that are before I am as I occur. The conversation between these aliens is an ethical one. It is also one about ethics. Or perhaps this is the same thing? The inquiry is always ethical; towards matters of concern. A struggle with ethics dwells in this thesis as a faint refrain. Here I take up the conversation more directly, for now at least.

*Haecceity 8: Another, different, middle.* In this haecceity I end without ending. I partly agree with Ben Highmore (2010, p.135) when he writes that a 'commitment to descriptive entanglement is hard to sustain for long and harder still to shape into academic conclusions'. I feel I could keep on entangling, and indeed I do, a little. But I agree that academic conclusions are hard to gather from threads which complexify. In this haecceity I discuss becoming an academic and possibilities for enhancing my capacities to affect and be affected. Further to this, I forward contributions of the thesis as being an example of what an enviroing education might teach, and as a form of writing-as-inquiry that explores living ethically in the face of environmental concern on a post-environmental plane: a protean post-ecobiography.

## **Haeceity 2: New materialisms and this thesis**

I begin this haeceity by writing back to myself from nearer the end of the thesis. At least, I do this initially. This haeceity details philosophical materialism, and new materialisms, as approaches to contemporary theorising and inquiry and discusses how they have been taken up in environmental education to date. However, the voice from the end of the thesis critiques the manner of this writing. Through this juxtaposition, I explore my becoming an academic writer through the thesis process. The voice from the end of the thesis, realising that a judgmental critique is not an immanent critique and may not leave space to grow, leaves the dominant voice to continue its journey, through the thesis. The voice from the end of the thesis is signaled by a change in font.

\*\*

What is a minor literature? Deleuze, Guattari and Brinkley (1983) note that the first characteristic is that it is the way the minority overtakes and deterritorializes the major language. Following this, the second characteristic of minor literatures is that:

everything in them is political...Minor literature...exists in a narrow space, every individual matter is immediately plugged into the political. Thus the question of the individual becomes even more necessary, indispensable, magnified microscopically, because an entirely different story stirs within it.  
(Deleuze, Guattari and Brinkley, 1983, p.16)

I am starting here with a minor literature in an attempt to become micropolitical.  
I'm a time traveller. I come from later in the thesis. Pages and pages away. But I

operate in Aion time. Free to move in time as a singularity<sup>18</sup>. Let me show you something. A way of writing from nowhere. A way of writing in Chronos time, as if there exists a linear arrow of time that unfolds space as it passes. In the writing I will show you, written as a majoritarian literature, I can perform what Haraway (1988, p.581) calls ‘the god trick’; The claim to be able to see everything, and yet not exist yourself. It’s a different Dave writing to the Dave, the me, sat on my sofa now in Edinburgh, Gemma, my wife, changing my son’s nappy as he pants, animal like. A Dave in the past. I’m embarrassed to show you him. What was he thinking?

Real history undoubtedly recounts the actions and passions of the bodies that develop in a social field; it communicates them in a certain fashion; but it also transmits order-words, in other words, pure acts intercalated into that development. History will never be rid of dates. (Deleuze and Guattari, 1986, p.81)

My body, as I write this, is pressed against the sofa and tired from a broken night of sleep. A broken night. A broken super-swell of dreaming in grey and purple. Of what will happen. An old friend. The strangeness of walking or climbing through tunnels and clouds. And then the wakening. And Fen and Gemma. Fen calling out. Scared. What does a six week old fear? What are his dreams? Again, I think of the future. Of scary articles about climate change. Again, I think about futility in academia. About academic careers in environmental education. What is that? A voice from the past?

---

<sup>18</sup> A singularity, for Deleuze and Guattari, is more than just a single instance. A singularity is ‘a potential to become in a distinct way’ (Colebrook, 2002, p.75). In this sense it is a feature of the plane of immanence. The plane of immanence is the limit category, there is nothing outside it. Deleuze and Guattari state that this single phylum consists of ‘the flow of matter in continuous variation, conveying singularities and traits of expression’. Importantly for this thesis the ‘operative and expressive flow is as much artificial as natural: it is like the unity of human beings and Nature’ (Deleuze and Guattari, 1986, p.406).



### ***His story of materialism***

The theoretical ground for this inquiry is the recent turn to materiality in academic discourse. Traditionally materialism is a monist ontological position that claims the primacy of the physical and material. In this way, it has generally been differentiated from dualist or pluralist ontologies which assume categorical, pre-physical or otherwise incorporeal features of the world. As a philosophical orientation materialism has historical roots traceable to before 600 BCE including the materialism prominent in the Indian schools of Cārvāka and Ājīvika, which are atomist in nature, as well as materialist aspects of Jainism and Buddhism, prominent in the Indian classical period. Concomitant materialist thought developed in Ancient Greece due to its close ties with the near and middle East in and around the mid-500s BCE. Indian philosophy likely greatly influenced thought in the Mediterranean classical world due to shared origins in the Bronze age civilisations of the near East, inclusion within the sphere of influence of the Persian Empire, and the trade that existed between Greece and India in the Alexandrian and Roman periods (McEvelley, 2012).



See how he sets out the stall, that old Dave. Tells one story as if there is only one story. This isn't a history, but a *his* story. It has a patriarchal, Western inflection that doesn't see other histories, other *her* stories, *others'* stories. It doesn't tell one story as if there are many.

That is environmental writing. This is environmental writing. This is environmental reading. They all practise the environment. They enact environmental educations. The writing above creates a reality that teaches. A

story that may be picked up by the reader; that it is possible to live outside of the world. That it is possible to tell *the* story. Yet, there is a materiality here, in the doing of this writing I am present. Or, an event is presenting. In the reading, your reading, an event is presenting.



Subsequently pre-Socratic Greek thinkers also developed philosophies drawing variously on the material. Thales for instance held that water is the origin of all matter, and Leucippus and Democritus each developed atomistic materialist philosophies, claiming the world to be made up of an infinite number of physical, indestructible parts. Anaxagoras, Epicurus and Heraclitus are other Greek philosophers whose metaphysics are largely materialist in nature (Burns, 2000). Richard Swinburne identifies Aristotle and Plato as ‘substance dualists’, retaining a notion that minds and bodies are made of ontologically distinct materials, a view that lingers in modern frames of knowledge (Alston and Smythe, 1994). In pre-Roman Europe Celtic animist traditions were grounded in ontologically material conceptions of the world (Green, 1997). The field of ‘contemporary animism’ has recently arisen to explore the role that materiality, as conceived as vibrant or alive, has played in many pre-literary as well as modern non-western cultures in the Americas, South East and Central Asia and Australia. The term ‘contemporary’ is used to differentiate this approach from the naïve anthropology practiced by Edward Tylor, who perceived animism as a primitive form of religion, rather than an alternative and legitimate metaphysical orientation which expands definitions of life and consequently relationality and responsibility. Drawing on archaeological and anthropological work there is a suggestion that relational material ontologies may well be very ancient (Harvey, 2013).



I can feel how I have changed since I wrote this. I'm bored by this writing. This is  
hardly an attempt at immanence.

History is always written from the sedentary point of view and in the name of a unitary State apparatus, at least a possible one, even when the topic is nomads. What is lacking is a Nomadology, the opposite of a history. (Deleuze and Guattari, 1986, p.23)

Deleuze and Guattari are awash with nomads<sup>19</sup>. They wander from established category to de-established uncategory. Nomads appear situated in a smooth space<sup>20</sup>. A nomadology is particular but not bounded: 'The variability, the polyvocality of directions, is an essential feature of smooth spaces of the rhizome type, and it alters their cartography.'

---

<sup>19</sup> Deleuze and Guattari (1986, p.118) introduce the nomad as a 'countersignifying semiotic'. That is, rather than thinking metaphysics in terms of settled states, of static objects, or of essential power structures, we can think nomadically. Nomadic thought 'marks a mobile and plural distribution, which itself determines functions and relations, which arrives at arrangements rather than totals, distributions rather than collections, which operates more by breaks, transitions, migration, and accumulation than by combining units' (Deleuze and Guattari, 1986, p.118). According to Rosi Braidotti (2011, p.2), nomadic thought is also 'a form of self-reflexivity unfolding in perpetual motion in a continuous present that is project oriented and intrapersonal', this is the manner in which nomadic thought is practised here. 'Place' is understood not as a delineated geographic location, but materially topologically placed. That is the manner of this inquiry.

<sup>20</sup> Deleuze and Guattari (1986, p.381) state that the nomad distributes itself on a 'smooth space'. That is to say that it does not move about in space, nor does it dwell statically in place. Rather it is constantly decomposing, or rather, its territory is a decomposing Earth, a deterritorializing Earth. It never *arrives*, or: the Earth that it is on, the environment it is 'of', never arrives. It is rather *environing*. This understanding is an ontological point, as it means that the nomad views the Earth as in process: 'If the nomad can be called the Deterritorialized par excellence, it is precisely because there is no reterritorialization afterward as with the migrant, or upon something else as with the sedentary (the sedentary's relation with the earth is mediatized by something else, a property regime, a State apparatus). With the nomad, on the contrary, it is deterritorialization that constitutes the relation to the earth, to such a degree that the nomad reterritorializes on deterritorialization itself. It is the earth that deterritorializes itself, in a way that provides the nomad with a territory.' (Deleuze and Guattari, 1986, p.381).

The nomad, nomad space, is localized and not delimited' (p.382). Nomadic writing is placeful whilst not *being in place*.

Where am I? What is occluded in this history? This *his* story without him.

objectivity turns out to be about particular and specific embodiment and definitely not about the false vision promising transcendence of all limits and responsibility. The moral is simple: only partial perspective promises objective vision. (Haraway, 1988, p.582-593)

Haraway (1988) calls for a situated knowledge. She means to reclaim objectivity as feminist, acknowledging that all narratives of objectivity position the mind, body, distance and responsibility in certain ways. Rather than the distance and irresponsible objectivity of the dominant Western gaze, Haraway (1988) posits that:

A feminist objectivity is about limited location and situated knowledge, not about transcendence and splitting of subject and object. It allows us to become answerable for what we learn how to see. (1988, p.583)

To become answerable. To combine ethics with epistemology and ontology. I'm sat in my flat in Edinburgh, once more, after just coming in from the office. I thought I was finished working for the day. My head was aching.

But now I see I have my laptop open. I've opened the file called 'wholething'. I look at the word count. 89860. How funny. That number didn't count as a word. 89869. I look at the 'date last opened'. 17th November 2017. It's the 6<sup>th</sup> March 2018 today. I've been putting off coming back here. Coming back to this mess I've created. I've been enjoying the other spaces I've been writing in. The blank

pages, without the built-up crud of nearly three years of attempting to write this thesis. But I had to come back. I had work to do. And work to undo. Thinking environmental education with situated knowledge practices has recently been invoked in environmental education (e.g. Blyth and Meiring, 2018; and Gough and Whitehouse, 2018; both cite Haraway's 1988 paper). That does not mean the approach is prominent. And it does not mean it is easy. Dave, that Dave is in transfer. Is transferring. Feels now, in this writing, as if he is transgressing. Breaking down the image of academic thought. Trying to write a materiality whilst being material.

\*  
\*\*

In the 1300s the Christian Philosopher Duns Scotus forwarded a metaphysics of univocity, whereby the world, or being, is uttered with one voice (i.e. God), rather than several (i.e. God speaking and things existing independently of him and themselves) and giving rise to the concept of haecceity – as something processually *of* being, rather than *a* being. Univocity is an important concept for the 20<sup>th</sup> century philosophy of Gilles Deleuze, and is analogous to his concept of the plane of immanence – here difference in itself (rather than identity) is spoken univocally (Widder, 2009). However, in the 1600s Rene Descartes developed a natural science philosophy of dualism which has as a first principle the separation of mind from the physical world. In contrast to this dualist approach, skepticism of the existence of an incorporeal human mind or soul was provided by Thomas Hobbes in *Leviathan*, the work of John Locke, as well as Pierre Gassendi's early specific criticisms of Descartes' metaphysics (Wilson, 2016). Nonetheless, Descartes' metaphysical dualism has taken root as arguably the default ontological position of understanding within the Western world and has greatly influenced the development of industrial, post-industrial, modern and postmodern institutions, including both education and environmental studies. In the modern era, Karl Marx and Friedrich Engels articulated what has been the most prominent position in theorising materialism. Influenced by

the materialist philosophy of Ludwig Feuerbach, Engels' and Marx's development of *historical* or dialectical materialism, based on an inversion of Hegel's dialectic idealism, is both social analytic method and ontological position. Their focus on the physical and material distributions of means of production have been hugely influential in political science and economics without challenging inherent ontological dualisms per se. Concomitantly, and throughout the 20<sup>th</sup> century, process philosophers, particularly Alfred North Whitehead, Henri Bergson and Gilles Deleuze, developed philosophies that explored the non-static nature of reality. Elsewhere Jamie and I have laid out new materialist positions in relation to process ontologies, philosophies of mind and contemporary animism (Mcphie and Clarke, 2015).

\*  
\*\*

Why do I show you this? Why don't I rewrite it in a creative manner? Well, maybe this talking back is creative itself. It allows a conversation to develop. It demonstrates different modes of thought. Perhaps it allows the reader to see my becoming. It allows comment on the genealogy of my writing. Of the thesis. I won't deny, it's also expedient to write like this. But it offers opportunities for my thinking. I can think with what I have written and where I am now. Where we are now. Where of is now. A diffractive encounter of past and present. Indeed, changing the past in the present (Barad, 2007). As I have said, one of my initial intentions for the study was an *application* of theory, as if theory is anything other than lived. As if theory was separate from life.

But is this honest? Why include the history at all? I suppose partly I don't know who I am writing for, or to. Yet, how honest is this? I have some ideas of who I would like to examine the thesis. Ostensibly, the thesis is

for me, a space to diffract my practice, as an educator, as a researcher, as a person. But then, why show it to you, reader? Why not write it and then put it on a shelf, so to speak, or delete it? No, there are other reasons for writing it, unsaid reasons. I want a PhD for all sorts of reasons, some of which I come to later in the thesis. This writing is not *just* an attempt at diffractive practice. It's also a manifestation of desire. Desire for diffractive practice, but also desire for the PhD. Desire for it to be over. Desire for the next stage in my life. Desire that isn't even *my* desire. It's desire that constitutes me. Desire as ontological process. All the stories of academic success gone before. The story of *the* career. The story of *the* secure job. The story of *the* PhD as the pinnacle of academic success.

These stories are embodied through me, before me, and after me in others. Desire wants to achieve these stories. And so, it's hedging its bets. It stands with a foot in each stream; the minor and the major. It wonders 'who do I need to convince?'. Desire is afraid of the viva. It is afraid that this writing, that doesn't tell a history of materialism, that instead plays at performance, is too risky. But it's also afraid of the other writing, that a history of materialism won't let it *pass*.

Carol Taylor (2016) puts it this way:

These forces encourage us—give us heart to—resist the tyranny that requires academic writing to display Depth, Surface, Essence, Appearance, and Competence in favor of instantiating the practices of Performance, Authenticity, Pretence, Truth, Lies (MacLure, 2005) which, although often castigated as “frivolous,” are more likely as practices to help recover some of the gleeful fun of playing with ideas that Derrida thought should be the provenance of universities (Myerson, 1997). It may be that such writing is risky. It may be, as Barthes (1953) notes, that writing which works against the modes established “under the pressure of History and Tradition” may be “a mere moment” (pp. 16-17). It may also be that such writing provides examples of personal commitment and imagination that Sword (as cited in Badley,

2011) thought was needed. The exemplars for doing this are beginning to multiply—but how might I do this? (Taylor, 2016, p. 2)

I was initially drawn to Taylor's question myself. How might *I* do this? But now I see that it is not really 'me' asking this question (or me doing *this* seeing). It is desire asking how it might continue. Desire is not one thing. It is multiple. But it is historical and therefore economic. The desire that writes here is, at least in part, a capitalist desire. Eve Tuck mentions this:

Democratic capitalism, which cannot reconcile itself, is the context of Deleuze and Guattari's incongruous desire, which is also irreconcilable. It is desire's nature of being unresolved and self-incompatible that makes desire *productive*. (2010, p.640)

The incongruity is present in my writing. Desire is manifest in the 'Depth, Surface, Essence Appearance, and Competence' of academic writing as well as the 'Performance, Authenticity, Pretence, Truth, Lies' of more open, creative writing. Desire, manifest through me of flows of capitalism, romanticism, westernism, androcentrism, environmentalism... and perhaps, hopefully, a potential to destabilise these flows. The genealogy of the amorphous becoming Dave.

As a minor voice, I dissipate now. The majoritarian Dave has a road to travel before he writes like this. I hope you see the minor cutting through at times, and perhaps gradually eliding the major that, for now, takes over as a starting place from which to grow.

\*  
\*\*

### **What's so *new*?**

The 'newness' of theory that positions itself as new materialist is of particular debate. The arrival of materialism is something of a recrudescence, being not necessarily new; though arriving at a time where it is, by definition, effecting ways of thinking the contemporary, and thus producing the new. Indeed, some significant articulations from within it state that everything is always new, in some way becoming other than it was. Coole and Frost (2011) suggest a 'renewed materiality', which draws on a long heritage of materialist thinking. Alternatively MacLure (2015) draws on Brian Massumi to suggest:

As the diversity of terms indicates, contemporary materialisms draw on and revitalise a wide range of theories and ideas. Brian Massumi (2002: 4), noting the multiplicity of intellectual currents that flow through the work, takes issue with its characterisation as 'new', suggesting that we think instead in terms of 'conceptual infusions' into an emerging programme of materially-informed thought and practice. (MacLure, 2015, p.4)

Consequently the 'material turn' has been characterised as both an academic turn, and an academic (re)turn. Termed a turn because it is a movement that is substantial, appearing within and often forging social science and humanities discourse in, for example, architecture, anthropology, performing and visual arts, geography, and of course, education. And positioned as a (re)turn because of the prevalence of materialist ideas from post-structural thinkers present within it; thinkers whose ideas about language were held more prominent in the linguistic or discursive turns (St. Pierre, 2014). The discussion of the 'newness' of these movements is perhaps beside the point. It is the case that theoretical positions aligned with the moniker 'new materialisms' are greatly influencing debates across discipline areas in the humanities and social science. It is, rather, the opportunities that our present situation affords which is of concern. In their recent collection entitled *Pedagogical Matters:*

*New Materialisms and Curriculum Studies*, editors Snaza, Sonu, Truman and Zaliwska (2016, p.xxix) note:

New materialisms gather together a range of ideas that have been taken up before, both in and outside of curriculum studies, but we think this gathering offers us a crucial chance to look at our practices as educators again, differently, more closely perhaps, as a gesture toward the emergence of new political action.

Though there is no agreed definition or demarcation between the discursive and material turns, there is a sense in which theory and research have become more concerned with ontology.

Within Environmental Education, Payne (2016) has signaled awareness of the non-newness of theory which returns to circular debates regarding the priority of construction or discourse of reality or ontology. Similarly, writing in *Children's Geographies*, Rautio notes:

...the 'new' in new materialism does not have to refer to the alleged culmination in a theoretical understanding. Rather 'new' is said to refer both to the newness of the challenges and problems we face due to the complexities of twenty-first-century biopolitics and to the novelty and variety of approaches that these challenges call for (Rautio, 2013, p.396)

The terms 'new materialism' and 'neomaterialism' were coined by both Rosie Braidotti and Manuel DeLanda independently of each other in the second half of the 1990s (van der Tuin and Dolphijn, 2010). However, a move to materialist process thinking in the social sciences can be traced to Latour and Woolgar (1979) as well as having links to other process philosophies of the 20<sup>th</sup> century. i.e. the work of Alfred North Whitehead and Gregory Bateson. Whilst not materialists per se, both these figures have effected the manner in which contemporary philosophers consider the world to be in states of flux and relation. Whitehead, for instance, critiques the idea

of 'brute' matter, a critique that new materialists would agree with. New materialisms has become an umbrella term used to encapsulate a general academic turn towards considering ontology in light of contemporary political and environmental events and their historical antecedents. This overview provides an acknowledgement of the potential deep implications that new materialisms provide for considering theory, research and practice in environmental education. Whilst I have been interested in the potentials of the new materialisms for *thinking* environmental education for the past few years, and have explored some directions, I claim no mastery of the topics, nor answers to the questions proposed by this meeting of movements of thought (Clarke, 2017; Clarke and McPhie, 2014, 2016; McPhie and Clarke, 2015).

What, then, are new materialisms? Whilst encapsulating a broad move toward ontology, there is no singular definition. We are all material beings constituted of a material world, yet materialism only appears sporadically and marginally in the history of philosophical thought (Coole and Frost, 2010). The main thrust of the new materialisms is a claim to take up philosophies of matter once again. New materialists posit that, philosophically speaking, social science in the last several decades has paid particular attention to subjectivity, at the expense of considering matter, due to a perceived inaccessibility of the material world.

There is an apparent paradox in thinking about matter: as soon as we do, we seem to distance ourselves from it, and within the space that opens up a host of immaterial things seems to emerge: language, consciousness, subjectivity, agency, mind, soul; also imagination, emotions, values, meaning, and so on. These have typically been presented as idealities fundamentally different from matter and valorized as superior to the baser desires of biological material or inertia of physical stuff. It is true that over the past three decades or so theorists have radicalized the way they understand subjectivity, discovering its efficacy in constructing even the most apparently natural phenomena while insisting upon its embeddedness in dense networks of power that outrun its control and constitute its wilfulness. Yet it is on subjectivity that their gaze has focused. Our motivation...has been a conviction that it is now time to subject objectivity and material reality to a similarly radical reappraisal (Coole and Frost, 2010, p.2).

Whilst there are disparate strands in the new materialisms, there are of course affinities between theories that have attempted to move beyond discursive or linguistic accounts. Connolly (2013) for instance, acknowledges that whilst escaping discourse seems difficult, we have never been able to truly escape matter, and so new materialists offer various forms of contestable metaphysics. Specifically, new materialist theorists ‘find it essential to bring such a cosmology into play in concrete explorations of ethics, state politics and global politics, exposing by contrast and comparison as we do so conventional cosmologies now tacitly in play in the human sciences’ (Connolly, 2013, p.400). The political effects of troubling pre-given ontologies is perhaps one of the fundamental characteristics of the various new materialisms. For instance, there is a general troubling of the concepts that are often taken, ontologically, as relatively stable in developing policy, theory and research approaches. New materialisms ask questions about what agency is and where it is located; the axiomatic distinctions between what is ‘natural’ and what is human or human derived; as well as the possibilities of expanding the concept of ‘life’ beyond the solely organic, as in Jane Bennett’s (2010) *Vibrant Matter* and materially informed contemporary animism (Harvey, 2013). This troubling of established dualisms is spearheaded by attempts to articulate forms of protean monism (Connolly, 2013). For instance, in reference to the nature culture dualism, van der Tuin and Dolphijn (2010) offer:

New materialism is a cultural theory that does not privilege culture, but focuses on what Haraway would call ‘naturecultures’. It explores a monist perspective of the human being, disposed of the dualisms that have dominated the humanities until today, by giving special attention to matter, as it has been so much neglected by dualist thought. New materialism, a cultural theory inspired by the thoughts of Deleuze, that spurs a renewed interest in philosophers such as Spinoza and Leibniz, shows how cultured humans are always already in nature, and how nature is necessarily cultured, how the mind is always already material, and how matter is necessarily something of the mind. New materialism opposes the transcendental and humanist (dualist) traditions that are haunting a cultural theory that is standing on the brink of both the modern *and* the post-postmodern era.

New Materialisms is not one thing. For instance Speculative Realism (often in the form of Object Oriented Ontology, or OOO), Feminist New Materialisms, as well as an emerging Material Ecocriticism are prominent labels that have arisen, amongst others, to engage with the binaries highlighted above.

### **Object Oriented Ontology**

‘OOO’ is a term coined by Levi Bryant, after his engagement with the object oriented philosophy of Graham Harman (Harman, 2015). OOO has much in common with other threads of the new materialisms, including a rejection of anthropocentrism. However it is defined by a particular take on ontology that retains the ‘objects’ which are often dissolved by other new materialist positions for being themselves anthropocentrically established. The focus on objects occurs as an attempt to overcome the problem of correlationism (that our observations of the world always retain subjective elements - there is no knowing the world or a given thing in itself; to say anything of the world is always also to say a correlate of our own thinking). Proponents of OOO thus offer various means by which to overcome both anthropocentrism and correlationism. In OOO the real is constituted by things that ‘are objects, not just amorphous “Matter,” objects of all shapes and sizes, from football teams to Fermi-Dirac condensates or, if you prefer something more ecological, from nuclear waste to birds’ nests’ (Morton, 2011, p.165). However, OOO adds several important stipulations to this position. For instance, in OOO objects retain an ‘irreducible dark side’, a position derived from Husserl but which is manifest here not in subject-object relationships, but object-object relationships (Morton, 2011).

Objects withdraw from each other (Harman, 2015). Further, everything is an object, from dogs and tractors to climate change and ourselves. Even ‘relations’ (and ‘intra-relations’) are objects. Within this field the works of Ian Bogost (*Alien Phenomenology*), Levi Bryant (*The Democracy of Objects*), Timothy Morton (*Hyperobjects*) and particularly Graham Harman have gained a significant following. OOO appears perhaps the least politically concerned of the new materialisms (so

far). Indeed exploring the relationship of politics to OOO has been critiqued as itself correlationist (Bryant, 2009) and, in contrast, as an important consideration for future work in OOO (Bryant, Srnicek and Harman, 2011). More recently Bryant has considered the implications of speculative realism for a critical pedagogy in the face of apocalypse. Interestingly for one of OOOs major proponents Bryant takes up a Deleuzian terminology of machinic assemblages of production in developing a pedagogy to tackle environmental crisis through considering our ontologies of everyday life (OEL) (Bryant, 2015). Other OOO scholars explore how the problems which we face are about coming to terms with the indisputability of objects, or, as Morton (2011) terms the stuff of the world, *strange-strangers*, rather than attempting to escape to an all encapsulating ‘Nature’ of modernism, or the ‘Non-Nature’ of other new materialist positions:

The problem (ecological, political, mathematical, ontological) isn’t what we call “subject,” but “self” and its correlate, Nature— or Non-Nature, or Matter. OOO thus differs from eliminative materialisms and realisms that hold, “There is a Non-Nature.” The trouble with standard ecological criticism—even Deep Ecology—is that it’s not nearly deep enough. Clinging to the palpable, we end up with faceless Nature, a symptom of how thinking has damaged Earth. OOO allows us to think deep down things. (Morton, 2011, p.185)

In writing this thesis I draw on OOO in several ways. Tim Morton’s (2007) concept of ecology without nature plays an important role, helping me to think my practice without a concept of a green nature that is distinct from human produce, including football teams or Fermi-Dirac condensates. Further to this, as the thesis progresses, I seek to explore strangeness and the alien as modes of subjectification as a posthuman other.

### **Feminist New Materialism**

In ready opposition to OOO, or at least, ready to *generously critique* various OOOs, are feminist new materialisms (see van der Tuin, 2014; and Taylor, 2016). Feminist new materialisms focus on ‘how the forces of matter and the processes of organic [and in-organic] life contribute to the play of power or provide elements or modes of

resistance to it' (Frost, 2011, p. 70). In this way, feminist new materialisms position themselves as fundamentally political. Material feminists acknowledge how feminist theory and practice have been significantly enriched by the exploration of power, discourse and performativity of postmodern feminism. However, acknowledging the work of, for instance, Donna Haraway and Clare Colebrook, they argue for a return to matter to allow exploration of the effects and affects of bodies and the myriad material conditions of power:

The retreat from materiality has had serious consequences for feminist theory and practice. Defining materiality, the body, and nature as products of discourse has skewed a tremendous outpouring of scholarship on "the body" in the last 20 years, nearly all of the work in this area has been confined to analysis of discourse *about* the body. (Alaimo and Hekman, 2008, p.3)

Further, and significantly, the environment, non-human, or more-than-human is positioned as an upfront concern in feminist new materialisms. This concern arises both as a result of the challenging environmental conditions of the 21<sup>st</sup> century and in response to the need to critically address 'nature' from feminist positions. Despite the critical work of Carol Merchant and Val Plumwood, mainstream feminist theory:

...relegated ecofeminism to the backwoods, fearing that any alliance between feminism and environmentalism could only be founded upon a naïve, romantic account of reality...The problem with this approach, however, is that the more feminist theories distance themselves from "nature", the more that very "nature" is implicitly or explicitly reconfirmed as the treacherous quicksand of misogyny. (Alaimo and Hekman, 2008, p.4)

In this way, feminist new materialists including but by no means limited to the work of Karen Barad, Donna Haraway and Rosi Braidotti, have drawn on both post-structural theory and developments in the biological and quantum sciences, to appear at the vanguard of critical discussion surrounding the nature of nature/culture debates and returns to ontology. There is a particular taking up of the combined work of 20<sup>th</sup> century continental philosophers Gilles Deleuze and Felix Guattari, who over the course of 30 years of collaborative and solo work, developed a politically critical

metaphysics of immanence to contrast with more prevailing transcendent metaphysics. I have previously outlined this philosophy of immanence and suggested some implications of this ontology for outdoor education and teacher education (Clarke and Mcphie, 2014; Clarke and Mcphie, 2016). Within feminist new materialisms, as with Deleuze and Guattari, a posthuman understanding is forwarded in which knowledge/world production is neither anti-scientific nor posited on science as *the* single truth, dismissive of other onto-epistemologies (Ahmed 2008). Taylor and Ivinson (2013) point out that ‘‘new’ material feminisms displace the human as the principal ground for knowledge [...] and accepts that matter is alive.’ (p. 666). There is a ‘priority given to difference, entanglement and undecidability’ as it challenges ‘the distance, separation and categorical assurance that shores up the self-mastery of the oedipal (male) subject of humanism’ (MacLure, 2015, p. 5).

This thesis borrows the impactful nature of the material and subsequent posthuman conception of research practices forwarded by feminist new materialisms. It also borrows the decentring of agency and the inseparability of ethics, ontology and epistemology that are important in feminist new materialism.

### **Material Ecocriticism**

My third thread, Material ecocriticism, concerns interests in the narrative potentiality of matter through *significance* and *innate meaning making* and in this sense deviates from feminist new materialisms and OOO. The focus on stories within material ecocriticism retains an anthropocentric flavour whereby the human ‘species’, whilst ‘extended’, is ultimately responsible for the destruction of a distinct ‘nature’:

While attending to the radically local, material ecocriticism also looks more broadly at human beings and the impact of their agency as an especially widely distributed species. Being a species means being material bodies with long-term histories, most of which are natural but some of which are decidedly unnatural. Nevertheless, our capacity for storytelling and tool-making serves to extend our material bodies and the material processes in which they are enmeshed, not to sever us from them. (Phillips and Sullivan, 2012, p.447)

Further, Iovino and Oppermann's (2014) materialism focuses on storied matter:

Material ecocriticism is the study of the expressive dynamics of nature's constituents, or *narrative agencies of storied matter* at every scale of being in their mutual entanglements. It seeks to explore the narrative dimension of the material world in terms of the stories embodied in material formations. (Oppermann, emphasis in original, 2013, p. 57)

This focus on stories is evocative of Ingold's (2011) notion of storied worlds that are verbed into life, which I explore elsewhere (Clarke and Mcphie, 2014). There is a further resemblance to the discursive-material nature of reality enacted by agential cuts, as described by Barad (2007). Ethically speaking, material ecocriticism seeks to acknowledge the relationality of human beings through establishing new narratives of matter:

With its sense of agential kinships, material ecocriticism wants to "help build ongoing stories rather than histories that end" (Haraway 1). This vision entails a sense of ontological and historical humility, an ethics of social hope, and a new moral imagination. On this open ground, humans share their narrative horizon with other subjects and other things, aware that the effort to listen to the world in the entirety of its voices is essential to the very project of being humans. (Iovino, 2012, p.66)

Material ecocriticism is, as with OOO and feminist new materialisms, a broad, loose and possibly arbitrary label as there are voices within it that reach across and dissolved disciplinary boundaries and categorisation. And so, whilst this is in no way an exhaustive review of new materialisms (for example, there are also rich articulations of vibrant materiality in contemporary animism theorising as well as new science of the mind), I think the three strands above suggest some divergent directions that are already influencing material-discourse in environmental education inquiry. This thesis takes the focus on stories from material ecocriticism to attempt to

enact stories, or narratives of practice, that displace traditional separations of education, the environment, and thesis writing.

### **Deleuze, and Deleuze and Guattari**

The final thread I want to discuss is Gilles Deleuze, and Gilles Deleuze with Felix Guattari. As I have mentioned, Deleuze and Deleuze with Guattari have been particularly influential among feminist new materialists. Deleuze and Guattari's philosophy has been linked to environmental thought previously. Hayden (1997) discussed the usefulness of Deleuzian philosophy for environmental thinking. He suggests that Deleuze's notion of micropolitics might be enacted 'to create new ways of thinking and feeling that support social and political transformation with respect to the flourishing of ecological diversity' (Hayden, 1997, p.185). The pedagogical potential of Deleuze's philosophy for ecological futures is echoed by Hroch (2014) and Kruger (2016). For Hroch (2014, p.54) this call for a 'new earth', 'new people' and 'new concepts' draws together politics, ontology and pedagogy: 'the call for a new earth and a new people is at once an affirmation of and an invitation to the people in the here and now to be creative in thinking and practices concerning their earthly existence so that they can become-other'. Hannah Stark (2017, p.154) also hints at the ethical slant of Deleuze and Guattari's philosophy, in the way it helps us to think:

...not about individual units and their capacities for relation, but about the micro-processes, forces and assemblages that subsist beneath the level of the subject. Their work is utopian in its tenor. It reminds us that subjectivity is not innate and does not manifest an interior essence but instead that ontology can be otherwise, that we can be the 'people that do not yet exist' on 'a new earth'.

Piotrowski (2017) considers the formation of subjectivities in the Canadian environmental movement by thinking with Deleuze's notions of the fold and faciality, to map acts of authenticity amongst activists in response to media

portrayals of hypocrisy. This chimes with Deleuze and Guattari's notion of things as 'haecceities, affects, subjectless individuations that constitute collective assemblages' (1986, p.266).

From Whitehead's *Process and Reality* to Bateson and further to Deleuze, process philosophy can provide ecology with a conceptual ground that allows for the 'complexification' [or, in Deleuzian terms, the *complication*] of the current ecological debate beyond the bounds of the strict distinction between homocentrism and ecocentrism. Although such a complexification would already be an important 'further step' towards a truly ecological culture, beyond these political dynamics, 'processing ecology with Deleuze' allows for something that might ultimately be more important: the ecologization of the subject. The true point-of-perspective of 'processing ecology with Deleuze' lies in the processualization and singularization of the subject, in its immersion with horizontal *planomenon* of flattened hierarchies and within the overall 'mentality – and mental ecology – of haecceities that make up the plane of immanence. Ultimately, 'processing ecology with Deleuze' means never to forget that, in our origami world, "the eco-mental system called Lake Erie is part of *your* wider eco-mental system – and that if Lake Erie is driven insane, its insanity is incorporated in the larger system of *your* thought and experience" (Bateson 492). (Haferkamp, 2008, p.62-63)

There are two elements at work in Haferkamp's (2008) description of 'processing ecology with Deleuze'. Firstly, that Deleuze brings a particular insight to the ontological ground upon which debates of correct response to environmental damage are based, and secondly that Deleuze has something to say about what the 'subject' should become in order to be 'truly ecological'. In this thesis, as things turn out, I forward my 'self' as the event to undergo subjectification in a Deleuzo-Guattarian process.

\*  
\*\*

There are clear implications of considering modes of environmental action resulting from an understanding that the material world is in process with, for instance, Morton's OOO and Barad's agential realism:

...the difference between Barad's and Morton's formulations of agency and ontology is a matter of emphasis: Morton is interested in *objects* in motion; Barad is concerned with objects in *motion*. Despite this difference, however, Barad and Morton, when considered alongside each other, offer a crucial insight to anyone concerned with human and nonhuman relations in a time of climate change. New materialism and object-oriented ontology together foreground the way in which ontology is about becoming as much as it is about being. (Johns-Putra, 2013, p.128)

There is no one 'new materialism' but, rather like the nature of the ontologies Deleuze depicts, there is a multiplicity. Both one and many. One line through this burgeoning and proliferating field of academic writing is present in this thesis. It could never be a 'full' or 'rigorous' reading. Rather, it is my way through, thinking *alongly* (Ingold, 2011). Each time it is encountered it is encountered differently, whether slightly or radically. It is never closed off.

New materialisms, then, are multiple approaches. They are certainly no 'magic formula' but rather they offer a push to think in different ways. In this thesis I draw predominantly on broad new materialist literature and the work of Deleuze and Guattari, but also draw on feminist new materialisms for the political reasons I articulate above. However, I do not consider 'feminist new materialisms' homogenous, nor homogenable. Instead each reading will be its own path through the literature, hence my use of the term 'a material turn' rather than 'the material turn'. This term plays a dual role by also articulating (another term for turning!) my own turning as a result of this process: my own environmental education (where 'environmental' is understood in the broadest sense). The term 'turn' is, in fact, apt for the process I am undergoing as I write this thesis. As Hekman (2010, p 68, cited in St. Pierre, Mazzei and Jackson, 2016, p. 2) points out:

...the new approach does not have an agreed-upon label. Many have been proposed: several feminist critics of science favor “the new materialism”; Nancy Tuana proposes “interactionism” and “viscous porosity”; Karen Barad favors “intra-action” and “agential realism.” The lack of consensus on a label, however, is indicative of little more than the newness of the approach. (p. 68)

Sarah Whatmore (2006) offers that within cultural geography discussion of materiality ‘manifests a rich variety of analytical impulses; philosophical resources and political projects that don’t ‘add up’ to a singular ‘new’ approach, let alone one that has a monopoly of insight or value’ (p.601). What is new or significant about the language of ‘returns’, according to Whatmore, is:

...a product of repetition - turning seemingly familiar matters over and over, like the pebbles on a beach - rather than a product of sudden encounter or violent rupture. Just as importantly, what is different or innovatory about these materialist returns is generated as much by the technologically and politically molten climate that informs cultural geographers’ intellectual investments and worldly involvements as by any academic repositioning (p.601).

Perhaps these are old ideas put to work in new ways, dealing with new problems.

### **New materialisms and outdoor/environmental education**

Outdoor education approaches have become strongly associated with the development of pro-environmental and sustainable values and behaviour development in both theory and research practices (e.g. Bögeholz, 2006; Bogner, 1998; Christie & Higgins, 2012; Cooper, 2010; Duerden and Witt, 2010; Ewert, Place, & Sibthorp, 2005; Higgins, 1997; Kals, Schumacher & Montada, 1999; Knapp, 1999; Mittelstaedt, Sanker, & VanderVeer, 1999; Tarrant & Green, 1999; Wells & Lekies, 2006). Impetus for the development of empirical and theoretical work in this area is based on, for example, UNESCO’s declaration that the years 2005-2015 constitute a ‘decade for sustainability education’ and calls from NGOs positioning outdoor experiential learning and sustainability together. These calls are

based within a paradigm of ‘ecological crisis’, which, in turn, stems from the reports of the IPCC (2007, 2013), as well as from the historical environmental movement more broadly. Policy wise, a terminological move from ‘environmental education’ to ‘education for sustainable development’ has been seen as legitimisation by some, but potentially limiting, overly globalised and prescriptive by others (Jickling & Wals, 2008). Nonetheless ‘education for sustainable development’ through outdoor learning is a prominent concept that, for example, has recently gained policy acceptance with the General Teaching Council for Scotland’s embedding of ‘Learning for Sustainability’ (consisting of the three themes of Global Citizenship, Education for Sustainable Development and Outdoor Learning) into the Professional Standards for Scottish teachers. A recent review of literature concerning outdoor experiential learning’s influence on developing sustainability and an ethic of environmental care highlights key themes of perceived importance including the promotion of ecological literacy, establishing connections to place, developing student empowerment as well as the encouraging of direct experiences with ‘nature’ (Christie and Higgins, 2012). These approaches are endorsed by prominent NGOs who promote outdoor learning experiences in order to ‘connect’ (RSPB), be in ‘harmony with’ (WWF), stop the ‘decline’ of (Friends of the Earth) or ‘apprentice’ ourselves to (Greenpeace) ‘nature’. However, Christie and Higgins (2012) highlight the lack of quality research concerning experiential outdoor education and values and action for sustainability. For instance, Lugg (2007) notes that research in the area has lacked a ‘learning process’ perspective, instead often quantitatively attempting to prove that outdoor experiential education can result in measurable outcomes. Sandell and Öhman (2013) suggest this approach is problematic as such relationships are difficult to establish in educational research. Previously, Jamie and I have also highlighted the dualistic or bounded assumptions upon which prevailing approaches to outdoor environmental sustainability education practice and research rest (e.g. working within, and emphasising, a conception of a nature/culture binary) (Clarke and Mcphie, 2014; Clarke and Mcphie 2016; Mcphie and Clarke, 2015). My interest is in exploring how I might write a personal outdoor environmental education in a manner that questions prominent dualisms in environmental education literature. These dualisms are ones that have been recognised for some time, and

have been grappled with by authors of environmental education in many different ways.

For instance, recent theoretical developments in cultural studies, anthropology and human geography bring to the fore post-human and new materialist counters to dominant dualistic essentialist perspectives of human-environment relations that have provided opportunities for combining educational research with lived-experience, ontologies of becoming, and environmental perspectives and values (e.g. Castree, 2003; Clarke and Mcphie, 2014; Ingold, 2011; Mannion, Fenwick and Lynch, 2013; Wylie, 2007). Mannion, Fenwick and Lynch (2013, p.804), for instance, refer to the potential of this ontological turn for sustainability education when they state:

Place-responsive pedagogy...can be aligned with emerging post-humanist lines of thinking and theorising that attend to the sociomaterial which we consider a critical feature of emerging debates in environmental education about how to change human–environment relations

Environmental thinking, then, is moving into a post-green era and there is a growing body of literature that takes up new materialist positions in considering environmental education. There are, of course, many practices and theorisations of how to educate to counter environmental harm. Here I turn to some examples of authors who have taken their own lines through new materialisms in the field of environmental education. Considering developing materialist theory has already been identified as an emerging ‘route’ for environmental education. In *Environmental Education Research*, a significant journal in the field, Van Poeck, and Lysgaard (2016) consider the potentials for materially informed theory to explore policy approaches to environmental sustainability education and their capacity to:

...challenge certain ideas and perspectives in *philosophy of education*, *(social) constructivism and critical theory* by revealing the need to move beyond an exclusive focus on discourse and language and to

seriously take the materiality of context of sustainability debates into account (Van Poeck, and Lysgaard, 2016, p.313, emphasis in original).

Van Poeck and Lysgaard (2016, p.314) further articulate how, amongst other approaches, claims of new materialists to operate beyond the strictly discursive may 'offer relevant and inspiring ideas, concepts, frameworks and findings to ESE policy research as well as the broader field of *educational research*'. Concurrently the new materialisms have recently been characterised as a new movement in thought for outdoor environmental education research (Gough, 2016) as well as a theoretical area that might hold potential for interrogating various 'absences and silences' within environmental education research (Payne, 2016). I see a genealogical thread of engagement with post-structural materialist thought in outdoor and environmental education (e.g. Barrett, 2005; Bell and Russell, 2000; Gough, 1999; Gough and Price, 2004; McKenzie, 2005; Stables, 2007), as well as work that has drawn on the materialist philosophy of Deleuze and Guattari within environmental education specifically (Gough and Sellers, 2004; Stewart, 2011, 2015), that must be considered as highly relevant to any 'new' turn to materiality in environmental education. This is especially true of unresolved debates concerning materiality and language from the mid 2000s (see the Special Issue in volume 11, issue 4 of *Environmental Education Research*, especially Russell, 2005).

Examples of recent work in environmental education that reference authors I perceive as aligning themselves with new materialist theory include Lysgaard and Fjeldsted's (2015) examination of speculative realism and nature education 'between discourse and matter', Pauliine Rautio (2014) and Karen Malone's (2016) uptake of the agential realism of feminist new materialist Karen Barad in considering children's geographies. Here I would also include creative engagements such as Leesa Fawcett's (2009) *Feral Sociality and (Un)Natural Histories* in which she thinks environmental education, salmon, and, among other things, earthworms rhizomatically to consider the (nomadic) ethical practice of environmental education scholarship. There are also a host of authors working in early childhood under the combined banner of the Common Worlds Research Collective (e.g. Affrica Taylor, Veronica Pacini-Ketchabaw, Mindy Blaise, Fikile Nxumalo, and many more),

Chessa Adsit-Morris' (2017) book *Restorying Environmental Education*, in which she thinks with the feminist new materialisms of Rosi Braidotti, Donna Haraway, and Karen Barad, is yet another example of new theory being put to work to reconfigure more contemporary approaches to environmental education. I also see commonalities with new materialist theory and Indigenous and decolonial approaches which focus on cultural perspectives, ontology and critiques of dominant ways of knowing and being, whilst acknowledging incommensurabilities which require attention (Tuck, McKenzie and McCoy, 2014; Tuck and McKenzie, 2015). Sonu and Snaza's (2015, p.258) interrogation of ecological pedagogy with new materialisms suggests a need to engage in creative practice to 'disrupt theories of vertical domination and conquest' which may appear within environmental education practice-research. Additionally a series of environmental education authors have acknowledged the work of feminist new materialists, the related field of non-representation theory, and a movement in anthropology to move to sociomaterial theory beyond nature/culture duality via a focus on ontology (spearheaded by, for example, Tim Ingold, 2002, 2007, 2011, 2013, 2016) as significant for environmental education research, e.g. Carolan (2007), Gannon (2017), Lynch and Mannion (2016), Rautio (2013), Rooney (2016), Ross and Mannion (2012). Lastly, I am aware of the diverse terminology in play within turns towards materiality and the particular move within educational discourse towards 'sociomateriality'. Sociomateriality has been referenced in research works with a focus on the conception of place based environmental education (e.g. Mannion, Fenwick and Lynch, 2013; Nxumalo, 2016). McKenzie and Bieler (2016) offer a number of empirical educational place-oriented projects through a sociomaterial lens to argue that 'categorizing some concerns as "social justice" or "critical" issues and others as "environmental" becomes increasingly untenable' (p.5) and draw from many authors aligned with the new materialisms as they do so.

Importantly, some previous work in outdoor environmental education perfunctorily draws on Deleuze, and Deleuze and Guattari, (Zink and Burrows, 2008; Irwin, 2010; Waite and Pleasants, 2012) and other work has engaged with some figurations of the work of Deleuze, and Deleuze and Guattari, in a deeper manner in relation to outdoor

environmental education (e.g. Clarke and Mcphie, 2014; Clarke and Mcphie, 2015; Mcphie and Clarke, 2015; Gough and Sellers, 2004; Stewart, 2011).

Whilst the literature listed here informs my starting place, I do not necessarily return to it as I move through the thesis. My hope is that the haecceities that make up this thesis add to these discussions by situating an environmental education on a plane of immanence, in some stories of a becoming academic, becoming a haecceitical self.

### **Haeceity 3: Research fuzziness: making the thesis**

In this haeceity I inquire into the type of inquiry I am enacting in this thesis. Currently I'm not sure how inquiry works. Rather than describing a method, I seem to have written orientations or clusters of thoughts-theories about inquiry: Fuzzy ideas about what inquiry is becoming. The terms 'fuzzy' and 'fuzziness' seemed to fit in describing something present yet indistinct. Deleuze and Guattari use 'fuzzy' to describe an opposition to axiomatic approaches, where the taken-for-granted is operationalized. For them 'the axiomatic manipulates only denumerable sets, even infinite ones, whereas the minorities constitute "fuzzy," nondenumerable, nonaxiomizable sets, in short, "masses," multiplicities of escape and flux' (Deleuze and Guattari, 2004, p.519). These 'fuzzinesses' thus try not to take method for granted. They also move across 'denumerable sets', or pre-given categories. I work concomitantly with issues of methodology, and issues of critique in outdoor environmental education. This being so it may be generative for the reader to read Haeceity 4 before, or perhaps during the reading of this Haeceity; I struggled to decide in which order they should appear in the thesis. In Haeceity 4 I lay out issues of thinking Deleuze and Guattari and new materialisms with outdoor environmental education through stories of my 'practice'. This was written at a time before these fuzzinesses greatly impacted my research, and reading from Haeceity 5 onwards demonstrates their gradual impact more fully. The fuzzinesses seem to tail off in odd directions that suggest that inquiry isn't a straightforward endeavour, and yet these fuzzinesses are not necessarily transferable to or resonant with other projects. At the very minimum, they live in my inquiry. Since writing these fuzzinesses, I have come across a new book titled *Madness as Methodology*, by Ken Gale (2018). I'm halfway through the book and find myself nodding often.

### **Fuzziness 1: Post-qualitative research and politics in environmental education**

In my reading of academic literature it seems that in recent years there has been a growing turn in educational research. This turn focuses on post-structurally informed post-human and the new materialist research approaches and the potential that these approaches offer to think research differently. Bolstered by various special issues in

academic journals (Lather and St. Pierre, 2013; Pedersen and Pini, 2016; St. Pierre, Mazzei and Jackson, 2016) and various research textbooks (E.g. Jackson and Mazzei, 2012; Koro-Ljungberg, 2015; Taylor and Hughes, 2016) the authors taking up these post-qualitative methodological issues and insights draw on new materialist, post-humanist and/or new empiricist theory though, as St. Pierre, Mazzei and Jackson (2016, p. 106) state, ‘no doubt, those we might categorize as “new materialists” and “new empiricists” will refuse those labels because there is no essence to center such structures’. These authors aim to problematise research practices and concepts that have been axiomatic in qualitative research handbooks and lecture rooms for many years, with the aim of arriving at something new. For example, in her contribution to the 4<sup>th</sup> edition of the SAGE handbook of qualitative research, edited by Denzin and Lincoln (2011), St. Pierre (2011, p.623, emphasis in original) wonders:

...Why not try something different?

But what happens next, is happening now, and has always happened, cannot be predicted or controlled. People everywhere always re-think, deconstruct, invent, and we theorists and researchers are always catching up, trying to make sense of their work. We individuate, we order, we name, we try to control, we draw lines. Nonetheless, they resist structural boundaries as they create entanglements that may initially seem incongruous. I propose we worry less – so much angst – about what might happen if we give up exhausted structures and attend to what is happening. *Deconstruction has already happened; it is happening at this moment, everywhere.*

St. Pierre (2011) frames post-qualitative research as a (re)turn to the deconstructive possibilities of post-structuralism, and as a chronological indicator of what comes after ‘conventional humanistic qualitative inquiry’ (St. Pierre, 2011, p.613). Further to this, and perhaps characteristically in comparison to other applications of post-structural philosophy to research, post-qualitative research is informed by a particular curiosity of the affective capacities of bodies, what influential new materialist Jane Bennett (2010) describes as ‘thing power’. To this end post-qualitative inquiry draws from myriad authors prioritising the affective capacity of things; that questions the constitution of the enlightenment human subject. It draws from theory that has

returned to the questions of the nature of reality, how and if things are divided, connected, whole or partial, set or changing, and the role that materiality and language plays in creating our worlds and, in turn, the role worlds play in creating social and environmental modes of behaviour and oppressions. Suffice to say post-qualitative inquiry is not one approach.

The extent to which these ‘new’ philosophies are driving critical discussion, and specifically research practices, is significant. Koro-Ljungberg, Carlson, Tesar and Anderson (2015, p.613) suggest a ‘qualitative revolution’ has occurred:

This qualitative revolution has opened up not only the breadth of the field, but, even more importantly, the depth. For instance, recent projects on thinking with theory (Jackson & Mazzei, 2012), data (Koro-Ljungberg & MacLure, 2013), and more-than-human commonworlds (Blaise, Pacini-Ketchabaw, & Taylor, 2014) are positioned in what Lather and St. Pierre (2014) refer to as post-qualitative inquiry. These branches and thinking with and beyond the traditional boundaries of research design lead qualitative inquiry down a path of reaching out and performing qualitative inquiry without borders or boundaries, as the decolonizing and liberating practices of recent qualitative inquiry contest the ideas of “oppression” of traditional research design and methodology (Steinberg & Cannella, 2012). Qualitative inquiry serves a transformative function for “thinking with” or “re-thinking” beings and things, including the researcher, the data, and the participant.

In and of itself, the growth of post-qualitative inquiry is relevant to environmental education research as it demonstrates a converging/diverging/emerging current concerned with new ways of doing research in education that attempt to account for the material agencies that have often been omitted or classified as secondary to human experience in the social sciences. As St. Pierre (1997, p.175) puts it, the purpose is ‘to produce different knowledge and produce knowledge differently’. This is useful given the requirement to embrace new modes of thought and research in environmental education (Scott, 2009). Aside from the benefit of the ‘new’ that post-qualitative research brings are, I believe, benefits to the specific problem of nature in environmental education research. No matter the diversity of post-qualitative research approaches, they are allied by their attempts to work beyond sediment

dualisms of, for instance, nature and culture and traditional renderings of subject and object. These dualisms lie at the heart of the most fundamental questions of environmental education: how are people and planet best aligned, conceptually and practically. Other fields have begun to acknowledge the push that these theoretical discussions have for their research orientations, and environmental education has a long history of considering these questions. Discussing the material, as well as other recent theoretical turns, Dowling, Lloyd and Suchet-Pearson (2017, p.824) acknowledge the challenge in studies in geography for instance:

This shift in recognizing and acknowledging multiple more-than-human agencies challenges researchers to do geography differently – to perform, to engage, to embody, to image and imagine, to witness, to sense, to analyse – across, through, with and as, more-than-humans. It also invites researchers to open research relationships, thinking, and representations to beings, things, and objects previously ignored as active agents. It invites, in other words, alterations in thinking and methods.

As previously mentioned, there is a space of environmental education research which is beginning to take up the potential of post-qualitative/post-human/new materialist approaches. This space combines with the history of post-structural critique in environmental education (see Hart, 2005). I would point to Karen Malone's (2017) work on child-dog encounters as an example of this. Further Sonu and Snaza (2015, p.261) draw on Pettman (2011) to highlight the potential of new materialist research to considering the fragility of ecological pedagogy, noting:

Although humanist education treats the human as a being separated from "nature" by a rupture, we must begin to imagine forms of pedagogical encounter that do not prop up the "error" of human exceptionalism.

Noel Gough's contributions over the years, including his taking up of Deleuze and Guattari's work and the speculative fiction of Ursula Le Guin should be regarded as

significant in forging this space. Gough's recent contribution on considering the new materialisms as a *postparadigmatic* 'new movement of thought' for environmental education has serious implications for the manner in which environmental education research is framed. Further, Phillip Payne (2016) has recently suggested that new materialist inquiry may lie on the path that springs from the question 'what next?' in relation to environmental education research. Payne (2016) highlights a series of 'absences' and 'silences' within environmental education research discourse. One of his silences and absences is the 'new theory'; the critical turns of various kinds, new academic grammars, methodologies and resources. Payne broadly implies that the new materialisms may have something to offer environmental education theory, practice, policy and methodology. Payne (2016, p.175) sounds an important note of caution however:

Although deconstructing the alleged nature-culture binary might be fashionable in certain quarters, the universalizing implications of homogenizing and conflating nature and culture, and their environments, and humans and nonhumans, for EE and ESD are profound—theoretically, pedagogically, and practically. What then is “environmental education” and what is being “sustained” in relation to “nature” and its various “environments”

There is a sense in which the orientations provided by post-human theory, including the new materialisms, tackle ontological problems whilst presenting (or ignoring) political ones. For, as I asked earlier, if there is no nature, then what is environmental education for? Eve Tuck and Marcia McKenzie (2015, p.17) voice their concern for what they perceive as the apolitical nature of some new materialist research:

The increasing influence of Indigenous and decolonizing scholarship, spatial theories, and new materialisms on the theories, methodologies, and methods of social science cannot be disputed. However, although one might suppose that such innovations and recalibrations might prompt a more robust discussion of place in the social sciences, this is not often the case. In many cases, flattened ontological or materialist frameworks de-emphasize the agency of people and politics in

attempting to better attend to the inter-connected “networks” or “mangles” of practice in researching social life...

They go on:

...‘to date much empirical sociomaterial research has a relatively narrow and depoliticized research gaze. We anticipate a growing number of empirical studies that use similar theoretical frames to take up critical questions of place and materiality.’ (2015, p.104)

Examples of more ‘political’ (according to Tuck and McKenzie, 2015) research using sociomaterialism include *Political Matter: Technoscience, Democracy and Public Life* by Braun and Whatmore (2010) – they site Hawkins, (2010) who discusses Bennett’s (2010) thing power and plastic bag use and ethical reasoning about the environment. Rose (1999) who posits ‘technologies of citizenship’ in the form of lightbulbs and thermostats, as well as the work of Marres (e.g. 2016) who advocates public involvement in environmental issues via technologies. Of course, I would read this as a narrowing of the term ‘political’ to always involve the human.

Gerrad, Rudolph and Sriprakash (2017) raise several points of (traditional) critique against post-qualitative approaches. They suggest that, in what they see as its complexity and difficulty, it can fail to acknowledge the exclusionary boundaries it creates; between those in the know and with secure academic positions to execute it, and those not in these positions. They are concerned about the potential ‘mystification’ of the research process in post-qualitative research’s turn to researcher intuition and affect. Further, they suggest the focus on the ‘new’ can reinforce settler colonialism in research practices. In thinking about these points, I could follow a rational logic to agree with or critique these critiques, and this is tempting, but, in recognition of an immanent critique as the mode of thought of post-qualitative research (MacLure, 2015), I instead wonder at the potential for research to open-up the concerns that Gerrad, Rudolph and Sriprakash (2017) describe; to riff off them. Or to acknowledge that even critiques are immanently affective within

post-qualitative research: they imply modes of existence, they do things. Post-qualitative research doesn't attempt to operate from a perspective of critical objectivity, but rather acknowledges the situated, partial, ethical, relational, posthuman and responsive ways of knowing that have been developed in feminist studies. It is non-oppositional. Post-qualitative research might not best be described as an approach, but as a series of understandings that can hook up with other understandings, even critiques, in the pursuit of ethical research. Personally, I feel I am learning about post-qualitative research all the time. It never feels like something that I will finally 'get'. It always feels like an attempt, or something that informs my thinking about research. For now, I think that philosophical concepts garnered from reading *are* methods, but are also tools that allow possibilities for living (Taguchi & St. Pierre, 2017). In post-qualitative inquiry, philosophy is not an arcane practice that has no bearing on the real problems of the world. Rather, philosophical thought is the coal face of practice; it expands the realm of the possible, and acknowledges that research creates worlds (Law, 2004).

Whilst discussing post-humanism more broadly, Zakiyyah Iman Jackson (2013, p.672) raises similar concerns of the absence of political consideration in posthumanism:

While post-humanism may have dealt a powerful blow to the Enlightenment subject's claims of sovereignty, autonomy, and exceptionalism with respect to nonhuman animals, technology, objects, and environment, the field has yet to sufficiently distance itself from Enlightenment's hierarchies of rationality: "Reason" was still, in effect, equated with Western and specifically Eurocentric structures of rationality. Thus, the very operations of rationality used to evaluate the truth claims of the Enlightenment subject remained committed to its racial, gendered, and colonial hierarchies of "Reason" and its "absence."

Along the same lines as the 'apolitical' critique offered here, a further consideration is that the 'conflating' of nature and culture that a new materialist reading suggests - the 'flat ontology' - is a real concern for those who have argued so passionately for the inclusion of 'the environment' in education research and policy. And yet,

postmodern ecological thought, as developed by Carol Merchant, Val Plumwood and others, is convincing in its articulation of the damage created by the separation of 'nature' (the environment) and 'culture'. I think I agree with Payne (2016), then, that rather than an abstracted 'mashing' of nature and culture, we require nuance and, perhaps, a gentle touch which is at the same time firm, curious and concerned. With this thought in mind I, perhaps contradictorily, hesitantly and enthusiastically consider post-qualitative research a potential theorising tool for articulating the nuance required for 'post-green' environmental education research. Even if it is a micropolitics, rather than a macro or majoritarian one. Edwards and Fenwick (2015, p.1402), for instance, suggest that:

In attempting to blackbox the sociomaterial as non-critical or lacking a politics to address issues of power and inequality, there is a matter of fact claim being made. Our concern...has been to keep this question open in order to provide different opportunities for experimentation [with] the questions we could address in educational theory, research and pedagogic practice and how forms of intervention address them.

Leaving ethics as an 'open question' seems to mean following the possibilities for new materialist research and the new ethical worlds it may allow (by paying attention to the other), whilst remaining sensitive to the possible ethical infractions, be they social or environmental, that this will inevitably enact. This type of ethics is one that is lived as it goes. A curriculum alive *of* the envioning process that is people going about their lives (in this case, researchers/educators) *of* the world will always be micropolitical.

Politics is, however, not just about the nature of theory, but about the nature of critique. The term 'environmental education' is something of an empty signifier with an 'impossible identity' (González-Gaudiano and Buenfil-Burgos, 2009) and so cannot be conceived as an essentialised field of practice. So, what do I mean when I refer to 'environmental education' in the thesis? Initially, I was interested in *applying* new materialisms, or what I thought of as a theoretical perspective, to the corpus of environmental education literature. I *had* a chapter that attempted to do this, by

combining the Deleuzian inspired critiques of various theoretical positions towards environmental crisis, put forward by Mark Halsey (2006), with an overview of practical ‘currents’ that constitute approaches to environmental education, provided by Sauv  (2005). Once I’d written that chapter it felt unhelpful to where my thinking was taking me. It attempted an overview, or a mass movement of capture, which felt at odds with the situated approach I am now trying to enact. It felt unethical, like an attempt to lay waste to a body of work, rather than think generatively and ‘towards the gathering’ (Latour, 2004). It began to make more sense to write of environmental education *for me*, where environmental education was encountered in materials, as research texts, places, and time with students, as I experienced it immanently, rather than as a thing out there. The thesis thus focuses on a micropolitics of a very specific ‘environmental education’. Micropolitics here refers to the situated, affectively embodied site of subject formation. Singh (2018) discusses a turn to ‘affective ecologies’, whereby the broader material and affective turns focus on environmental possibilities for environmental change and politics. Singh (2018) highlights the debate between the position that a turn to ‘affect’ theory fails to deal with the ‘hard’ political problems of environmental justice:

...political theorist Nancy Fraser (1997) voices...concern that the turn to affect can provoke a retreat to soft, psycho-cultural issues of identity at the expense of the hard, political issues of economic justice, environmental sustainability, human rights, or democratic governance. In response to Fraser, Bennett (2010: xi) argues that the bodily disciplines through which ethical sensibilities and social relations are formed and reformed are ‘themselves’ political and constitute a whole (underexplored) [sic] field of ‘micropolitics’. (Singh, 2018, p.2)

Micropolitics of affect is a useful, perhaps the only, starting place. My thesis has come to focus on a further question of transcendent environmental ethics that resides in the turn to micropolitical affective ecologies. For instance, Jane Bennett (2010, p.xi) also argues that ‘there can be no greening of the economy, no redistribution of wealth, no enforcement or extension of rights, without human dispositions, moods, and cultural ensembles hospitable to these effects’. Whilst there is a plain focus on an affective site of ethics here, the ethical *problems* are prescribed ahead of time. There is a transcendent principle of aim in the various justices cited to which it seems

affective modes of being are posited as a solution (Singh, 2018). This seems to contradict both my understanding of immanent ethics (as non-prescriptive) and immanent ontology (as flattening the binaries of nature and culture).

I explore these issues through the environing educational becoming process of my post-subjective education through and of the (non-essentialised) environment. It is an environment made up of places; the city of Edinburgh, of cafes, of my flat and my family, of memories, my life, and particularly of excursions with students. It is also an environment made up of material encounters with texts and with writing. With concepts. With long hours reading and the strange uncanny process of thinking that always seems to happen with things; with the fridge door as I close it and think of something I've been reading. With the bedroom ceiling as I stare at it and my thoughts push elements of my thesis around. It is an environment that is constituted through life, through the practice of life. It is an environmental education that comes to be (micro)political through practice.

## **Fuzziness 2: Practice and research and data**

Science or theory is an inquiry, which is to say, a practice: a practice of the seemingly fictive world that empiricism describes; a study of the conditions of legitimacy of practices in this empirical world that is in fact our own. The result is a great conversion of theory to practice. (Deleuze, 2005, p.36)

St. Pierre and Jackson (2014) describe how each reader of Deleuze makes their own, ungeneralised, path. Each reader will work with concepts in unique ways. The concepts *word* particular worlds *with* the reader. Authors who engage with this form of research state that there is not one way to do this new work. The 'new' 'cannot be described, having not yet arrived' (Massumi, 2010, p.3). This being so, post-qualitative inquiry is inquiry without, or even against, method. Methods are prescriptive and prescription limits the potential for novelty (Massumi, 2010). Honan (2004, p.268), in her rhizoanalysis of teachers' reading of policy texts suggests that 'turning against method is a thread that connects the work of many who have written

about attempts to translate Deleuzian theory into some kind of methodological action'. And so, rather than following or enacting a method, the thesis is more of a *practice*, both in the sense of being an attempt (or several, in fact many, attempts) and being something that is physically done. What I'm producing is something akin to Anna Hickey-Moody's (2015) notion of 'practice as research'. Hickey-Moody differentiates practice as research from practice-led research and practice-based research. She notes:

I use the term practice as research to refer to practical invention and evaluation, via processes that draw on 'multiple fields' and which piece 'together multiple practices' (Bolt and Barrett, 2007: 12), across academic and contemporary art contexts (Hickey-Moody, 2015, p.169).

Hickey-Moody realises that 'in many respects, all practice-based projects are rhizomes (or 'plateaus') that explore space, time, territories, locations, points of stasis and lines of flight, movements of deterritorialization and destratification' (2016, p.171). Similarly, Ken Gale (2016, p.244) articulates 'theorizing as practice' whereby 'writing, conceptualization, theorizing and so on are modes of practice which animate and *activate* in both pedagogical and research-based terms'. A common thread in new materialist research approaches, as in Hickey-Moody's (2015) 'Manifesto' for 'the rhizomatics of practice as research' is a productive form of thinking whereby figurations from the rich oeuvre of post-structuralist authors are used to think *with* data (materially), theory (materially) and the problem at hand (materially). Noel Gough has performed just such figurationally informed thinking in relation to pedagogy generally and outdoor environmental education for instance. I borrow from Gough (2011, p.4), and others, to describe the power of the figuration here:

Rosi Braidotti (2000) argues that 'the notion of "figurations" – in contrast to the representational function of "metaphors" – emerges as crucial to Deleuze's notion of a conceptually charged use of the imagination' (p. 170). Similarly, Donna Haraway (1997) asserts that 'figurations are performative images that can be inhabited... condensed

maps of contestable worlds... [and] bumps that make us swerve from literal-mindedness' (p. 11)

Figurations are tools that allow us to consider worlds, or our data (yet, how can these be separate from worlds?), in ways which move against the 'common sense' that, Deleuze (2015) argues, traces illusory forms of categories and difference, forms from which potentially violent environmental judgements are then drawn (Halsey, 2006).

This is the first time the term 'data' has really cropped up in the thesis, so it is an opportune moment to discuss it. My inclination is to partially agree with Springgay (2014) that posthumanism renders the idea of 'data' as irrelevant, as data suggests an object to the perceiving subject. Rousell's (2017) suggestion of verbing data, after Whitehead's notion of datum, is more convincing for me than leaving 'data' as an object, where prehension exists within objects as object events, or objectiles. In this understanding:

The objectile lures us into this relational encounter as the potential for a new experience, a creative advancement in which the object contributes itself as the datum for the next composition of an event. 'All prehension is a prehension of prehension', such that each new prehension becomes the raw material for the next (Deleuze, 1993, p.78) (Rousell, 2018, p.215)

This event of prehension, what Rousell terms the data event, I simply term *an event*, or the event. Or even *eventing*. The ongoingness of the prehension of things. Things subjecting/objecting.

What I'm calling the data event is a commingling of such lures and respondent prehensions in which data is felt as the accretion of experience on the surface. And yet the data event will always exceed its actualisations. Something is always left out, something remains unseen, unexhausted, spectral, negatively prehended (Manning, 2013, p. 25). (Rousell, 2018, 217)

This is also my understanding of posthuman inquiry. Though I choose not to identify these events as 'data-events' as the inclusion of the word 'data' in the term seems to

lead me to want to identify these moments as ‘data’, rather than simply ponder them. ‘Data’ feels like it has too much baggage. I’m with Denzin (2013), and his 15 reasons for not using the word ‘data’.

My approach has been to wonder at the things that have come through for me, in the process of undertaking the PhD. In other haecceities there are vignettes that attempt to combine theory which troubles essentialist and representational accounts, as well as pushing my affective capacities through creative (post-)environmental writing. This is similar but different from attempting, for instance, a ‘slow ontology’ as advocated by Ulmer (2016, p.208), who states:

Slow Ontology is a diffraction—a dispersal—of time, space, and matter across different wavelengths, moving in different directions at different speeds. As waves travel, they move along the cycles of the sun, moon, water, land, living organisms, and our waking dreams. Because a Slow Ontology invokes time that is rooted in nature, it inspires more natural rhythms for our spatial, temporal, and material localities.

There is much here that I like, though the inclusion of a romanticised ‘nature’ in Ulmer’s approach is a reminder to me to be critically aware of the assumptions of the starting locations of our diffractions. For Ulmer, ‘nature’ is given. My focus on matter in this thesis doesn’t speak to an out-there environment, but focuses on the matters of research practices as embodied, affective and material. In this sense it is a focus on ‘things’ eventing in their becoming, rather than the autonomous enlightenment human subject or any category of representation. This is because concepts are material-discursive, as Karen Barad (2007) suggests. Concepts matter in the ways in which they are not the purview of an individual western subject, but go about their lives. This is doing an environmental education as *a* life.

### **Fuzziness 3: Autoethnographic/assemblage/ethnography/non/collaborative writing as inquiry**

In the manner it has recently been practised as an approach to developing understanding of outdoor and environmental education practice, Autoethnography retains an image of the thinking and feeling human subject in nature, (see e.g. Nicol, 2013; Collins, Brown, and Humberstone, 2018). Couper's (2017) autoethnography comes close to overturning the subtle nature/culture binary at work in this literature, her argument is that the natural, or what she refers to as the 'blue/green' is made of an inherently differently experienced type of space. This is different to the post nature thinking of new materialisms and Deleuze and Guattari. Whitehouse's (2018) autoethnographic inquiry into the ecopedagogical potential of snorkeling is a particularly successful and affecting read. She writes of the impacts of experiences of coral snorkeling off the coast of Australia, where the experiences juxtapose rich living coral seascapes with bleached, dead reefs. Funnily, I also write about snorkeling later in this thesis. This work can also provide a jumping off point for attempting to work beyond these assumptions. Nicol's (2013, p.14) call for autoethnography of outdoor environmental education practice for sustainability highlights two important questions that might inform 'post' autoethnographic work:

I wanted to explore what happens when the powerful stimulation of outdoor experiences is related to current theoretical concerns surrounding environmental sustainability. In so doing there are some questions that can provide guidance for educational practice:

- Who am I as a person living on the planet today?
- What am I going to do about the way I live on it?

The 'who' and 'what' of these questions are shifted by the philosophy of Deleuze and Guattari to instead focus on their ontological premises, yet their sentiment seems paramount; what is the nature of the idea of the human subject that conditions or allows current (unsustainable?) ways of being? And how might this idea be inquired

into and overturned? In my Masters thesis I emphasised the importance of experimenting with the material-behavioural implications of resting environmental education practice on unexamined ontological assumptions in attempts to ‘reconnect’ with nature. I critiqued both scientific objectivist ‘ecologist’ conservationist positions and subject establishing phenomenological approaches. I drew on both Marcus Doel’s (2000) and John Wylie’s (2007) reading of Deleuze to critique both of these positions as emphasising ‘being’ over becoming. As such, I argued, conservation ecology and phenomenology are both ‘pointillist’.

The notion of becoming first captures the Deleuzian sense of a world continually in the making, continually proliferating. It also captures the strongly anti-phenomenological bent of Deleuze’s writing; in so far as ‘becoming’ is explicitly a radical alternative to what Deleuze would see as the static and sedentary tonalities of Heideggerian notions of dwelling and ‘being-in-the-world’. (Wylie, 2007, p. 201; original emphasis, cited in Clarke and Mcphie, 2014, p.204)

...and...

...there is nothing left for the spatial scientist but the play of joints (and . . . and . . . and) . . . What remains is precisely that which maintains the different detached pieces in their incalculable disjointure—AND . . . AND . . . AND—: the interval takes all; the ontology of being gets carried away by the conjunctives. (Doel, 2000, p. 130, cited in Clarke and Mcphie, 2014, p.204)

Deleuze and Guattari (2004) describe method as a royal science; an exercise in pointillism:

A “method” is the striated space of the *cogito universalis* and draws a path that must be followed from one point to another. But the form of exteriority situates thought in a smooth space that it must occupy without counting, and for which there is no possible method, no conceivable reproduction, but only relays, intermezzos, resurgences. Thought is like a Vampire; it has no image, either to constitute a model or to copy. (p.416).

Methods are to be avoided, then. Creative writing, and creative collaborative writing as inquiry allow the research to move past or to undermine pointillist positions.

Marcia Mackenzie (2005) advocated such approaches in *Environmental Education Research* in her call to take post-structural theory seriously in environmental education. Connie Russell (2005), wanting to explore MacKenzie's (2005) initial arguments further, draws on Leesa Fawcett (2000) to attempt to establish the extent to which other processes may be involved in collaborative writing as a form of inquiry:

The strategies listed by McKenzie as potentially enabling co-construction, such as participatory action research, narrative inquiry, and collaborative writing and theorizing, all rest on an assumption of a speaking subject. Is there any room here for 'nature' as co-constructor?

If, as I advocate, 'nature' is understood as a potential co-constructor, the questions posed by Fawcett (2000) become important:

...how do we tell stories that acknowledge other animals/beings as subjects of lives we share, lives that parallel and are interdependent in profound ways? How do we ensure that their voices are audible and that we can co-author environmental stories to live, teach, and learn with?  
(p. 140)

I like the link that Russell draws between MacKenzie's call for creative research practices in *Environmental Education Research* and Fawcett's questions concerning the audibility of the ecological other. Once again, however, I question the exclusion drawn between other 'animals/beings as subjects' and what might be left out of this category, e.g. the geological? The atmospheric? Discarded waste? Climate change itself? Similarly, I think Russell is using 'nature' in a broad sense here, though I am not sure whether she would include everything under this title; including human produce and concepts as I hope to. I see connections here to the collaborative writing as inquiry explored by, for instance, Wyatt and Gale (2013, p.311). Their work moves to make the author, as a human subject, unstable in its 'enforced separations of self and others; form and content; place and space'. Further, I see the manner in which their work takes up new materialist concerns as paralleling Russell's (2005) queries about 'nature' as a co-constructor whilst also avoiding the category trap of 'nature'. Assemblage/ethnography works hard to escape humanising the subject of

research whilst also taking into account the affective materiality of assemblages, for instance. This type of inquiry is beyond or ‘post’ autoethnography, as:

the research methodology acknowledges, emphasizes and troubles the intended open-endedness, rhizomatic and processual nature of the research project itself. Arguments have been offered against describing research methodology of this kind as ‘autoethnographic’ (Wyatt and Gale, 2013a, 2013b) in relation to phenomenological and humanist inclinations that are to be found in most conceptualizations of the term and the practices that it implies (Gale, 2016, p.245)

Thinking of research assemblages depopulates the world of subjects who would, in Russell (2005) and Fawcett’s (2000) account, be taken into account. Rather, research assemblages trouble divisions between reality, representation, and subjectivity:

In such an assemblage, as Mazzei argues: there can no longer be a division between a field of reality (what we ask, what our participants tell us, and the places we inhabit), a field of representation (research narratives constructed after the interview), and a field of subjectivity (participants and researchers) (Mazzei, 2013, p. 735, cited in Honan, 2014, p.2)

This allows, and conditions/requires, much more creative tellings of selves-environments. I have come across a number of beautiful (post-)autoethnographies that have allowed writers to perform what I perceive to be haecceitical environmental educations. For instance, MacDonald (2018) thinks her research assemblage as a burgeoning pharologist (someone who studies lighthouses) through the colour blue:

In fragmented sections designed to highlight the ways experiences intertwine, I move through four phases of feeling “blue”: the deep blue of confusing academic anxiety and depression; the search for a methodology to lead me to a brighter, more pleasant kind of blue; the research journey that moved me forward; and the “blue sky” blue it led me to (2018, p.149)

Her methodology draws on arts based autoethnography of place (Minge and Zimmerman, 2013) which draws at least partially on Deleuzian ontology and reminded me of Kathleen Stewart's (2007) *Ordinary Affects* in its style. However, my reading of MacDonald's work, informed by my own ontological rationale, co-produces a reading as a haecceitical environmental education assemblage. As such this thesis is an experiment with my experiences of teaching and researching with new materialisms in 'mind', as a 'post'-subject. This line of thinking moves across several (already multiple) themes: research/ing in EE with new materialisms; the ethics of new materialisms; the problem of the 'environment' and the 'subject' as the foundation of environmental education; teaching environmental education, the arbitrariness of these as distinct areas through the process of becoming an academic. This might seem too wide and shallow, rather than the more normal 'deep and narrow' approach of PhD study, however, I think that to define the categories of study before the study in this way is too hylomorphic. Rather the study is building its own ground, creating its own territory, or perhaps mapping its own refrain. Rather than fitting into the quiddital 'whatness' of these categories of inquiry, it is rather creating its thisness, its haecceitical self. It's an attempt at a subjectless individuation.

This is why the study is not a strict autoethnography. My telling here is perhaps post-autoethnographic, and as such I come to attempt to acknowledge what Gannon (2006) calls the *(im)possibilities of writing the self-writing*. This writing employs:

...textual strategies that evoke fractured, fragmented subjectivities and provoke discontinuity, displacement, and estrangement. In post structural autoethnography, the writing writes the writer as a complex (im)possible subject in a world where (self) knowledge can only ever be tentative, contingent, and situated. (Gannon, 2006, p.474).

And yet, in this writing, there is an 'I'. I retain the 'I' in the same manner as Gale and Wyatt (2013, p.147-148):

...we do not do away with the I's', the 'me's' and the 'you's', partly because we can't! Instead we displace them, we don't divorce them and we will not lose them. We will repeat them and as we do this we will do this always with the presence and action of diffractive possibilities, always in acknowledgement of and always in play with the exponentially existent possibilities of contingency and flux. We will be using this in intensity to activate and create further intensities. Perhaps it is, as you suggest, in and through our stories that this will emerge.

Stories, there are stories that precede and follow. I recognise, along with Gale (2017, p.5-6), that:

I have come to the view that any active, vibrant, and living autoethnographic practice needs to move beyond the humanist and phenomenological proclivities of thinking with and of selves, of bodies as beings, as categories of difference, and to start thinking of posthuman ways of affectively engaging with them in terms of multiplicity, intensity, and becoming and always differentiating heterogeneity and contingency. Autoethnography, the very name that many people here identify with, in my view, appears to enshrine the narrow individualism of the Cartesian 'I' and the arborescent sense of self idealised by Enlightenment thought.

As I move through what follows, before and after this haecceity on inquiry, the I of the thesis becomes more troubled, more displaced; more unhuman. This isn't immediate. Indeed, it is hard to do. I struggle with it. I start off slowly, unknowing perhaps. As I continue the event attempts to become more alien to itself. Or to become *itself* whilst belonging to another. I ask you to try to sense this.

Lastly, I have mentioned that I draw on various things that are to hand as I go. For example, stories that I have picked up, academic texts, and concepts. I consider these *thinkings-with* as forms of collaboration. In Haecceity 6, for instance, I perform a collaborative writing with an event occurring with concepts, students, Walney Island in Cumbria, and my colleague Jamie Mcphie. I don't view collaboration as two objects or subjects coming together, but rather as the formation of a territory out of encounters between already unboundaried haecceities, where the haecceities

themselves can combine to form this new *thisness*. I choose to keep the term collaborate, rather than jettison it as St. Pierre suggests:

Collaboration is one of those concepts based on the humanist subject that doesn't work anymore. It assumes there are separate individuals who decide to work together. If we think we do not have a separate existence, if we think we are not individuals separate from other people and everything else, then the word *collaboration* doesn't make sense. If we believe we exist in assemblage, in entanglement, in haecceity, then collaboration doesn't make sense. That's one of those words that brings an entire ontology along with it [...] I certainly think we need others to help us think—we're dangerous when we're alone in our own heads. It's in those conversations, that, for me, the humanist subject disappears. This is much more than conventional collaboration. (St. Pierre, 2015, in Guttorm, Hohti and Paakkari, 2015, p.17-18)

Collaboration comes from Latin, with the prefix '*col*' originating from the preposition '*cum*', meaning '*with*'. Thinking with *is* much more than conventional collaboration. It is not so much a *doing with* as a *doing-with*. The *with* does not foreground the coming together of two (as each is already a multiplicity), but the production of the new in encounters of difference in itself. With immanence, it is more like a storm meeting another storm. A haecceity-disturbance patterns-haecceity. It is affirmative.

#### **Fuzziness 4: Ambulant science, problems, infinite learning, affect**

Problems. This thesis is about problems that constitute me. That demand new things of my body, and demands the acquisition of new language. The learning I undergo in this thesis is resultant of focusing on the problem of environmental concern given new materialist critiques of romantic nature and the subject as distinct from the world. Problems, for Deleuze are central to a particular take on the nature of inquiry: what Deleuze and Guattari (2004) refer to as an ambulant science. Problems, for Deleuze, are also the catalyst of learning in life, they produce an *infinite learning*:

In fact, the Idea is not the element of knowledge but that of an infinite 'learning', which is of a different nature to knowledge. For *learning evolves entirely in the comprehension of problems as such*, in the apprehension and condensation of singularities and in the composition of ideal events and bodies. (Deleuze, 1994, p.192, emphasis added)

Here the Idea, or conceptual, is not removed from the world, but is empirical within it. An ambulant science works against the state, or royal science, in its attempts to homogenise and pin down; to create striated, rather than smooth space. Deleuze and Guattari (2004) state that an ambulant science is 'problematic, rather than theorematic' (p.399), that is it is oriented towards the problem, rather than a solution. Lebedev (2017, n.p.) suggest that Deleuze's concept of the problematic allows education to focus on the conditions of problems; there constituting assumptions. Deleuze' focus on the axiomatics of problems in *Difference and Repetition*, rather than upon attempting to identify solutions:

...unveils an important issue in pedagogy and learning. Ultimately, it is argued that the axiomatic element should always be made dependent upon a problematic... current emphasizing a calculus of problems very different from axiomatics. Only on this condition will thought cease presupposing the answer as the simplicity of an essence, and will it reconnect the abstract movement of representative understanding with the real movement which traverses the conditions of the problem.

Focusing on the 'conditions of the problem' in this thesis means turning, as it were, to gaze back at the direction of travel; to look carefully at the *problem* of environmental concern, and its constituting elements of subject, object, and transcendent morality applied to a transcendent 'nature'. This process is one of *infinite learning*. Semetsky (2009) notes that Deleuze develops a 'pedagogy of the concept' that understands concepts to be empirically sensed and affective. Concepts are living things that should be created and put to work:

...novel concepts could be invented or created as a function of real experience. For Deleuze, knowledge is irreducible to a static body of facts but constitutes a dynamic process of inquiry as an experimental and practical art embedded in experience. Thus experience is not confined to a personal Cogito of a Cartesian subject but represents an experiment with the enviroing world: we can, and should, learn from experience. Experience is that quasi-objective milieu which provides us with the capacity to affect and to be affected; it is a-subjective and pre-personal. (p.443)

Further, concepts should be invented which allow the exploration of the conditions upon which problems lie. This is a pre-personal, affective, educational, inquiry. This is the learning-inquiry that occurs in this thesis. An ambulant science is thus a science of problems and affective learning. This is a science that is inherently political (and is highly suspicious of royal science's claims to the apolitical). This is because affect is, as Brian Massumi calls it, 'proto-political'. Affect 'concerns the first stirrings of the political, flush with the felt intensities of life. Its politics must be brought out' (Massumi, 2015, p.xi). Patricia Clough (2013, p.69) experiments with affect to move autobiography beyond its current ontological tellings. In this instance she focuses on sound:

This is not autobiography  
But rather a turn in me  
to perform a vibrational artistry,  
to become an ontologist of vibrational force.

An ontology of vibrational force delves below a philosophy of sound and the physics of acoustics toward the basic processes of entities affecting other entities. Such an orientation therefore should be differentiated from a phenomenology of sonic effects centered on perception of a human subject, as a ready made interiorized center of being and feeling.

I opened this thesis with a section of this quote – thinking now about a change of 'me', rather than in me. Affect then, understood as transversal (cutting across boundaries) to the subjective and the objective, propagates mind-body-environments

in intensive desires and as such identifies the very ‘problems’ the ambulant science is concerned with.

Such a science is not only less imperialistic but, in meeting the world “half-way” (Barad, 2007), also more in touch with contingencies, relationalities, instabilities, and history. This calls for a science more attuned to innovation than “the epistemological quarrel over the conditions of scientificity” (Dosse, 1999, p. 352) and a critique more attuned to the weight of the material in our knowing. What becomes thinkable is a science that grows out of practical engagement with the world within a different ontology of knowing: This might be the beginnings of not only (post) qualitative research but a science worthy of the world (Lather, 2016, p.129)

### **Fuzziness 5: Thinking *with*, and diffractive analysis**

Thinking *with* is a methodological approach that characterises well the post-qualitative turn. Jackson and Mazzei’s (2012) book *Thinking with Theory in Qualitative Research* has, I would hazard, already become something of a classic. Jackson and Mazzei (2012, p.viii) describe their intention thus:

Our purpose in this book is to challenge qualitative researchers to use theory to think *with* their data (or use data to think *with* theory) in order to accomplish a reading of data that is both *within and against interpretivism*. We argue that qualitative data interpretation and analysis does not happen via mechanistic coding, reducing data to themes, and writing up transparent narratives that do little to critique the complexities of social life; such simplistic approaches preclude dense and multi-layered treatment of data. Furthermore, we challenge simplistic treatments of data and data analysis in qualitative research that, for example, beckon voices to “speak for themselves,” or that reduce complicated and conflicting voices and data to thematic “chunks” that can be interpreted free of context and circumstance.

The notion of thinking *with* has been taken up across a myriad of disciplines, in effect enacting a form of intra-disciplinary research event. Consider Anna Tsing’s

(2015) *The Mushroom at the End of the World*. Tsing thinks with matsutake, a mushroom and delicacy in great demand in Japan, to theorise economics, capitalism, environmental crisis and what is occurring in the ruins of capitalism. Echoing Ursula Le Guin's (2015, n.p.) praise, that 'in a situation where urgency and enormity can overwhelm the mind, [Tsing] gives us a real way to think about it' and that she is 'grateful to have this book as a guide through the coming years' would posit that Tsing's thinking *with* a mushroom is at once an educational, environmental and novel form of post-green environmental research. *Thinking with* has been enacted in a spectrum of educational research (e.g. in indigenous education studies by Higgins, Madden, Korteweg, 2015). The potential of thinking *with* in environmental education is already being enacted and, whilst I am not attempting a comprehensive review here, it will be useful to provide instances of this. Adsit-Morris' (2015) wonderfully titled *The nomadic wanderings of a bag-lady and her space chums: re-storying environmental education with feral figurations* takes up the task of thinking environmental education *with* Barad, Braidotti and Haraway as well as other authors working in the material turn. Adsit-Morris borrows from Ursula Le Guin to enact bag-lady storytelling as 'a performative new materialist methodology' in which she picks up the figurations, stories and metaphors she finds productive while wandering and gathering through the problem at hand. For Adsit-Morris 'such wandering and gathering requires a different logic, an attunement and attentiveness to processes and practices of ongoingness (not simply endings). Sharing the stories and figures I gathered doing and thinking a performative Environmental Educational inquiry'. Adsit-Morris (2015) focuses on a year long school environmental art project in British Columbia. Taking up the recurring figuration of the salmon, Adsit-Morris demonstrates how she begins to think with Barad, Haraway and salmon as experienced in her research:

Following Haraway, who is able to playfully unpack figurations through their multiplicity, or their contradictory political, material, natural, cultural, and spiritual identities, my hope is to unpack the figuration of the salmon, a lively entity whose complexities and contradictions bring forth (or allow) a deeper understanding of the "entangled" nature of the material and the discursive, leading to a

“posthuman performativity” that “incorporates important material and discursive, social and scientific, human and nonhuman, and natural and cultural factors ... [and] calls into question the givenness of the differential categories” or “differential boundaries” drawn within Western society (Barad, 2008, p. 126).

Adsit-Morris (re)configures salmon, variously drawing on Fawcett’s (2009) figuration of salmon in her own environmental education writing as well as salmon related art installations and genetics, to demonstrate how the stories we tell of salmon produce certain worlds. Salmon as *escapee*, for instance, enacts potentially different responses to salmon as *refugee*.

Thinking *with*, in this way, has much in common with the heuristic method of inquiry in that a conceptually/materially powerful figuration is pragmatically used to think difference into being. However, there are important distinctions, Moustakas (1990, p.9) suggests that within heuristic methods ‘The self of the researcher is present throughout the process and, while understanding the phenomenon with increasing depth, the researcher also experiences growing self-awareness and self-knowledge. Heuristic processes incorporate creative self-processes and self-discoveries.’ In contrast, thinking *with* can ‘fuzzy’ the ‘self’. It can be a diffractive research practice that recognises the embodied materiality and co-constitution of researcher and research process and materials, as well as the materiality and concrete repercussions of formulating, asking, and postulating answers to certain research questions. It allows diffractive possibilities for shifting, contorting, collapsing and mutating beyond/without/out of subjectivity. Diffraction is the acknowledgement that the ways in which we matter the world through our research questions literally *matter*. This understanding can be applied to all existing research methods (and indeed practices and occurrences outside of research or even human concerns). Mol (2002) puts a similar notion to work in her studies of the ways in which medical science *matters* disease conceptually and politically in the framing of research questions and concretely in the creation of medical practices, procedures and policies for instance. What post-qualitative researchers attempt to do is acknowledge the *mattering* nature of qualitative research and by troubling the foundational ‘drops in the pond’ that produce the same diffractive patterns over and over. Instead, the aim is to make some

of these foundations unstable, position new points to diffract from and to, and to tentatively think differently.

...a focus on coding, or at least an analysis that relies only on coding, results in a reporting that focuses on “sameness” within categories as researchers adhere to the coding imperative to reach “data saturation.” A diffractive analysis, however, emphasizes difference by breaking open the data (and the categories inherent in coding) by decentering and destabilizing the tropes of liberal humanist identity work necessary in conventional qualitative research: the subject, interpretation, categorical similarity, and so on. To engage in a diffractive analysis is not to layer a set of codes onto the data, or even “a” theoretical concept for that matter, but is to thread through or “plug in” data into theory into data (Jackson & Mazzei, 2012) resulting in multiplicity, ambiguity, and incoherent subjectivity. A diffractive analysis, however, emphasizes difference by breaking open the data (and the categories inherent in coding) by decentering and destabilizing the tropes of liberal humanist identity work necessary in conventional qualitative research: the subject, interpretation, categorical similarity, and so on. To engage in a diffractive analysis is not to layer a set of codes onto the data, or even “a” theoretical concept for that matter, but is to thread through or “plug in” data into theory into data (Jackson & Mazzei, 2012) resulting in multiplicity, ambiguity, and incoherent subjectivity. (Mazzei, 2014, p.743)

This is because discourse does not reflect matter, but tangles with it – *of* it. In this immanent landscape, new at least to critical thought in qualitative inquiry, experimenting with the possible is privileged over negative critique – that is, critique as ‘construed as the exposure of error, the revelation of hidden circuits of power/knowledge, or the unmasking of ideology’ (MacLure, 2017, p.51) This being the case MacLure (2017, p.51) asks: ‘does qualitative inquiry, as the transformative work of interpretive, intentional, critical human agents, still have a place in our theories and research practices? And if not, what shall we do?’. Her answer pushes me:

We would need to stop thinking of data as raw material for our own intellection. We would need to rethink our practices of interpretation and explanation, if these involve identifying ‘what is really going on,’ what something ‘really means,’ or uncovering something more

significant (for example, more abstract; more general, more meaningful) beneath or above the surface messiness of talk or action. These customary understandings all assume a masterful human subject separate from the objects of her inquiry, which await her interventions in order to attain meaning. Analysis would become ‘diffractive’ – no longer a matter of magisterial interrogation by a human agent of her data, but an entanglement. We would need to develop forms of immanent critique – a matter of sensing and tweaking events as they unfold. We would need to think of thought as not intrinsically ‘ours,’ but as an impersonal force that exceeds us and catches us up. We would need to think emotions, in a similar way, not as welling up from inside us, but as *affect* – pre-individual intensities that connect and disconnect bodies. (MacLure, 2017, p.51)

Here is affect, again. Critique aims for productivity and creation, via diffraction.

### **Fuzziness 6: Inquiry as making**

I realise I have started writing this before knowing what it is that I’m writing, or how I’m doing this piece of research. Should I feel alarm at not knowing which has arrived first? The chicken or the egg? The wasp or the orchid? The writing or ‘me’. Where is the cause, and where the effect? Taking a post-qualitative stance, I think that is ok. Similarly to Deleuze and Guattari (2004), Tim Ingold (2013, p.20-21) critiques the hylomorphic model – the notion that the finished image is achieved in the human head and then represented in the real world - whether as sculpture, painting, building, or as in my case, a journal article: ‘Whenever we read that in the making of artefacts, practitioners impose forms internal to the mind upon a material world ‘out there’, hylomorphism is at work’. Ingold (2013, p.22) suggests that this is a false understanding of the world. Rather, materials are not brute, but push back at the maker, both constituted longitudinally by forces and relations:

To read making longitudinally, as a confluence of forces and materials, rather than laterally, as transposition from image to object, is to regard it as...a form-generating – or morphogenic – process. This is to soften any distinction we might draw between organism and artefact. For if organisms grow, so too do artefacts. And if artefacts are made, so too are organisms.

I think this is true in many senses in both writing and research. I am not composing this paper alone, it pushes back at me with an ...‘and?’. With a question. In this way it grows and makes me as much as I grow and make it. Every time I type, I read. The materials before me – keyboard, screen, text, and my copy of Ingold’s (2013) *Making: anthropology, archaeology, art and architecture* open before me, an image of his students busily making baskets on a beach – constitute a collective research assemblage (Law, 2004). As serendipity would have it, I am listening to waves breaking on a beach. The noise in the PhD office this morning – chatting, typing, coughing - was pulling my thoughts away from work, and so I have my headphones on listening to a swollen sea. Topologically I am on the beach with Ingold’s students. We are both imbricated in a morphogenic process; them of basket making, me of thesis making. But the ‘it’ of the thesis is never finished. It is never complete. It is always doing something. It is an event. Particularly now as it is read by you. The ‘*spect-actor*’ (Boal, 1979). Research as making in processes of affect seems to connect with Gale’s (2017) seeking of anti-hylomorphic and affective writing practices, saying ‘yes’ to Kathleen Stewart (2007) in her attempts at ordinary affects. This being the case the wasp-orchid demonstrates the anti-hermeneutic nature of much post-qualitative work to date.

This morphogenic process is similar to how post-qualitative researchers, including Eileen Honan, describe the relationship between researcher and materials – not one of a removed organism, prying at brute data – coding it into themes - but of a breaking down of this binary: a morphogenic research process in which the difference between reader, researcher, researched, data, and theory is no longer useful. Instead the spaces between these ‘order words’, carrying out ‘little death sentences’ (Deleuze and Guattari, 2004), are (re)placed with conjunctives...and...and...and...or what John Law (2004) might call the messy creation of realities. This understanding has been termed a ‘research-assemblage’ (Law, 2004; Fox and Alldred, 2013; Coleman and Ringrose, 2013; Masny, 2013) whereby: ‘the view that knowledge can be gleaned from observation of the world is itself founded in the anthropocentric privileging of human cognitive processes’ (Fox

and Alldred, 2015, p.403).

But, what then is it to do research in this way? Firstly, it is always partial and unfinished. One iteration is never a full picture, especially my attempt at introducing some of these concepts to readers. Knowledge/world creation is contextual, situated and conditional. This is because ontology is foregrounded and problematized (and vice versa) and the forms of solutions that occur from questioning the unsatisfactory ontologies that have underpinned prevailing qualitative methods are radical in comparison to dominant ones. Indeed, they are new and require new forms of empiricism.

My argument is that a certain form of critical spirit has sent us down the wrong path, encouraging us to fight the wrong enemies and, worst of all, to be considered as friends by the wrong sort of allies because of a little mistake in the definition of its main target. The question was never to get away from facts but closer to them, not fighting empiricism but, on the contrary, renewing empiricism. (Latour, 2004, p.231)

This is of course a very useful understanding of method given the claims within postmodern ecological thinking that planetary environmental crisis is a result of the manner in which we perceive ourselves as superior to what we refer to as ‘nature’. This ‘crisis of perception’ is an argument suggesting that broad human instigated environmental degradation is a result of the prevailing social understanding of the human race as distinct or separate, in ontological terms, from the rest of the world – in short, people’s often unquestioned assumptions about the nature of reality – specifically the state of the human-environment relationship – result in current ‘unsustainable’ behaviours. The ‘crisis’ discourse has been captured by environmental education research and discourse which, sometime knowingly sometimes not so, situates itself in an ecological postmodernist paradigm (e.g. Goodwin, 2016; Hawkins, 2014; Jordan and Kristjánsson, 2016, Sterling, 2005). Ecological postmodernism is an important discourse, but it is not a new one and, whilst it may not have been adopted or acknowledged in all environmental education research, it has been at least explored in the context of environmental education (see

for example Sterling, 2005). I was tempted to then explain how research as making would be better, how it circumvents the problem and lands us closer to where we want to be. But I want to try and escape the instrumental; the approach that says if only *this*, then *THIS!* There is no easy cause and effect. I'm not suggesting a lens to see through to create the right outcome. At least, I'm trying not to, now, not anymore.

Thinking of research as a process of non-hylomorphic making places value in the process, not at the end somewhere when everything becomes clear. I am sold on Manning's (2016) term 'research-creation', and all it seems to indicate. I've only come across her chapter *Ten Propositions for Research-Creation* late on in the writing of my thesis. But it seems to articulate feelings I have had in the process of writing. Manning (2016, p.141) writes: 'Research-creation: the value produced is the process itself, is its very qualitative autonomy' and I couldn't agree more. It makes me wonder about all processes of research creation, even those in what are thought of as positivistic frameworks. Does the process of that type of inquiry have value, or at least, is that not where a certain pragmatics or way of being is produced? In the thought-inquiry itself. The image of thought that that form of inquiry requires? For me this speaks to the inescapability of immanence.

Tim Ingold's (2011) figuration of *wayfaring* is useful for describing the process of research in a post-qualitative landscape. Ingold contends that to be alive is to follow the lines of the world's material becoming. And accordingly the role of artists and, I contend, researchers alike:

...is not to give effect to a preconceived idea, novel or not, but to join with and follow the forces and flows of material that bring the form of the work into being. The work invites the viewer to join the artist as a fellow traveler, to look *with* it as it unfolds in the world, rather than behind it to an originating intention of which it is a final product. (Ingold, 2011, p.216).

This idea of research as non-prescriptive making *with* the reader is compelling. Other researchers are moving in this direction also. The word 'method' is a combination of

the Greek *meta* (follow) and *odos* (way) (Doll, 2006, p.89). Doll (2006) traces a history of the development of methodology which has produced a process of following a well-trodden way, and argues instead for a forging forwards:

As useful as this strategy was in the late Renaissance ages—and compared to the abstract intricacies of scholasticism—it has left us with a legacy which assumes that knowledge can, and indeed should, be presented efficiently: in concise, simplified, methodized form...Textbooks, an inheritance of this legacy, by their very design and presentation are organized to provide us with a short-cut to knowing. Knowledge memorized is substituted for the act of knowing. The mimetic is substituted for the poietic—copying for creating

Doll (2006), drawing on Dewey (1916/1966), is discussing educational method here, but his arguments work just as well for any presupposed attempt at knowing, including research methods. Indeed, he could be describing research methods textbooks. Elizabeth St. Pierre (2013) notes how the ‘classic’ texts of qualitative research methods (Denzin, 1989; Erickson, 1986; Lincoln and Guba, 1985) were informed by important interpretive and critical turns in the social sciences, and yet within them they were ‘still trying hard to be hard and reap the benefits of the game of Science, they imitated a simulacrum of the natural sciences, borrowing concepts like data and evidence, an instrumental methodology’ (St. Pierre, 2013. p.224) and many other tropes that post-qualitative research - intensely aware of the post-structural critiques levelled by, for instance, Spivak, Derrida, Foucault and Deleuze and Guattari - intends to overturn (Jackson and Mezzei, 2012). Post-qualitative researchers argue that, despite post-structuralism having been around for more than 40 years, ‘even now, some qualitative researchers continue to use concepts and practices like bias, objectivity, subjectivity statements, triangulation, audit trails, and interrater reliability that signal they are bound to logical positivism/empiricism, objectivism, and realism’ (St. Pierre, 2013. P.224).

Making forwards the physicality of research. Making an inquiry. Making a thesis. Carving words. Carving theory-practice. Making is a practice of learning.

## **Fuzziness 7: Methodology as pedagogy**

St. Pierre notes ‘Not only do people produce theory, but theory produces people’ (St. Pierre, 2001, p.142, cited in Gale, 2016, p.256). Ken Gale (2016, p.247) argues:

Expressing the contiguity of theorizing *as* practice with the emergence and affective nature of assemblages is partly to address the tyranny of the theory/practice dualisms that are present in education research and pedagogy and partly to trouble and disrupt the data collection and analysis binary that works to construct research practice within the constraining limits of (post) positivist thinking and practice.

Gale’s (2016) observation pushes the thought that I have had and articulated so far. That there remains, even in post-qualitative inquiry discourse, as in Gale’s description above, a divide offered between pedagogy and the process of conducting research. As I have said, the process of making this thesis has been an (environmental) education. St. Pierre’s articulation that concepts produce people, applies also to methods and methodologies (themselves concepts). Environmental education research approaches are so often concerned with the learners they study, whilst being unaware that they themselves, the outputs, research articles, dissertations, theses, articulate worlds that are taken up by their readers. Ontological assumptions are read by students, and taken up. A particular exception to this is Tuck and MacKenzie’s *Place in Research* (2016), where the authors make a case for critical place inquiry as stemming from a series of ethical imperatives. Specifically, that research methodology that considers place better fulfils ethical obligations in a relational world. These obligations are to people across places, to land and to future generations. For Tuck and MacKenzie (2016), traditional qualitative humanistic inquiry can reinforce unethical practices due to its ‘Western embeddedness in the logics of Enlightenment rationality of prioritizing mind over body, individual over community, humans over nature’, and this in turn ‘is thus a partial answer to why place has not been more significantly taken up in social science research to date’. (Tuck and MacKenzie, 2016, p.152) Tuck and MacKenzie (2016) further posit that the linguistic turn, whilst offering much to social science in the form of interrupting

modernism and positivism, ‘focused on epistemology at the expense of ontology’ (p.152). Lastly they offer that, if Western society omits place so regularly, why would it be more present in Western social science? These understandings point to a requirement for research that takes up an alternative, relational validity.

I am pushing myself to pay more attention to research creations as themselves affective (and political) forces, regardless of whether they have a policy orientation or not. This involves being aware of the metaphysical lessons implicit in research outputs. Metaphysics being synonymous with ‘environment’, and all research outputs holding metaphysical assumptions, means, I think, that all outputs perform environmental educations.

The dominant style of research methods textbooks, then, articulating an ‘end product’ of successful research to assess, is one that post-qualitativism critiques, taking much of its inspiration from the oeuvre of Gilles Deleuze. However, I think it is important not to see the use of prescribed methods as in *actuality* ontologically opposed to what St. Pierre, Jackson and Mazzei (2016, p.1) describe as the ‘heightened curiosity and accompanying experimentation in the becoming of existence’ in post-qualitative work. For, whilst to follow a research method might presume a certain post-positivist ontology, a *presumed* positivist ontology none-the-less occurs *of this* world, not *in* a removed one. As a result, what may appear a pointillist enactment (especially to those enacting it!) is actually outstripped by a series of conjunctives; by improvisational movement. As Ingold notes; ‘this is so even if practitioners are following directions laid down in a plan, score or recipe: indeed the more strictly any performance is specified, the greater the improvisational demands placed on the practitioners to ‘get it right’’ (Ingold, 2011, p.216). And so, the very specific requirements of stipulated research methods, whether acting in a presumed positivist, post-positivist, or social constructivist ontology, are nonetheless improvisationally produced *with* materiality. The illusion of transcendence is one produced by immanence.

Deleuze advocates a transcendental empiricism. As Colebrook (2002, p.xxix) puts it:

it is a transcendental empiricism because it insists on beginning with ‘the experienced’ or ‘given’ as such. (Empiricism is a commitment to experience as the starting point of inquiry, rather than ideas or concepts.) The empiricism is transcendental because when Deleuze begins with experience he does not begin with human experience; for Deleuze experience includes the perceptions of plants, animals, microbes and all sorts of machines.

In transcendental empiricism ‘it is possible to think pure experience of singularities without rashly categorising them in terms of their universal features’ (Rölli, 2016, p.163). Though it is important to stress that Deleuze would conceive of Colebrook’s examples as immanent enactments of production (haecceities/machines) rather than transcendent/quiddital categories (animal, plant, etc). In fact, it is exactly these sedentary concepts that he is attempting to transcend. It is this escape from representation where prevailing research methods fail. At the risk of repeating myself (or, embracing the repetition and what it does differently), there are two problems with what St. Pierre (2011) describes as conventional humanistic qualitative methodology. The first is its tendency to centre the human which is done, for example, in hermeneutic or phenomenological work. Johansson (2016, p.450) explains: ‘by doing this, not only a dualism between a subject and an object is constructed, but also a hierarchy. When the stable, rational, and coherent subject constitutes the centre of attention, the objects become secondary’. When we consider that methodology teaches, as I have stated, by enacting ontologies that are taken up as habit in a researchers/students practice, then it is not only the case that humanistic qualitative inquiry may present a poor or uncritical image of affairs, it is that it may be unethical in its teaching of the world as removed from those who act within (read: *of*) it. This would appear to be the very problem that (some) outdoor environmental education research is attempting to overcome – how to foreground the ‘background’. How to become more ~~ecocentric~~ *ecocentric* (immanent) in our research/practice? I suggest that our research practices should enact the forms of ontology-epistemology-ethics we aim for. The second problem with conventional humanistic qualitative methodology that St. Pierre (2011) identifies is, as I have described above, that it is not qualitative

enough. The methods initially designed to probe the 'socially constructed' world have become static and staid and, while more creative and experimental work has always been present, there has remained a broader process of commodification of research approaches and a political pull to 'rigorous' methodologies. In U.S. educational research a tendency to use positivistic frames, even within qualitative research, was bolstered as a result of the No Child Left Behind policy and resulting claims about legitimate ways of doing research (St. Pierre, 2011): processes blindly carried out on brute, unlively 'data'. In doing this, qualitative research has itself often become an unthinking process:

In trying to escape the criticism regarding what in this era can be seen as features of arbitrariness in qualitative research's inability to construct sources of generalizations, qualitative research is degrading to concepts such as data-collection, reflexivity, coding, research design, bias, validity (Johansson, 2016, p.451).

What does this teach, this method? It carries with it whole ways of being. Never mind that the ontological assumptions upon which it rests can be critiqued, and that we should do research differently as a result. But what does the prevailing approach to research *do*? If ontology is always ethical. If it matters what ways we organise the world, then humanistic qualitative research has certain ecological fall-out. It teaches certain habits of thought-action.

For instance, Karen Barad (2007, p.48) observes the tendency of prevailing approaches to divide into dominant pre-given categories:

Both scientific realists and social constructivists believe that scientific knowledge (using multiple representational forms such as theoretical concepts, graphs, particle tracks, and photographic images) mediates our access to the material world; where they differ is on the question of referent, whether scientific knowledge represents things in the world as they really are (i.e., nature) or objects that are the product of social activities (i.e., culture), but both groups subscribe to representationalism.

These different foci produce different orientations for action. Often, though not universally, ‘nature’ as a pre-given referent is the focus of environmental education research. Previously I have been accused of creating a straw man when stating this. But it remains the case. At the time of writing this, the most recent paper published in *Environmental Education Research* is called ‘Connecting children to nature through residential outdoor education’ (Mullenbach, Andrewjewski and Mowen, 2018). There are critical voices, and have been since at least 2005 when a special issue on the implications of post-structuralism for the field was published, probably much earlier. And yet ‘connection to nature’ papers keep coming.

### **Fuzziness 8: Language**

The limits of representationalism and the meaning of language have been identified as significant across research in the material turn. Maggie MacLure (2013) articulates that a common critique by new materialist authors is that the linguistic turn in post-structural theory tended to render the material world inaccessible, hidden behind the discursive systems that represent it. In place of this representational approach, MacLure (2013) states that materialist ontologies aim for a ‘flattened logic’ which escapes the hierarchical nature of representation. Deleuze and Guattari (2004) have many terms for this logic, each a figuration which paints the ontology in a new light and opens up new ways of considering what might be produced through its enactment. The Deleuzo-Guattarian figurations of becoming, rhizome, assemblage, refrain, haecceity, and plane of composition, consistency, immanence and univocity, Body-without-Organs (BwO), lines of flight, de/reterritorialization, and nomad<sup>21</sup> have all been ‘plugged in’ to post-qualitative research studies. A non-signifying ontology produces a conceptual topology where these terms cannot relate to any set definition. As MacLure (2013, p.661) points out: ‘conventional definitions would strictly be invalid, since to define is to return to the logic of representation,

---

<sup>21</sup> I have been advised to provide definitions for these terms, however I feel that an attempt to define them here would be cumbersome as well as against the spirit of the ontology at work, which is attempting to explore what things *do*, rather than what they *are*. However, see Colebrook (2002) for brief explanations for key Deleuzian terms. I explain some of the more frequently used of these terms at other points as they appear in the thesis.

where words ‘refer’ to entities as if these were separate and distinct from one another’. Indeed, many of these Deleuzian figurations are non-static; constantly moving (verbing) and as a result (over)lapping and (re)peating and never referring to a given, but instead questioning what might be produced. Through an understanding of language as non-representational there is an implicit inference of language’s immanent nature, its material capacity, or rather, the material/discursive nature of reality. This is a logic of sense, or thinking in thought. In this understanding there are not two distinct realities - concrete materiality and abstract language – instead there is a third way; a Deleuzian sense/event:

Deleuze identified something wild in language: something that exceeds propositional meaning and resists the laws of representation. Deleuze called it sense, this non-representing, unrepresentable, ‘wild element’ in language. Sense is important for a materialist methodology because it works as a sort of ‘mobius strip’ between language and the world (Deleuze, 2004, p. 23). Sense ‘happens to bodies and ...insists in propositions’ (p. 142), allowing them to resonate and relate, while never being reducible to either ‘side’ of that old duality that separates the material world from the words that putatively represent it. (MacLure, 2013, p.658-659)

In both Deleuzian and new materialist understandings of the world discourse, literally matters. That is true of what I write now. It is affecting. ~~Validity~~. I change words here and there. I write differently here and there. In a similar vein, Patti Lather (1993) chose to retain the term ‘validity’ in her seminal critique 20 plus years ago ‘in order to both circulate and break with the signs that code it. What [she] means by the term, then, is all the baggage that it carries plus, in a doubled-movement, what it means to rupture validity as a regime of truth’ (Lather, 1993, p.674). In my PhD inquiry I have grappled with legitimation issues as I have engaged in my doctorate ‘training’ and conversed with fellow research students and been surprised at how little these issues are the focus of others’ attention. Indeed, there appears a tendency for the basis of truth to be taken for granted once, early on in the PhD candidate’s journey, an epistemological frame is taken, though sometimes this is left until the last! In my reading, however, there is not a foundation for legitimation, but rather a

host of concerns which reframe terms such as rigour, authenticity or validity, ‘as multiple, partial, endlessly deferred’ (Lather, 1993, p.675). This being so, the post-qualitative author has creative choice in language. For instance, I use St. Pierre’s (2014) term ‘post-qualitative’ in the same spirit as Deleuze and Guattari (2004), not in recognition of given conceptual limits under an order-word, but recognising that the use of a label no longer matters given the perspective, having reached a certain point in understanding. This is why I can keep my own name in the writing of this thesis (whilst also allowing myself what Honan and Bright (2016) term ‘a space to pass’), for the same reasons that Deleuze and Guattari (2004) kept theirs:

Out of habit, purely out of habit. To make ourselves unrecognizable in turn. To render imperceptible, not ourselves, but what makes us act, feel, and think. Also because it's nice to talk like everybody else, to say the sun rises, when everybody knows it's only a manner of speaking. To reach, not the point where one no longer says I, but the point where it is no longer of any importance whether one says I. We are no longer ourselves. Each will know his own. We have been aided, inspired, multiplied.

Is this disingenuous? Habit is important, it is a manifestation of lines of desire, rather than an affliction, like the habit of smoking. And so, while I present my story here - alongside and *with* other voices - of becoming a researcher and diffractive environmental educator, it is important to remember that this is only a manner of speaking. The trick is first to reach this post-binary understanding. Here, I mean post-dominant, or prevailing ‘binary’, as binaries themselves are not necessarily ‘bad’. To judge them as such would rely on a transcendent ethics. Rather, it is the effect of particular binaries that is at issue. To see the text as both performing and questioning as de Oliveira Andreotti (2016, p.80) has put it:

“performative” texts are very different from texts that claim to represent something literally. As an expression of an aesthetic force the text has a life of its own and is out of my control— in the artistic sense, I cannot claim responsibility for what it does or even where it comes from. My experience with this force is that it intends to “touch” each reader differently, in order to bring forward something needing to surface and

to become visible. In this sense, I invite you to observe yourself reading the text: to hold your response before you as a gift in your hands (literally); as something to be present towards. The text invites this experience

And yet, different readers come with different preconceptions of what the text is supposed to do. In traditional academic writing, the text is supposed to communicate specific meaning; be clear, be transparent. The reader is not *supposed* to do half (or all) the work. They are not necessarily supposed to have already read Deleuze. I have to imagine a reader as I write. Either a reader who has read *A Thousand Plateaus*, or one who hasn't. But more than this is occurring as well, for the writing isn't only for the reader; not really. It is the method by which I gain understanding. The method by which I explore what is possible for my understanding. And so, with more creative, performative texts 'readers will read it differently, selectively and abusively, even. Some will be offended by it, some will have something triggered by it, others will domesticate it and make it fit whatever it is that they are for or against' (de Oliverira Andreotti, 2016, p.80). If this is the case, how can a contribution be judged? Especially when:

we have too many colleagues and students – male and female – who haven't done their reading, who haven't kept up and are “paradigms behind” (Patton, 2008, p. 269) – who still think and live in those binaries. Having to work with them is tiring and irksome and always makes me cranky. (St. Pierre, 2013, p.149)

I wonder how this makes you feel, reader? It scares the hell out of me! There is so much I haven't read. And so much I haven't read well.

Is outdoor environmental education research 'paradigms behind'? Certainly not all of it. However, I don't think it is a stretch to claim that much environmental education research rests on problematic methodological assumptions, often falling either into positivistic attempts to measure the effects of nature or social constructivist/phenomenological attempts to gain insight to the social meaning or embodied experiences that result in care for the environment As a result of this

understanding, early childhood education research has begun to embrace the material turn as a counter to the criticisms of prevailing research paradigms (e.g. Malone, 2016). Other ways of thinking are occurring. New figurations that help me/us think these things differently and I cite some of this research in Haeccity 1. At the time of writing this the Special Issue on New Materialisms and Environmental Education which I am co-editing contains submissions drawing on a host of new materialist and post-qualitative literature, I am excited to see the ways these papers develop, especially in exploring the ways in which environmental education literature contributes to discussions of the ethical orientations of new materialisms which position themselves as environmentally significant. Language, and the space between language and reality, has been taken up before in environmental education, especially in a special issue on the ‘post-post’ era in a 2005 issue of *Environmental Education Research*.

### **What to do *after method*, machines, and matters of concern**

This is, as John Law (2006) would say, *after method*. Following St. Pierre’s (2013) instruction to her students, I ‘plug’ my machine - my life and problems - into Deleuze’s and others’. What is analysis? Elizabeth St. Pierre (2011) explains that when she asks her students what they did when they were ‘doing analysis’ they ‘describe a multitude of activities’:

washing the car and weeding the garden (*the physicality of theorizing*), making charts and webs, talking with friends, writing, listening, dozing on the couch, and so forth. The positivism imbedded in qualitative research quickly fails – audit trails can’t capture that work, it can’t be triangulated, and it is never saturated. (St. Pierre, 2011, p.622)

Analysis is lived *with/of* things. The machine is a Deleuzian figuration that may initially jar with readers from an environmental education background. Stephen Sterling (2005) popularly differentiated between a ‘mechanistic’ worldview and an ‘ecological’ worldview of education, urging a shift to the latter by promoting whole systems thinking through education and education management change. As I have mentioned, there is a strong heritage of deep ecological thought in outdoor

environmental education practice and research. For instance, Sterling (2005) defined the mechanistic worldview as objectivist (the observer views from the outside), descriptive, primarily reductive, focused on material reality (as distinct from ‘mental’ reality), promoting an ethos of control, atomistic, and dualist among other related notions. These are indeed the same objectivist notions that new materialisms seek to escape, as St. Pierre, Jackson and Mazzei (2016, p.100) note ‘the dogmatic, orthodox, Cartesian image of thought’ where the world is described as operating as a machine still drives much social science. However, the Deleuzo-Guattarian image of thought offers an ‘incommensurable counter image of thought’ as a sense/event which collapses the separation implied by the representational separation of language and materiality (MacLure, 2016). How then do we reconcile this seeming contradictory use of the term ‘mechanistic’? I would suggest that Sterling’s (2005) label of this dominant way of seeing as mechanistic is *metaphorical*, that is it offers a representation of the state of affairs. In contrast, Deleuze and Guattari (2004) use the term machine, as well as many other concepts and ideas, as a *figuration*. The figuration is non-representational in that it does not articulate a state of affairs, but rather acts in the world. For instance, in her contribution to Coleman and Ringrose’s (2013) edited collection *Deleuze and Research Methods*, Jackson (2013, p.113-114) opens her chapter with a section of interview transcript. It is a monologue from a participant in one of her research studies. Jackson’s interest is in reconfiguring our conception of data using the Deleuzian figuration of the machine:

I do not begin this chapter simply with data but with a *machine*: a productive force that functions immanently in its becoming. In its becoming, the data is already multiplicitous – it is not dependent on being stabilized or known in an onto-epistemic project of qualitative research ‘interpretation’ and ‘analysis’. As a machine, data ‘works’ when it enters and interrupts a flow, or is ‘plugged in’ to produce different ontologies.

Jackson (2013) is not saying that her data are *like* a machine (as Sterling (2005) suggests the Cartesian worldview envisions the world to be *like* a machine), but that her data *are* a machine. Rosi Braidotti (2000) states that ‘the notion of “figurations” -

in contrast to the representational function of “metaphors”- emerges as crucial to Deleuze’s notion of a conceptually charged use of the imagination’ (Braidotti, 2000, p.170, cited in Gough, 2004, p.263). Donna Haraway comprehends figurations in a similar fashion, as ‘performative images that can be inhabited...condensed maps of contestable worlds...[and] bumps that make us swerve from literal mindedness’ (Haraway, 1997, p.11, cited in Gough, 2004, p.263). In *After Method: mess in social science research* Law (2004, p.151) states that he has ‘tried to show that they [prevailing methods] presuppose and enact a specific set of metaphysical assumptions - assumptions that can...and should be eroded’. And so:

A new materialist methodology is thus performative (Alaimo, 2010), requiring researchers to challenge taken-for-granted assumptions by becoming entangled with the research process. In becoming part of the research-assemblage (Renold and Ringrose, 2008), new materialist analysis is necessary in order to trace the affective economy of the assemblage (Clough, 2004), to map out the flows of affect between researcher-data in order to reveal the micropolitics of methodology and the kinds of knowledge they produce (Jackson and Mazzei, 2013), and to produce lines of flight that carry us into new possibilities of being-thinking, forcing us toward a politics-to-come (Rotas and Springgay, 2013). (Sonu, Snaza, Truman and Zaliwska, 2016, p.xxv)

‘Affective economy’. ‘Micro-politics of methodology’. New materialist research seems to be (post-)personal-(post-)environmental research. It is constituted on the materiality of the situated contexts that make up the research/ed/er assemblages. It is concerned with affect. ‘Environmental’ here relates to the entire spectrum of events which make up reality – the literal environment which we so often (limitedly) perceive as boxed by labels such as the social, the natural, the conceptual. In this way, post-qualitative new materialist research offers me the form of post-green environmental education research that I require to think past the romanticised conceptions of nature. The broadening of the notion of environment in environmental education has political and normative consequences.

Inhuman agency undermines our fantasies of sovereign relation to environment, a domination that renders nature “out there,” a resource for recreation, consumption and exploitation (Cohen, 2015, p. 9).

Payne (2016, p.171) draws on Noys (2010, 2014) to highlight the risk of this “post-critical” space’ – I interpret Payne’s caution as speaking to the manner in which the nature of academic critique has changed. For instance Bruno Latour (2004) articulates how ontology - the real - is manifest politically – ‘matters of concern’ - as well as scientifically – ‘the matters of fact’. This in turn, Latour (2004) maintains, requires a shift in the *manner* of critique. Critique is ontological insofar that, if I oppose a matter of fact I critique it, but if I oppose a matter of concern, I may damage something very legitimate:

Archimedes spoke for a whole tradition when he exclaimed: “Give me one fixed point and I will move the Earth,” but am I not speaking for another, much less prestigious but maybe as respectable tradition, if I exclaim in turn “Give me one matter of concern and I will show you the whole earth and heavens that have to be gathered to hold it firmly in place”? For me it makes no sense to reserve the realist vocabulary for the first one only. The critic is not the one who debunks, but the one who assembles. The critic is not the one who lifts the rugs from under the feet of the naïve believers, but the one who offers the participants arenas in which to gather. The critic is not the one who alternates haphazardly between antifetishism and positivism like the drunk iconoclast drawn by Goya, but the one for whom, if something is constructed, then it means it is fragile and thus in great need of care and caution. I am aware that to get at the heart of this argument one would have to renew also what it means to be a constructivist, but I have said enough to indicate the direction of critique, not away but toward the gathering, the Thing. (Latour, 2004, p. 246)

Latour is articulating a further concern of post-qualitative inquiry; a proposed collapse of the ethical imperatives that drive our inquiries and the state of the real. Latour’s point has been usefully applied by Van Poeck, Goeminne and Vandenabeele (2014) in analysing educational practices that enrich discussion of the democratic paradox in education for environmental and sustainability education. Karen Barad (2007) similarly claims a collapsing of the distinction between ontology and ethics

with her notion of the ‘ethics of mattering’. Both of these stances claim that ontology and ethics are imbricated, which is a distinction from the claims of, for instance Bennett (2010) or Haraway (1994), who each articulate in different ways that the realisation of the world’s agency *requires* an ethical response. And this is different again from speculative realists and object oriented ontologists who, whilst advocating flattened ontologies and post binary realities, appear less concerned with politics. According to Taylor (2016, p.208):

New material feminists, like speculative realists, adhere to a non-dualist, flat ontology, which at the same time reworks epistemology but, unlike speculative realists, they have been particularly exercised by ethics as engaged, embodied, situated, and *gendered* meaning-making practices which necessarily displace objectivity, “truth,” and “reason”—what Haraway (1988) called “the god trick of seeing everything from nowhere” (p. 581)—as central values in social research (Alaimo & Hekman, 2008; Barad, 2007; Bennett, 2010; Braidotti, 2013; Coole & Frost, 2010).

In this way OOO and speculative realisms retain an interest in matters of fact, the ways things are, rather than matters of concern.

### **What follows and precedes and is**

Philip Payne (2016) asks ‘What next?’ in environmental education research, and a tentative answer that he provides is that the emergent turns in thought, towards the material and affectual, can be thought of as:

...another braiding of the calls in EE from the 1980s for a “paradigm” shift in education and research, a point touched upon by Bob Jickling through Kuhn,... Undoubtedly, it is an exciting (theoretical) time for environmental educators and researchers. (2016, p.170)

I agree with this sentiment and have written here a different form of environmental education inquiry. Not following a method, post-qualitative work is, at its most a/effective, a (non-)method that acts as a catalyst for thought against the pre-given:

Suspicious as I am of efforts to codify and discipline the “beyond” of qualitative work, I want to endorse the incalculable, the messy, and the responsibilities of not knowing. This is against the much more common disciplining efforts that would benefit from an immersion in vitally minor possibilities that work against the forces of homogenization. In Deleuzian terms, this is a molecular vision of the alternative, a plurality of fissions and margins, a system of deviances straining for communicability while protecting its marginality, registering in the local, enacting the future life of difference, and a way to dream and perhaps enact postqualitative work. The question is how might we move from what needs to be opposed to what can be imagined out of what is already happening, embedded in an immanence of doing. (Lather, 2016, p.129)

This is a risky and necessary business. What might an articulation of a post-environmental education look like? What I have ended up producing are haecceities of the materiality of *a* life. They are stories of practice-theorising-inquiry at the edges of environmental concern post-nature, or what I come to call environing education. Elements of teaching, research, ethics and *a* life come together in explorative writing in eight haecceities (including this one). They are not perfect, nor are they (necessarily) complete. They are experiments that ebb and flow between precarity and security. I think I start off safe, and become more playful as I proceed, though I have started all over the place and not yet ended! My focus ranges across many elements of *a* life, but I hope the stories are grounded in what Lather (2016, p.129) calls an ‘immanence of doing’ that is, the call of post-qualitative inquiry. I move through, re-turn and overturn, pedagogy, thinking, writing, and ethics.

## **Haecceity 4: Becoming rocked**

'I didn't know we were at the disco' said a student down to my right hand side. He was remarking on my leg, which was drumming up and down at the knee under the odd, angled pressure I was exerting upon it. The student, ostensibly acting as a 'spotter' in case I fell, was one of 12 who had come on this trip to Fontainebleau forest about an hour's drive south of Paris. Fontainebleau is world renowned for its sandstone boulders, which are climbed by thousands of people each year. Although I had visited 'Font' several times before, for the undergraduate students, undertaking a degree in 'Outdoor Adventurous Activities', this was their first time wandering the sometimes thick, sometimes gladed, sometimes deserted Oak, Scots Pine and Beech forest.

We had been climbing at a spot called Le Diplodocus in the Trois Pignons area of the forest all morning. I had been sitting on a bouldering mat having some lunch when some of the students had started trying to climb a short slab route off to my right. I'd seen a local ascend the route not ten minutes earlier with little problem, and so was interested when these students, among them some very talented climbers, were struggling to get to the top. From where I sat it looked 'do-able'. I wandered over. I was drawn over. I could picture placing my right foot on the solid foot hold, stepping up to 'smear' my left foot wide and high, balancing, and then biting in with the rubber on my left shoe to step up to the broad 'jug' hold at the top. Three simple moves. After helping spot the students for a while they offered up a slot. 'Dave?' said Tom, indicating to the rock.

To say the rocks are climbed might be something of a mistake. The rock is not inert in the process. Rather, it climbs us as much as we climb it. Years of climbers returning to the same famous circuits (sets of climbs of roughly the same difficulty) and routes (the individual climbs themselves) leave their mark on the rock in the form of chalked up hand holds, blackened foot holds and a gradual 'polishing' of the holds which makes each attempt at a route infinitesimally more difficult than the

previous attempt. But the rock acts on the climber in very physical ways also, asking her to contort, balance, rush, be still, endure, sprag, smear, bridge, create, push, pull and above all, feel – through searching fingers and weighted toes, and the gentle pendulum of a balance nearly caught. There is none of this without the rock. If the rock is climbed, then the climber is rocked. As Ahmed (2010) notes, ‘while bodies do things, things might also ‘do bodies’’ (p.245).

Pauliina Rautio (2013) is a human geographer whose research on the way children experience their material world demonstrates this ‘intra-relational’ existence:

Stones have (intra-)agency: stones do things to us and with us. They have us pick them up, feel them, close them in our fist (if particularly smooth and rounded) or hold them between our thumb and forefinger (if small and edgy). They condition our walking: on a frosty morning when the roads are slippery the sight of gravel on the ground makes us pace with ease. Stones play with us if they are flat in the right way. We throw them onto water to make them bounce – just to make them bounce. And if our co-operation is optimal they bounce quite a few times (p. 404)

The students and I spent most of the time looking, in a haptic sense, at the rock face<sup>22</sup>. We chatted to each other as we stroked our fingertips over the rippled sandstone, searching for nuances in the face that might hold a toe (the foothold was all important for this particular climb). So here we were, our ‘matters of concern’ before us (Latour, 2004), imbricating us, intra-acting upon each other (Barad, 2007), and all blurring at the edges through our intra-acting; or, more accurately, becoming more real as a result of it. In ‘Font’ the routes are numbered, and often named, so climbers can follow a circuit, or return year on year to a problem yet unsolved; an old friend they want to get to know better. Blue 11 at Le Diplodocus was becoming a friend, taunting me warmly, daring me to stand on my left foot. Trust the hold; trust

---

<sup>22</sup> Haptic because, as Karen Barad (2008, p.327) notes: ‘Can we trust visual delineations to define bodily boundaries? Can we trust our eyes? Connectivity does not require physical contiguity. (Spatially separate particles in an entangled state do not have separate identities, but rather are part of the same phenomena.)’. Following Deleuze and Guattari (1986, p.492); “Haptic” is a better word than “tactile” since it does not establish an opposition between two sense organs but rather invites the assumption that the eye itself may fulfill this nonoptical function’.

the rubber on my shoe. Trust the students spotting me (another matter altogether).  
And reach the top.

\*  
\*\*

I'm walking up the Royal Mile to the office. Once again someone has stopped in front of me on the pavement, head tilted upward to the right, squinting as they raise their camera. The Tollbooth Tavern clock tower stops people in their tracks daily. Like a tractor beam, it roots them to the ground, demands their attention. Each time I see it, I wonder how many thousands of photos of the tower lie in barely-ever-open folders on hard disks around the world, or in the cloud. The cloud is of course very Earthly. These digital images float as electrons in Google's massive data centres. In 2015, these centres produced as much CO<sub>2</sub> as all air travel (Vaughan, 2015). As I learn this I immediately think of a tweet I sent out, raising the issue of academics flying to conferences to discuss climate change. I think of the fact that this thesis is stored on my Google Drive. Right now my thesis, along with digital replicas of the towers, is slowly warming the planet. I find myself raising my camera.

\*  
\*\*

Since reflecting on my experiences of climbing in Fontainebleau and the contingent play of materials that become whilst bouldering - enlivening my conception of the lithic and, by extension, the material world - I have come across Jeffrey Cohen's (2015) beautiful book *Stone: an ecology of the inhuman*. Cohen (2015, p.16) expresses my sentiments well:

Stone's time is not ours. For many, this disjunction will never be noticed, triggering neither affect nor insight. For those for whom rock's alien intimacy becomes palpable, however, its temporal noncoincidence

is profoundly, productively disorienting. A climber faces the face of the mountain, and in that interface relation unfolds, bringing each into intimacy: fraught, perilous, fleeting, familiar, suspended above the certainty of ground. Something happens in such interfacial zones: anarchic irruption (arche is origin, grounding: what happens when arche is impossibly distant, geologically adrift?), generative encounter, an erosion of secure foundation, an ethical moment of connection-forging. Lithic-induced perspective shift triggers an ontological and temporal reeling, a rocky movement of affect, cognition, horizon.

‘Ontological and temporal reeling’ is, I think, something like what I hope to get at with this study for the very reasons that Cohen articulates: as a bridge to ‘ethical connection-forging’ (though I take issue with the term ‘connection’) and, particularly, the enchantment and consequential ethics that an understanding of the world as lively might produce. However, where Cohen and I differ is in the assertion that climbers, per se, know or understand this view, or in the assertion that to climb one must attend to this conception of the world. That is manifestly not the case. The students I climbed with in Font on that day, and students I have engaged with in many other endeavours, do not, by and large, see the world that Cohen describes. Nor do I. At least, not all the time. It’s something to practise.

### **Turning the Anthropocene**

Sustainability education has often been conceived as responding to a ‘crisis of perception’. There are certainly alternative ways of conceiving the world to dominant western understandings, and it is reasonable to assume that our ways of conceiving have an influence on our actions. Are there, then, more ‘sustainable’ ways of conceiving? Ways of understanding reality that, through the manner in which the ‘human’ is conceived in relation to the wider world, result in change that might be productive (healthy? Ethical, even?) for the ‘human’ and the ‘non-human’? It is certainly an idea worth exploring. And I wonder what the concept ‘Anthropocene’ means for our ways of seeing. Mirzoeff (2014, p.215) argues succinctly that the concept has unescapable implications for our conception of nature, and of the broader world:

Nature, so often used by humans to define perversity as unnatural, has itself become perverse (Mortimer- Sandilands and Erickson 2010: 1 – 47), undoing all theologies, deisms, Spinozisms, and other forms of the transcendent. We now find ourselves confronting an autoimmune capitalism that seems determined to extract the last moment of circulation for itself, even at the expense of its host lifeworld. Like AIDS and other autoimmune diseases, in which the body turns on itself, this capitalism has a long etiology and multiple symptoms and is resistant to cure: we might call it autoimmune climate- changing capitalism syndrome, or AICS for short. I want to acknowledge that it was Dipesh Chakrabarty (2009) who first called for humanists to use the Anthropocene as a means of analysis in what has become a classic essay.

Ontological transcendence is set adrift by the Anthropocene, or revealed as an illusory framework upon which western modernity pinned its faiths – including modern positivist and neo-positivist social science research (St. Pierre, 2014). As Mirzoeff (2014) points out, this is true for our conception of nature – also no longer tenable as transcendent, despite some environmental education scholars’ claims to the contrary (e.g. Bonnett, 2015). Mirzoeff (2014) wishes to stress Chakrabarty’s view of the implications of the Anthropocene in relation to academic endeavour and it is a reflection worth considering in light of my own work:

[Chakrabarty’s] crucial point was to emphasize that the periodizing and dividing so beloved of academia no longer holds good. In the Anthropocene, all past human history in the industrial era is the contemporary. No location is outside the Anthropocene, although some are affected far more than others. The modern research university has grafted the capitalist division of labor onto the medieval vision of the individual scholar in his cell. Learning to think, to coin a term, will mean letting go of both the divisions of time and space that define research and the myth of the solitary intellectual.

We are never alone in our being. And what alternative conceptions exist to the Anthropocene? Whilst there is healthy debate amongst geoscientists as to ‘when’ this ‘new’ epoch arose (Zalasiewicz et. al, 2015) there is also debate, in broader fields, as to the manner in which we might conceive of any change in a geo-temporal era – i.e., who is to say when one epoch finishes and another begins? Noel Castree has recently

expressed this sentiment in *Nature*:

What counts as epochal change is a matter of perspective and emerges from judgements about when quantitative change morphs into qualitative transformation. The interpretive and critical parts of social science can help us to appreciate that formalizing the Anthropocene is a misguided attempt to ‘scientize’ a particular set of value judgements. No such formalization is needed to underpin arguments for humans to live in ways that are less environmentally destructive. (Castree, 2017, p.289)

For instance, Donna Haraway (2015) recently de-centred the ‘anthro’ in the Anthropocene, noting that ‘...no species, not even our own arrogant one pretending to be good individuals in so-called modern Western scripts, acts alone; assemblages of organic species and of abiotic actors make history, the evolutionary kind and the other kinds too’ (p.159). Whilst some embrace the concept of the ‘Anthropocene’ as evidence of the damage that humanity can do, the rush to label humans as the central instigator of environmental crises does not sit well theoretically with post-humanist theory that attempts to erode the dualism of humans and nature. Splitting history into distinct geological phases is, after all, a very Western human thing to do, as is naming one of them after us.

Jason Moore’s (2014) ‘capitalocene’ paints a different picture to the dominant narrative once again. Moore moves beyond the implied dualism of the Anthropocene (that humans are ‘overwhelming the great forces of nature’ [Steffen, Crutzen & McNeill (2007)]) to instead depict capitalism as a *world-ecology*. This conception, Moore (2014) argues, is useful for overcoming a prevailing problem, that ‘[p]hilosophically, humanity is recognized as a species within the web of life; but in terms of our methodological frames, analytical strategies, and narrative structures, human activity is treated as separate and independent.’ (p.2). Our ways of seeing, then, can be likened to the volcanic action that most likely brought on the great Permian-Triassic extinction (Clarke & McPhie, 2014; McPhie & Clarke, 2014). And history, as they say, repeats (Pimm et al, 2014).

My story of my experience with Blue 11, and Rautio's (2013) description of our diffusion with the material world more generally, spring from an emerging and promising current of alternatives to the prevailing conception that is beginning to seep into our 'methodological frames, analytical strategies and narrative structures' (Moore, 2014, p.2). These alternatives, variously and often enigmatically named, are united by their move past dualistic conceptions and transcendent notions of reality to reimagine, often to blur and make 'messy', the human relation to the world in order that we may productively tackle socio-ecological crises. Ivakhiv (2014, p.1, cited in Mcphie and Clarke, 2015) describes this entanglement of new narratives and perspectives as an:

...“ontopolitical” milieu of contemporary social, cultural, and environmental theory, a milieu in which posthumanism, critical animal studies, actor-network theory, assemblage theory, critical realism, agential realism, nonrepresentational theory, enactive and embodied cognitivism, post-phenomenology, multispecies ethnography, integral ecology, and various forms of “new materialism,” “geophilosophy,” and “cosmopolitics” fashion themselves as intellectual responses to the predicament indicated by such terms as the ecocrisis, the climate crisis, and the Anthropocene.

Many of these neologisms serve to demonstrate their intent by themselves. More than this, they can allow the reader to think generatively. For example, rather than acting as a signifier to a pre-given realm of reality the term 'geophilosophy', derived from the materialist philosophy of Gilles Deleuze and Felix Guattari (2004), is more of a process that cultivates the readers thoughts. What does it make you think to read the term? For me, sometimes, the expression implies a rupturing of any transcendent divide between the *mental abstract* and the *geophysical*. When I read the term my thoughts can become as tangible as fjords, or French boulders<sup>23</sup> – no longer any chasm of categories of reality between them and the 'real' world. The challenging of modernist dualisms, such as mental/physical, is a feature common to the diverse approaches Ivakhiv (2014) lists. This is not, as Ivakhiv (2010) points out, because

---

<sup>23</sup> Deleuze talks of a 'real empiricism' where 'thought itself exists in fundamental relationship with the Outside...[where there is] on one hand, a physics of the mind; on the other a logic of relations' (2005, p.38).

dualisms are inherently bad (though there may indeed be negative consequences of basing action solely on dualisms), but rather because the (often unquestioned) importance we place on them may smother other ways of thinking.

The nature/culture dualism is one such schism that may be stultifying other modes of educating for sustainability. Presently much research, theory and academic effort supports the notion that spending time in 'nature' can inform environmental awareness, and even 'reconnect' 'us' to 'it' (Cheng & Monroe, 2012; Christie & Higgins 2012; Frantz & Mayer, 2014; Liefländer, Fröhlich, Bogner & Schultz, 2013; Sommerville & Williams, 2015). However, the term (nature) is used variously and incongruously in the field of environmental education. For example, sometimes the term is used to refer to the 'ecological processes' of the planet. For instance, approaches that advocate 'ecological literacy' often suggest helping people better understand the 'natural ecological process' of the planet (McBride, Brewer & Berkowitz 2013). Alternatively 'nature' can refer to geographically delineated places, supposedly untrammelled (or only partially trammelled) by people. For instance some authors advocate 'nature experiences', as if there is a transcendent 'nature' that is somehow apart from the everyday lives of people (e.g. Zelenski, Dopko & Capaldi, 2015). In the first of these examples, students may be urged to consider the ecological systems that they draw from, and which they affect in their day-to-day life choices. In the second, students may spend time in supposedly 'natural' places, so as to have firsthand aesthetic experiences, gain propositional knowledge of 'wildlife' and 'natural processes' and as a result start to care for it/them. There are many variations of these approaches and 'nature' is not always essentialised in environmental education literature (see Gough, 2004, for example). However, other fields of enquiry have moved much further in their exploration of the concepts of the 'human' and the 'natural', as indicated by Ivakhiv (2014). As the term appears so central to environmental education, researchers, theorists and practitioners could make more use of this rich world of alternatives.

In environmental and human geography for instance Lorimer (2012, p.2) tracks a profusion of conceptions of nature referring, rather, to multinatural ontologies

constituted by ‘a diverse array of non-deterministic and non-dualistic materialisms’. The focus on materiality, or *new materialisms*, allows a dissolving of the essentialist barrier that is set up by the terms ‘human’ and ‘nature’ as well as the constructivist view of culturally constructed natures. Coole and Frost’s (2010) edited collection, *New Materialisms*, acts as a confluence of this ‘material turn’ in cultural studies, demonstrating that it is a turn that has been picking up speed across fields as diverse as anthropology, archaeology, feminist studies and political studies for example, even producing its own areas of science studies, rhizome studies and contemporary animisms as well as its own academic battles (the static Object-Orientated-Ontologists vs the fluid process-relationalists for example). The potential for these approaches to influence how education can help young people conceive of their material coalescence *of* (rather than ‘with’ or ‘in’) the material world is great. This fact seems particularly significant given the emphasis environmental education discourse places on changing people’s perceptions of their dependence on (or, from a new materialist perspective, coalescence *of*) the world.

### **Veering away from ‘nature’: shallow, deep, dark and flat ecology and environmental education**

So what of ‘nature’? New materialists might say that the term is highly anthropocentric, implying that humans have *the* ‘culture’. Why is it, for instance, that the action and produce of bowerbirds are *not* conceived as culture, and everything *outside* of their dances, bower building and selection and display of colourful artifacts is conceived as nature? Architect, designer, choreographer and educator Eva Perez de Vega (2014) walks us through the different conceptions of the ‘nature/culture’ problem by highlighting four approaches: four *ecologies*. She highlights the popular *deep* ecology of Arne Naess (1973) as an attempt to move beyond the prevailing dominance of culture in our perceptions of the nature/culture relationship, an approach that Naess famously termed a *shallow* ecology. Naess’ premise was that we needed to move from a shallow ‘anthropocentric’ conception, where human culture was the dominant concern, to a deeper ‘ecocentric’ conception of the world, where nature was considered the home of human culture, and therefore more central to human concerns than modern society would suggest. Many authors

postulate what a pedagogy influenced by Naess' work, and greater consideration for ecological process in general, might look like (e.g. Haigh, 2006; Orr 1992; Stone & Barlow, 2005). Whilst there may be some examples of practice embracing deep ecology and ecological processes in general, the absence of these approaches in mainstream education, certainly in the UK, demonstrates that a *shallow* ecological perspective is dominant in schooling in the West. Students may have separate time for 'nature study' or field trips where nature is experienced as an 'other'. Deep ecology has not even greatly influenced popular adventurous forms of outdoor education, where the environment is treated staggeringly uncritically. In this practice there may be plenty of time set aside for synoptic weather charts, footpath erosion and leave no trace principles, but seldom any for discussion of the petrochemical industries required for Gore-Tex jackets, satellite navigation and portable gas canisters, not to mention the socio-environmental justice issues created by the economies upon which these industries are founded (Cachelin, Rose, Dustin & Shooter, 2011). Environmental education theory has, of course, accessed the philosophical perspective of *deep* ecology, and it has even been seen as firm conceptual ground on which to construct environmental education practice (Nicol, 2003). However, de Vega draws on Timothy Morton's (2010) *dark* ecology to demonstrate the lingering dualism in Naess' (1973) formation, and the romantic and perhaps limiting conception of nature that *deep* ecology relies on, celebrating green 'nature' over the 'culture' of humans. Might there be a way forward beyond *deep* environmental education?

Morton's (2010) *dark* ecology, articulated in his books *The Ecological Thought* and *Ecology without Nature*, suggests that the greatest barrier to ecological thinking is the concept of nature itself. This is because the notion of nature sets up an aesthetic distance between 'us' and the 'world'. Morton complains that we cannot mourn for the environment because we are deeply connected to it – 'we' are it – and 'we' includes our industrial processes, urbanisation, pollution and waste; all of which are ecological events that are not 'killing nature', but producing their own *dark* ecosystems. In this conception the petrochemical industries are as 'natural' as a wild flower meadow. Morton maintains that *deep* ecology's ecocentrism, retaining

modernist ideas of nature, is not much better than *shallow* ecology's anthropocentrism in clearing up the metaphysical puzzle. Whereas in *shallow* ecology uncivilised nature is to be tamed by culture, de Vega demonstrates how in Naess' (1973) *deep* ecology there is a favouring of the perceived idyll of nature over the presumed depravity of culture; in both cases, however, a metaphysical divide remains. In contrast, a *dark* ecology allows us to cut out the romantic, picturesque, idyllic and trite from our environmental conception - an operation that is, perhaps, much needed in environmental education discourse. A *dark* environmental education would move beyond ecological principles as popularly conceived. Morton's *ecological thought* is one that acknowledges the co-existence of all things - things already coping with environmental catastrophe. According to Morton (2007), to begin to think our way into this new world we have created we must, above all, reject 'nature'; whatever else it might be. A *dark* environmental education would be an education without 'nature'. Jeffrey Cohen (2014, p.xxii) editor of the collection *Prismatic Ecology: Ecotheory beyond Green* stresses the dominant role the hue of green has played in even recent attempts at ecocriticism and the world we must consider if ecotheory is to have credence:

It's not easy being viridescent. Bright green criticism emphasizes balance, the innate, the primal, landscapes with few people, macrosystems, the unrefined. What of the catastrophic, the disruptive, urban ecologies, the eruptive, heterogenous microclimates, inhumanly vast or tiny scales of being and time, the mixed spaces where the separation of nature and culture are impossible to maintain? Underneath every field stretches an unplumable cosmos of primordial stone, worms, recent debris, reservoirs of natural and manufactured chemicals, poisonous and fertile muck. In a green Arcadia what do we make of the airplane, graves, gamma rays, bacteria, invasive bamboo accidentally planted as an ornament, inorganic agency, the crater become lake, the invisibly advancing or receding glacier refuse, lost supercontinents, parasites, inorganic compounds that act like living creatures, species undergoing sudden change? Other colors may be necessary to trace the impress and interspaces created by ecologies that cannot be easily accommodated within the bucolic expanse of green readings, or at least within those that possess a utopian emphasis on homeostasis, order, and the implicit benevolence of an unexamined force labeled Nature.

Timothy Morton's 'dark ecology' is of course a reaction to the very same 'green Arcadia' that Cohen wishes to escape. Phillip Payne (2014) takes up Morton's (2010) dark ecology, along with Rosi Braidotti's Nomadic ethics, to practise a form of dark environmental education in Bear Gully (Bare Gulli), Victoria, Australia. Payne's (2014) reflections on the *dark* side of his students'/participants' experiences of a stripped back 'vagabonding' environmental education experience highlights both the potentials for considering a dark environmental education for better understanding these experiences (as opposed to more prevailing romanticised or transformational accounts), but also the research problems associated with what is essentially a post-qualitative attempt at knowing:

This "problem" is exacerbated by the difficulties of representing both the "ecocentric" and "embodied" turns while wrestling with an ontological (re)turn in philosophy and theory. Put simply, as unusual as it might seem, this researcher believes that the politics of the ontology of time, in relation to space, through bodies emplaced in different natures, lies most earnestly at the very heart of a renewed post-critical "educative" quest for social and environmental justices. Thus at this point, additional theoretical resources and explanations of the voices and stories of the researched are required. (Payne, 2014, p.55)

Payne's identification that the politics of the ontology of time, space, bodies and multinatures are central to the development of environmental education research is one that I wholeheartedly endorse and is a reason why I am pushed to examine the dualisms in prevailing environmental education research. Whilst retaining an implicit favouring of romantic ideas of nature, Naess' philosophical call is one that at least attempts to remove the dualism between nature and culture. Plumwood (2000) recalls the debates between Arne Naess and his mountaineering friend Peter Reed; where Naess stressed that an environmental ethic must spring from acceptance that nature is the home of culture, thus advocating a monistic *unity* (i.e. that humans and nature are of the same essence), Reed was vehemently dualist, falling back on romantic

conceptions of the sublime and awe inspired by the *difference* of ‘wild’<sup>24</sup> places as the grounds from which environmental action would rise (a fundamentally *pluralistic* view – dualisms are limited forms of pluralism, but if your worldview is made up of many dualisms it is fundamentally pluralistic). In contrast to these approaches a Deleuzo-Guattarian *flat* ecology places the emphasis on the continuous and immanent materiality of the world, before the formation of signifying language (i.e. ‘nature’ and ‘culture’) (Deleuze and Guattari, 2004). Immanently experimenting in world-making through storytelling may produce any number of dualisms, however the idea is to overcome the staid ones and understand that the dualisms we construct can be left behind and discarded – as furniture we are forever rearranging. de Vega (2014) employs the term *flat* as it demonstrates the anti-hierarchical plane of continuity, and yet a quasi-form of difference, implied by Deleuze and Guattari’s ontology. St. Pierre, Jackson and Mazzei (2016, p.5) also demonstrate the influence of thinking flatly on language when they discuss how the subject, the “I”, is likely entirely fictional:

Could that “I” be just a habit, a bad habit? Perhaps “I” does not precede the verb, “think.” Perhaps thought is not initiated by the “I” but comes to the “I” from the world. Perhaps the “I” is not even separate from the verb or the object of the verb in the sentence, “I am running in the road.” Perhaps “I,” “running,” and “road” only exist together—in a spatiotemporal relation without distinctions. Perhaps everything exists on the same flat plane with no depth, with no

---

<sup>24</sup> In immanence everything and everywhere is wild, including what we might think of as the most mundane and domesticated of events or differences. In this way, Levi Bryant (2011, n.p.) refers to a ‘wilderness ontology’ in which human beings ‘are amongst beings, rather than beings for which all other beings are correlates’. If I focus on the plant pot to my left in this café, if I imagine myself shrunk to the size of a cell and placed upon its surface, I will perceive a wild and sublime terrain full of beauty and danger:

And herein lies the greatness of Whitehead and Deleuze as thinkers of the wilderness. Occasionally they will adopt the point of view of humans and discuss the peculiar manner in which we encounter the world. Yet for them we are always *amongst* beings. They equally shift to the perspectives of grizzlies, trees, neutrinos, metals, institutions, groups, wasps, markets, and Cleopatra’s Needle as points of view on the world in their own right, irreducible to vehicles for human aims, interests, and meanings. Humans are entangled in these other agencies but are not sovereigns unilaterally determining all of these agencies. (Bryant, 2011, n.p.)

hierarchies of subject/object or real/language/representation. But that is not the plane of thought Descartes laid out.

From a perspective that attempts an escape of the subject/object divide we can become immediately skeptical of the fixity we place on the world and realise that, rather than having to fit the world into the language we use, we may instead acknowledge that our language may be limiting in all sorts of ways. Deleuze's *flat* ontology (ecology) may appear monistic in its conception of the world, but it allows for the expression of difference (pluralism) manifesting 'of' this apparent monism. Deleuze and Guattari justify this twist by rejecting the notion that the world is made up of one substance (monism), or many (pluralism). Grosz (2005, p.6) explains:

It is no longer a question of 'undoing' binary terms even temporarily, of freeing up the subordinated term in an oppositional or dualistic structure, for dualisms cannot be resolved either through monism, which involves the reduction of the two terms to one, or through the addition of extra terms [pluralism] – as if three or four terms would somehow overcome the constraint of the two (or the one, for binary terms are commonly translatable into a single term and its negation). It is only the proliferation of dualisms, and their capacity for infinite reversal that reveal the stratum, the field on which they are grounded, which is the real object of both Deleuze's and Bergson's explorations.

Instead, Deleuze and Guattari argue that all things are produced by a process of continual *becoming* consisting of folds, speeds and intensities, rather than a static state of either monistic or pluralistic *being*. This monist=pluralist conception lays a path between the dualistic *shallow* ecology of pure *difference* on the one hand, and Naess' attempt at monistic *unity* on the other. Deleuze and Guattari (2004, p.23) refer to 'the magic formula we all seek – PLURALISM = MONISM – via all the dualisms that are the enemy, an entirely necessary enemy, the furniture we are forever rearranging'. In this way, the world is a processual and relational production, one where dualisms can be tackled, but in which we can stay vigilant for the likely construction of new dualisms:

As we have seen, Naess' deep ecology subjectifies nature; Morton's

dark ecology rejects nature; while Deleuze's flat ecology intensifies nature, treating it as a comprehensive ontology of complex material systems defined not by their identifying properties, not by whether they have natural or artificial essences, but by their process of production—their morphogenesis. (de Vega, 2014, p.7)

Instead of a world consisting of pre-given or bounded objects or subjects, there is a smooth space of univocity, or plane of immanence – a *flat* ecology. This understanding led Deleuze and Guattari (2004) to voice the *haecceity*, rather than the *object*, as the fundamental property of reality; a move that puts an end to human exceptionalism and a move that has creative, exciting and confusing implications for environmental education<sup>25</sup>. Deleuze and Guattari demonstrate the nature of a haecceity in their usual enigmatic fashion:

There is a mode of individuation very different from that of a person, subject, thing, or substance. We reserve the name *haecceity* for it. A season, a winter, a summer, an hour, a date have a perfect individuality lacking nothing, even though this individuality is different from that of a thing or a subject. They are haecceities in the sense that they consist entirely of relations of movement and rest between molecules or particles, capacities to affect and be affected. (Deleuze and Guattari, 2004, p.287-288)

I will return to the notion of haecceity shortly, for now let us consider the implications of some of the ground we have covered for environmental education. For instance, what would be the point of a *flat* environmental education? If all things are in a state of material flow, then, why does it matter *how* things flow? What happens to *values*? Does this new perspective offer anything to the ethics upon which we base environmental pedagogy? Karen Barad (2007) suggests that the becoming material processes that constitute her ontology of *agential realism* produce an *ethics of mattering*. Noting that knowing, being and doing are inseparable she (Barad, 2008) reasons that 'ethics is not about right response to the other, but about

---

<sup>25</sup> Nature and culture are, of course, conceived as objects in the prevailing approach – physically and temporally delineated: boulder and climber; object and subject.

responsibility and accountability for the lively relationalities of becoming of which ‘we’ are a part’ (p.333). In educational terms this has a profound significance. For, as Spuybroek (2011, p. 182, as cited in Mcphie and Clarke, in 2015) notes, those involved in education ‘are not recipients but participants’; a *flat* environmental education is therefore a pedagogy of engagement and of participation with a world that is *already* participating. In Haeceity 7 I deal specifically with the nature of environmental ethics in an ontology of immanence as related to the environmental education occurring here.

If environmental education is really about realising that we are already participants of a participating world, then pedagogy built on process materialism could be very useful; it could demonstrate the diffusion of people and planet by attempting to erase the borders of both, and yet retain the persuasive power of difference (and forms of language that we still require to articulate the world). Action then, would spring from *both* an understanding that environmental degradation is akin to cutting off one’s own arm (in fact, we would no longer perceive *an environment* or *one’s own arm*, but rather immanence – *a life* [Deleuze, 2005]) *and* a form of awe (what Ingold [2011, p.75] terms ‘astonishment’ and Morton [2010, p.104] ‘enchantment’) which results from living in a world which is seen as constantly becoming, rather than static, staid and stultifying. Perhaps, more powerfully than both of these points, a process relational pedagogy may demonstrate the eventing nature of existence to learners; comprehending the animate nature of their becoming may be inseparable from consideration for consequence. In *Deleuze and Environmental Damage* Mark Halsey (2006) draws on Deleuze’s reading of Michel Tournier to conclude that ‘nature’ may be the *possible*, stubbornly passing as the *real*. Halsey concludes that if this is so, ‘the object of future socio-ecological struggles should not – indeed cannot – be the ‘environment’ or ‘humanity’, but the techniques and processes which govern their image(s) and frame the limits of the possible’ (p.257). As Noel Gough (2004) has articulated, educating beyond the ‘natural’ and the ‘cultural’ must therefore be about helping create educational practice that allows students to experiment with the ‘real’ (Clarke & Mcphie, 2015).

## Mapping haecceitical 'selves': (re)framing the limits of the possible with students

A year before our trip to Fontainebleau the students had undertaken a module entitled 'Concepts of Outdoor Education'. During the module we had ascended the 900-metre North Ridge of Mount Tryfan in Snowdonia, North Wales. Below us the dull grey waters of Cwm Ogwen were surrounded by farmland: Fields delineated by dry stonewalls climbing high into the surrounding mountains could be glimpsed in the occasional gaps in the cloud that was moving down the valley and around the prominence on which we were perched. At this point in the module we had moved through de Vega's four ecologies and we were now questioning the received wisdom of the 'human subject' existing 'in' the 'objective world'. Earlier in the week I had introduced the idea of the haecceity to the students. The term haecceity comes from the philosophical work of Duns Scotus (1266-1308 [Vos, 2006]), though an analogous concept is present in many animistic peoples' understanding of the world, and therefore is much older than the late Middle Ages. In general we tend to think of the world as populated by objects. The concept of haecceity works against this conception to instead argue that processual unboundaried things, multiplicities and becomings constitute the fabric of the world. For a technical definition of haecceity the term is best contrasted with the term quiddity (also from Duns Scotus). A quiddity is an object as we, in the west, are most used to understanding a thing. It is a thing defined by the characteristics that make it a *particular type of thing* – or the question 'what type of thing is that?'. By contrast a haecceity is a thing defined by its *thisness*, its process of becoming, and, in contrast to the question 'what type of thing is that?' a more appropriate response might be 'look at this! What's it/they doing/producing?!' as haecceities are by definition multiplicities, each thing one *and* many, and unique in their becoming (Deleuze and Guattari's [2004] *Body Without Organs* might be the most famous conception). At the heart of Deleuze's project is a (re)consideration of ontology of difference as the primary focus of philosophy. Much of Deleuze and Guattari's work is based on this understanding of philosophy, which is a philosophy of immanence. Grosz (2005, p.6) explains the fundamental nature of difference to Deleuze's philosophy. For Deleuze:

Difference is not a concept bound up with units, entities, or terms. It characterizes *fields*, and indeed reality itself. Difference is an *ontological* rather than a logical, semiological, political or historical category. It is a relation between fields, strata and chaos. It is movement beyond dualism, beyond pairs, entities or terms. Difference is the methodology of life, and, indeed, of the universe itself. Things in their specificity and generality, and not just terms, are the effects of difference, though difference is not reducible to things insofar as it is the process that produces things and the reservoir from which they derive.

Essentialising the world into, on the one hand, nature and, on the other hand, culture is to see the world as made of quiddities. To work with a conception of difference as negative, rather than affirmative. Shallow and deep ecology retain a quiddital view of the world. A *flat* environmental education would, by contrast, urge students to consider the material intra-relations that constitute their current *thisness* – their haecceitical self. A flat environmental education questions where bodies and environments begin and end – or even if they *can* begin and end. In this way, the student is not urged to ‘connect with nature’ as there is no nature. Rather, they are urged to consider how they are materially manifested *of* the world. The task I had given the students while we sat on the lichen covered rocks of Mount Tryfan was a challenging one: to map their haecceitical selves; to consider how they came to be *this* currently occurring process – student-mountain-view-lecturer, all at once. This was an experiment with pedagogy to see if students might take to the idea of viewing themselves as literally constituted of the world, not ‘in nature’, or ‘the environment’. Some student took to the idea with good intentions by, for instance, talking about the physical affects of the exercise on their bodies and the resulting affects their bodies had on the environment – sweat evaporating and CO<sub>2</sub> from their breath. Others were more interested with the philosophical nature of what I was asking. It did raise some interesting discussion and questions from some of the students - questions that did indeed seem as if they might have the potential to push at their ‘frame(s) of the possible’ – perhaps with practice from both the students, and myself, we could achieve more. See Clarke and Mcphie (2016) for a consideration of the potential for teacher education to take up approaches that experiment with teachers’ notions of

themselves by way of creating haecceitical selves.

In the paper *A walk in the park: considering practice in environmental education from an immanent take on the material turn* (Mcphie and Clarke, 2015) we draw from a range of post-humanist, new materialist and process-relational theory to describe a series of encounters with students where the facilitators create opportunities for re-framing the limits of the possible of students' environmental engagement. There is much theory that can be used to draw undergraduates into discussion that may challenge their preconceptions of the 'real'. For instance, Ingold (2011) demonstrates how some cultures already perceive the world from this perspective. Some animistic cultures, as I have discussed, tend to have a processual metaphysical conception of the world. That is, they start from the premise that the world relationally constitutes them (and they the world), and is therefore moving and active, rather than from the premise that they exist as separate entities within a static world that is then populated with objects that they perceive and then represent in their heads – they have no 'nature'. Bird-David's (1999) study of the Nayaka of Southern India, for instance, demonstrates how the Nayaka experience their lives as eventing *with* their environments.

Their attention is educated to dwell on events. They are attentive to the changes of things in the world in relation to changes in themselves. As they move and act in the forest, they pick up information about the relative variances in the flux of the interrelatedness between themselves and other things against relative invariances (p.74)

In this way, the animistic Nayaka produce their knowledge of the world, but it is a manner of producing knowledge that results in direct action/ethical consequences. Bird-David (1999) expresses this fact by comparing the dominant Western approach to the 'acquisition' of knowledge to the Nayaka relational co-production of knowledge. In the West, to gain knowledge of a tree, or any other aspect of the world, we tend to fragment what we have before us, cutting it into parts that can then be analysed to get a full understanding of what the tree 'is'. The Western approach

has nothing to do with the production of action or morality, but purely with the production of a form of abstract knowledge. Bird-David demonstrates the stark contrast in the approaches:

If “cutting trees into parts” epitomizes the modernist epistemology, “talking with trees,” I argue, epitomizes Nayaka animistic epistemology. “Talking” is short-hand for a two-way responsive relatedness with a tree— rather than “speaking” one-way to it, as if it could listen and understand. “Talking with” stands for attentiveness to variances and invariances in behavior and response of things in states of relatedness and for getting to know such things as they change through the vicissitudes over time of the engagement with them. To “talk with a tree”—rather than “cut it down”—is to perceive what *it* does as one acts towards it, being aware concurrently of changes in oneself and the tree. It is expecting response and responding, growing into mutual responsiveness and, furthermore, possibly into mutual responsibility (p.77)

Ingold (2011) posits that the animistic state of coming to exist with a world in perpetual becoming results in a state of ‘astonishment’ for the animist. This astonishment, rising from the mutual flux of the ‘self’ and the ‘world’, may produce actions of ‘care, judgment, and sensitivity’ (p.75). Bird-David (1999) acknowledges that relational epistemology, although the dominant form of knowing among the Nayaka, is just one of several ways in which they learn with the world. In her work she suggests that this epistemology is, however, apparent in all cultures, including those in the West, but that it may be marginalised by other dominant ways of knowing. Nicol (2003) calls for educational practitioners to formulate their practice conceptually by grounding their teaching in epistemological diversity to overcome the dominance of dualistic ways of knowing the world. A relational epistemology, promoting animistic ways of seeing, may compliment this approach well. What we can do then, is experiment with practice along these lines.

\*  
\*\*

As some of the students looked around the rocks, juniper bushes and sheep poo, valiantly trying to map their haecceitical selves on the side of Mount Tryfan, others sat, looking out across the valley and remarking on the occasional Royal Air Force fighter jet, tearing through the space between us and the ground as it roared towards the sea. The play of air on things in flight can make an excellent talking point for some of the concepts I have been considering in this haecceity. Clouds, viewed from the side or from above, demonstrate that, rather than objects existing in a vacuous space, they are instead swept up in a processual flow, themselves entangled in the world's becoming. Snowfall demonstrates this same thing in wonderful fashion. It expresses that there is not space in-between the two faces of a valley, but rather a continuous play of materiality – a middle you do not see without the snow tumbling through, and tumbled by, it. Ingold (2010a) refers to the all-encompassing nature of the processes that make up the world as the 'weather-world', highlighting how the weather is 'not so much what we perceive, as what we perceive in' (p. 131). Ingold (2010b) directs his students to fly kites so as to demonstrate their haecceitical becoming, describing how the kites appeared to be 'objects' when they were built inside:

But when we carried our creations to a field outside, everything changed. They suddenly leaped into action, twirling, spinning, nose-diving, and – just occasionally – flying. So what had happened? Had some animating force magically jumped into the kites, causing them to act most often in ways we did not intend? Of course not. It was rather that the kites themselves were now immersed in the currents of the wind. The kite that had lain lifeless on the table indoors had become a kite-in-the-air. It was no longer an object, if indeed it ever was, but a thing. As the thing exists in its thinging, so the kite-in-the-air exists in its flying. Or to put it another way, at the moment it was taken out of doors, the kite ceased to figure in our perception as an object that can be set in motion, and became instead a movement that resolves itself into the form of a thing (p.7)

Ingold is making two points here, partly he is poking fun at scholarly claims of the

agency of ‘objects’, but more importantly for my purposes, he is demonstrating an educational exercise that can be used to allow students to explore the concepts discussed in this haecceity in intra-relational terms. For the students perched on the side of a Welsh mountain we made do with discussions of fighter jets and seagulls in flight, which in turn lead to questions of UK foreign policy and whether seagulls would even be on Tryfan if people didn’t drop their sandwiches up there. Even though the general conversation had diverged to the more conservative ‘leave no trace’ questions<sup>26</sup>, at least two students approached me with questions that I perceived to be testing the limits of the ‘human’ and the limits of the ‘environment’ as we descended the mountain that afternoon. These conversations, and many like them, demonstrate to me that students are often excited and enthusiastic to learn that you can (re)frame the limits of the possible. Indeed, it is this excitement that pushes me through this thesis.

Thus opens a rhizomatic realm of possibility effecting the potentialization of the possible, as opposed to arborescent possibility, which marks a closure, an impotence. (Deleuze and Guattari, 2004, p.211)

### **A middle:**

In a process-relational world of becoming there are no beginnings or ends, and certainly no conclusions. There are, however, plenty of middles, and this is where we find ourselves now. The title of this section is thus an attempt to illustrate the ontology described in the haecceity, and this may be one way to help engender animistic ways of seeing with learners, demonstrating the intra-relational becoming of the world with students in any way we can. In the past, for instance, I have asked students to read the illustrative prose of Deleuze and Guattari to instigate discussions of the human relationship to the world:

---

<sup>26</sup> And this includes one of the biggest ethical questions for students of outdoor education – ‘why this place’? Can we justify the carbon emitted as a result of our drive to Fontainebleau, or up here to North Wales? What alternative practices might we create? – This is, of course, a question that all educators should ask themselves.

‘You will yield nothing to haecceities unless you realize that that is what you are, and that you are nothing but that ... You have the individuality of a day, a season, a year, *a life* (regardless of its duration)— a climate, a wind, a fog, a swarm, a pack (regardless of its regularity). Or at least you can have it, you can reach it’ (2004, p.289, cited in Clarke & Mcphie, 2014, pp. 211-212, emphasis in original)

There are many intriguing and generative passages in Deleuze and Guattari’s writing and it is often stimulating to ask students what their individuality means to them, and if they can think of anything outside of their immediate bodies that constitutes their individuation. Often the answers are things like family, friends and material possessions, but sometimes students map larger assemblages including the fast food dinner of the previous night, the infrastructure that enabled the ingredients to arrive at the restaurant and tracks of land turned over for intensive beef farming. Students can then ask themselves ‘in what ways do I become changes of the world?’.

My environmental education needs to pay more attention to the ‘virtuality laden in the present, its possibilities for being otherwise, in other words the unactualized latencies in any situation which could be, may have been, instrumental in the generation of the new or the unforeseen’ (2005, p.76-77 emphasis in original, cited in Lorraine, 2011, p.11). Grosz (2005) is discussing potentials for theorising and practicing feminism in the following quote, but I believe the argument works just as well for environmental education. There is a line that we can follow then, considering haecceitical selves, about the potential of practicing subjectivity in environmental education and the ways it performs the world. As John Law (2006. P.56) notes:

We may find that there are no irrevocable objects bedded down in sedimented practices. We may find that the hinterlands are not set in stone. And if things seem solid, prior, independent, definite and single then perhaps this is because they are being enacted, and re-enacted, and re-enacted, in practices. Practices that continue. And practices that are also multiple.

## **Haeceity 5: Practicing enviroing education: affects, concepts, practice**

In this haeceity I draw events of practice through each other. Twist them together. Juxtapose them. Or jar them. I take instances of my experiences of practicing environmental education to see what an experimenting and iteratively re-turning to events of environmental education as I experience it as a becoming academic pushing out the borders of subjectivity. My practices of environmental education come in the form of texts, online exchanges, and working with students. For instance, I am co-guest editing a Special Issue of *Environmental Education Research* with a focus on new materialisms; I coordinate an online course for postgraduate students called *Introduction to Learning for Sustainability* (University of Edinburgh); and I have also sought out ‘face to face’ time with students through working with postgraduate students of outdoor experiential education undertaking a module in reflexive practice (University of Cumbria). In this haeceity I explore the affective becoming of these immanently-lived environmental educations with other aspects of my life. *A life*. For instance, I write with the sea and snorkelling in the north west of Scotland. I write with a day out with postgraduate students in Holyrood Park, Edinburgh. And I write with the book *Pure Immanence: Essays on A Life* by Gilles Deleuze (2005). These three narratives rise and fall in this haeceity. They bob against each other, providing the opportunity for the reader to make connections where they see them. I do this in an attempt to enact a drawing of concepts, practice and affects through each other. I attempt to write transversally, cutting across the boundary of difference between theory and practice to instead create theory-practice and practice-theory. The writings are of different lengths, some very short, some several pages. I hope the currents intra-act in their being read, or perhaps diffract. At any rate, the manner in which they are brought together is not prescriptive.

In the materiality of the doing of the stories and of the writing I draw inspiration from Kathleen Stewart’s book, *Ordinary Affects*. I can’t write like Stewart, with her eye for the micro-affects of the everyday. I am, however, seeking the impactful

between bodies of writing-text-reading, in my doing-writing-thinking. Between the becoming of bodies of text and flesh:

Ordinary affect is a surging, a rubbing, a connection of some kind that has impact. It's transpersonal or prepersonal – not about one person's feelings becoming another's but about bodies literally affecting one another and generating intensities: human bodies, discursive bodies, bodies of thought, bodies of water. (Stewart, 2007, p.128)

I wrote, with this to hand, or in mind, or moving somewhere inbetween. When I started I didn't know if this would work. I still don't know if it does. In my writing, I attempt to deal with affect in the Spinozan sense, rather than as the emotional domain. As Ken Gale (2017, p.6) notes:

there is a need to activate a shift away from the phenomenological and humanist concerns that autoethnography seems to continually express with emotion and feeling as something that is somehow owned by a body, a concern that inevitably places the human at the centre of our inquiries. Instead there is a need to consider affective concerns with the relational intensities of life. Theorising with affect recognises that agency is always distributed through the relationality of bodies, human and nonhuman; the capacity to affect and be affected is a capacity that inheres in multiplicity in all aspects of spatial and temporal relationality.

I am seeking out this posthuman affect in my practice. Practicing the search for the constitution of self in the movement of moments. Of Haecceities.

\*  
\*\*

### **Environing education**

Is it becoming clear that when I use the term 'environment' in this thesis, including in environmental education, I am moving, turning, more and more to the idea of environment as a verb, rather than a noun? A haecceity as a thisness is an event,

rather than an object, and to environ might be a more appropriate term than environment for an environmental education interested in haecceities. The possibilities of the environment as a process of which we are of, rather than a location to be visited or protected, are that it engenders a way of seeing that results in a certain attunement to the individuality of events, and thus a certain wonder (Clarke and Mcphie, 2014). Understanding this means that I can see each thing as ongoing, regardless of its presentation. For instance, I can see each of these words as events, as happenings, but this happening can also be occluded by the noun itself. Put another way, ‘although at their secret interiors nouns are words in motion, they have a habit of obscuring the eventuation of the world, its ongoingness’ (Cohen and Duckert, 2017, p.4). So, whilst I can see environment as a verb, rather than a noun, the word environ better demonstrates the ongoingness of the world in its becoming, as Jamie also argues. The etymology of environ, as a process of turning, going along or encircling, demonstrates its life as an activity, rather than something that can be extended to delineate a particular location or place, regardless of scale (Mcphie and Clarke, in press). Whilst I am drawn to the movement of verbs, I am mindful not to present environing as a straightforward solution to the problem of conceptualising environmental relations. I see it rather as a movement in a useful direction to an affective presencing. The term has its own problematic history<sup>27</sup>. Before the appearance of ‘environment’ in print in 1603, environ (and variations) was most often employed in military terms as to encircle in a threatening way or to lay siege (Nardizzi, 2017). Nardizzi (2017) explains how Shakespeare’s early plays associate environ with oppressive darkness and with suffocation, stultification and death. Shakespeare links environ with:

Sensory deprivation (the threatened darkening of all light and life in Henry VI) and with stimulus overload (“ears” crammed with “hideous

---

<sup>27</sup> Tracing the genealogy of words is not an attempt to get to their origin, or beginning. As I have said, there are only middles. It is rather a ploy to draw attention to the assumptions we enact in our current use of words and a way of demonstrating that the worlds our words enact have changed radically over time. This highlights the contingent nature of the world we think into being. Nietzsche first enacted genealogy as a research methodology to explore the conditions upon which contemporary morality is formed. Foucault subsequently used genealogy to explore the history and thus the conditions for the possibilities of contemporary understandings of sexuality and madness, for example.

cries” in Richard III and a body so imaginatively inundated by water in Titus Andronicus that the sea itself turns into a gigantic alimentary system that “swallow[s] Titus up”. Being environed in these plays is a harrowing affective and physical state in which death and its otherworldly agents press upon – and sometimes into –the human figure. (p.190)

Nardizzi concludes:

Environings thus organize relations that put the health of individuals and populations at risk and endanger life...this is not the most common definition for what environments (can) do in our contemporary moment (p.191)

Environing is not moralistically ‘good’. However, it offers different ways of thinking about environments, as constantly created in practice, along the lines of life.

This line of environing is not necessarily one that must come around to meet its own tail, and thus create a circle. Thinking of environing in this way, as an encircling that demarcates the inside from an outside (and sometimes subsumes the border) is different from thinking oneself as the process of the line doing the encircling (Ingold, 2011). Rather, the lines of life follow another etymology of environment. The French verb *virer*, a root of the term environment, means to turn or to *veer* (Cohen and Duckert, 2017). Indeed, ‘turning’ to this idea might be the best way to think about the verb of environing. To environ seems a practice that we cannot escape from. It is the act of living in movement. Perhaps what Deleuze gets at when he talks of immanence as *a* life.

Environing education is thus a practice, something to attempt and never to attain. Elsewhere Jamie and I discuss environing education as a process of playing with concepts:

Rather than suggesting anyone ‘reconnect’ with nature, as an endeavour of environmental education, we instead propose the idea of playing with nature, as a concept with learners. This can be conceived as a process of *naturing* or as *environing* education. (Mcphie and Clarke, in press, np)

Here I attempt this through stories, juxtaposed. Practice awaits me in every attempt.  
Every attempt at *a* life.

\*\*

### **A drenching**

In April 2018 my wife, son and I visit Gairloch in the North West of Scotland. We stay at a friend's empty holiday house. I am here to write. 'Writing up' isn't quite right as I already have much written, though I am unsure of how it will come together. Maybe I am here to come together? To try to conclude in some way. But things are never finished.

I am sat at the kitchen table. There's a view of the bay, and I can see boats at the harbour. I have just emailed a 'decision' to an author who has submitted work for the Special Issue. She has replied, almost instantly, requesting more detail on how she can ready her article for publication. She is concerned that the reviewers' comments pull her article in too many different directions. I think I agree. The article is beautiful. Aesthetic. More like poetry than traditional humanistic qualitative inquiry. One of the reviewers has said as much. The others want to see more nuance, justification, methodology, supporting literature. What do I want to see? Do I parrot the journal line, follow the critical reviewers? Something in the middle. I am in an academic journal machine. I'm some kind of cog. Similar to the AcademicConferenceMachine described by Benozzo, Carey, Cozza, Elmenhorst, Fairchild, Koro-Ljungberg, Mirka and Taylor (2018). Except I don't feel I can disturb my machine in the way they do. I will write to the author and explain that it's not ready for 'them'. The wrong logic is too dominant. 'They' need more explanation, 'they' still need rationality. 'They' want to be told first and then shown.

The doing is not enough. Not yet. Academia rests on the state logic. It relies on the state logic to justify other logics. And of course, for some, this will never work.

The tide is filling the bay yet slowing, imperceptibly. I sense it. The light draws me to the water.

Yesterday I went snorkeling. I had in mind a little outcrop of rocks that met the sand at the end of Big Sands beach, not to be confused with Big Sand, further up the coast. I'd visited the beach a few years previously and was attracted by the contrasts; black rock jutting into pale yellow sand and the blueness of the sea deepening the further out I looked. There was something equally alien and inviting about the place. Now, I'm back in Gairloch and I've brought a snorkel and my wetsuit. I'd viewed the rocks from Google Maps the day before and spotted the place again. The morning was sunny and I headed to the beach.

I've changed into a wetsuit in many car parks. But I was self-conscious as cars came and went, and I waited for an opportune moment to get undressed. It has been a few years since I squeezed into my wetsuit. I wondered if it would still fit. A struggle, but it was on.

Now I'm at a shallow pool. A good idea to practise, seeing as I haven't snorkeled since I was young. I have faith in my wetsuit and wade straight in, place my face in the water. My hands sting with the cold. Much colder than I thought it would be. I think of the days I worked as an outdoor instructor in Devon, surfing after work. The water never felt this cold then. How has my body changed since then? Older? Is the water colder here? Perhaps something in between. Another in between. Qualitative differences, rather than definite ones. I see the sand below. This shallow watery world feels like the beginning of what I'm searching for. I soon forget my hands. I look up from the still water of the pool and out, past the rocks acting as a breakwater, to the choppy, deeper water. The rocks follow a curve out to sea and out of view. Beyond them the horizon. Behind me the comfort of people and dogs on the beach. I feel both the pull and the push at the same time. Both the wanting to go there and the

wanting to stay here, in the known. I start to swim, the unknown has won out, before I knew it.

The sand slowly drops away below me as I swim. Shards of seaweed levitate in the water below, a sheet of translucent plastic passes. I am far out now, closer to the rocks. I think of images I've seen; of snorkelers diving down, and blowing out air as they surface. I dive and the world changes with me. The crisp sounds of the waves suddenly plunge into a menacing silence that combines with the frames of my mask to promise monsters lurking just out of sight. Nothing down here can get you, I tell myself. Do seals bite? Aren't seals evolved from bears? A pressure makes my body different. It makes my body the ocean. I am flying downward and the cold increases. I arch my back as I reach the sand, three meters down at least. I am deep. Below me a blue-grey starfish a foot across lays on the sand. In front of me a great wall of dark kelp, white spheres of sea urchins picked out by the shards of light. I float, and try not to think.

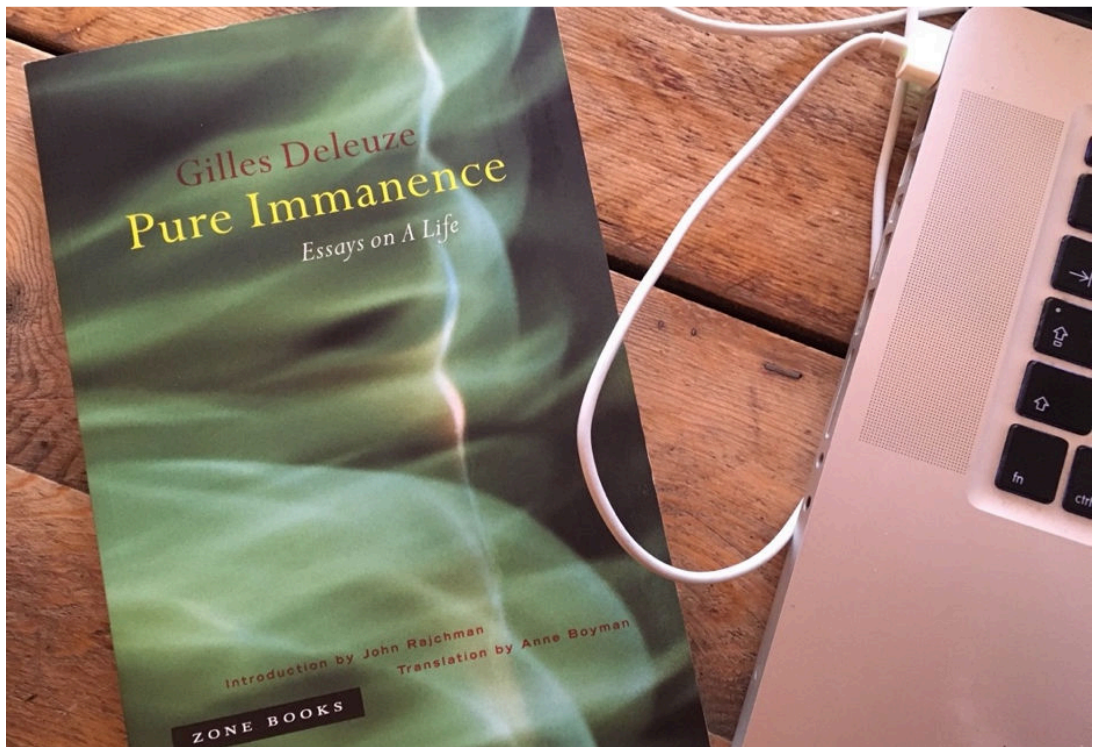
For a moment, somewhere, this is the world I wanted to find. The sense of it. This is the way I wanted to be. To feel this lost. This far out. This detached. This immersed. To feel this alien. Utterly out of place, and yet finding a place in the practice of it. The practice of a different way of being for a while. To *feel*. Not a romanticisation, but a drenching. A different me. Stranger(s) in me, coming into life.

\*  
\*\*

### **Non-worlds, in between worlds**

This is an attempt at writing my experience of an environmental education *with* a particular book. My reasons for wanting to do this are caught up with my wanting to better understand immanence and its relationship to my experience of becoming an environmental education academic. Scratch that. As I have said. I am infatuated with

immanence. The promise of *Pure Immanence* is too much for me to resist. What is it? There is something dark in my wondering here. The book now sits to the left of my laptop. Its cover is deep and watery. Mysterious. As if I could lose myself in its contents. This seems the promise. The impendingness of immanence. There's something tempting about the destructive potential of it. Powerful. Like deep tumultuous waters that appear still on the surface. Why would I be drawn to this?



The book is looking up at me from my desk this morning. I've sat down to write. I feel I need to write about my practice more. My supervisors have nudged me in this direction. What is practice? Why do people worry about whether what I'm doing is 'practical'? Why do they assume it isn't? Why would I do something that doesn't speak to me? That doesn't feel useful? That isn't a mode of living? I hold the book in my hand. It's hot here. My office always seems too hot. What does the warmth do? It fills the space. Shrinks the room, making me claustrophobic. My breathing is shallow, I notice. I feel my fingers on the book cover, a light oil from my skin sticks the cover to me. I feel the cover pull away. But this isn't quite right. I am the feeling of the cover pulling away, *before* the feeling. I am the sound of it, *before* I recognise

it as such and it becomes *\*Thuck\**. That before, is that *a* life? I open the book. *Pure Immanence: Essays on A Life*.

What is *A* Life? I know this can't mean someone's, or something's life. It feels more like life, the event we all pass through, *of* the world. In a wide sense the inorganic is even a part of life as the world unfolds. And yet, the singular and capitalised 'A' suggests something more. Something specific as well as dispersed. And what of my practice as an educator? The phrase sounds so odd; 'my practice as an educator', as if it's a possession I keep in my pocket. Or something I can leave at home, or rather leave at work! It's right here. Always changed by the things that event with me. *Of*. How is interaction with other people anything other than education? You take them into account when you interact. Their cares and surely their futures matter to you in the event. I hope for the best for the people I meet. And I want to facilitate that future. That's why I say 'good luck', or why I open a door for someone. At least, I like to think that's why we do it. But this isn't a one-way exchange. We both take and give something in the interaction. The intra-action, as Barad (2007) would say, constitutes us. But this is not the only thing happening either. The event moves backward and forward simultaneously, but in other directions also. Multidirectionally. I wish I was more open to this. No, I am open to it. I wish I made it more apparent how open to it I am. To be seen to be open. And then there's the education we receive in the interaction. Whilst I may have sympathies with his politics, I quote Jeremy Corbyn, the leader of the UK Labour Party, simply because I think he's correct when he says 'Everyone you meet knows something you don't'. I wonder if the same can be said of things. And of your *self*. What do *you* know, that *you* don't? Nobody knows what a body can do. No *body* knows what it can do, and how the 'it' changes in the doing.

I look at the book. The yellow font of the 'Pure Immanence' seems out of place. 'Gilles Deleuze' is dark, almost sinking into the green pool of the cover. I think of the cover as a watery entrance. C. S. Lewis' *The Magician's Nephew* comes to mind and the middle world he creates; full of pools to other worlds:

The next thing Digory knew was that there was a soft green light coming down on him from above, and darkness below. He didn't seem to be standing on anything, or sitting, or lying. Nothing appeared to be touching him. "I believe I'm in water," said Digory. "*Or under water.*" This frightened him for a second, but almost at once he could feel that he was rushing upwards. Then his head suddenly came out into the air and, he found himself scrambling ashore, out on to smooth grassy ground at the edge of a pool. (Lewis, 2016, p.22)

The world of trees and thousands of pools is soporific. It transpires that it is not a world at all, but a 'wood between the worlds'. I stop looking at the cover and think about between. What was I thinking about?



### **Practice as concepts, concepts as practice**

Lenz Taguchi (2007) discusses how, in common renderings, there is a gap between the textual and cerebral realm of theory, and the physical realm of practice:

It constitutes a binary, which is contaminated by the imagery of, on the one hand, a visionary, rational and logical, clean and flawless theory—an ideal state or condition; and on the other hand, a messy, dirty, unorderly practice, in need of being organized, cleaned up and saturated by the rationales and visions of theory. (2007, p.278)

However, for Lenz Taguchi (2007) life-practices are always already filled with theory. Drawing on Judith Butler, Lenz Taguchi suggests that we are all 'lay philosophers' practising what we think the world is, what we think is doable, and what we think is right and worthy. The power of theory, of philosophical concepts, is that they expand this potentiality. They do things. Brian Massumi (2010) explains the dissolution of the theory/practice binary:

The meaning of a philosophical concept cannot be reduced to its semantic content, defined in abstraction from this process. There is a transformational aspect to the concept's letting loose, by which it effectively overflows its own definition. This is the aspect of what philosophy comes to *do* in the world: its pragmatic aspect. It is the processual aspect of the concept's moving on, to new effect. The concept's meaning cannot be abstracted from its flow-over effects. *Its meaning is one with the movement of its taking excess effect.* In addition to the semantic meaning that it can be defined to contain, a philosophical concept carries a surplus of meaning that is one with the transformative movement of its performative *force*. (p.4, first emphasis added)

This is one reason concepts can be dangerous. 'Nature' has evolved conceptually within the realm of science, through the philosophical work of Boyle, Bacon, Harvey, Descartes, Hooke and others, who have variously extended the concept of nature from a Greek and medieval organismic agent, to a concept of nature as mechanistic or as a set of laws guiding the operation of clockwork to be observed (Weinert, 2004). The nature of nature has further shifted with the development of quantum theory. The plasticity of the concept of nature in the history of the philosophy of science demonstrates its empirical and philosophical *ongoingness*. It is an enacted idea, a lively and multiple concept, that is influenced by empirical observations. And yet these observations often have little to say about the fact that the concept itself *occurs* and that its implications *manifest*. They perform empirically, even as the concept changes. The concept itself *matters*.

Deleuze and Guattari (1994) explain how the purpose of philosophy is to create and deploy concepts of resistance; concepts that may overturn dominant, striated concepts of the world. David Cole and Mehri Mirzaei Rafe (2017) note:

Concepts have been connected to territories, trajectories and power relations through the expansionist policies of European nations, and the resulting colonial episodes that are still arguably paradigmatic in places such as Australia, Canada and the USA. The whole of contemporary

educational research and practice is permeated with the aftermath of the history of European thought in, for example, Australia, Canada and the USA, and elsewhere, which has deeply territorialised these societies, effectively obliterating both the prominence and understandings of indigenous (non-European) knowledge and modes of being, and human connection with nature. (p.851)

The concept 'nature' has a long history of mattering in this way. For instance, Human Geography and Environmental History have well explored the conceptual construction of the environment, or nature, establishing its material fallout and the impossibility of considering it an unbiased element of study (Schama, 1995; Castree & Braun, 2001; Lorimer, 2012). Castree and Braun (2001) state for instance:

however rigorous and scientific one's investigations of the natural might be, there is no easy way to separate objective observations from social biases and political interests. As Raymond Williams (1980, p. 70) famously put it, "What is usually apparent [when reference is made to nature] is that it is selective, according to the speaker's general purpose." Secondly, it follows that statements about nature say as much about who is doing the talking, and what their individual group interests are, as they say about nature tout court. Thirdly, it's often the case that claims about nature – and actions based upon those claims – can serve as instruments of power and domination. Consider, for example, the wildlife conservation movement in the developing world, which has both an ecocentric and technocratic wing. For over a century, in countries like Kenya, indigenous peoples have been forcibly removed from, or denied access to, traditional territories because conservationists have argued that segregated 'wildlife parks' are required for species protection. (p.9)

Along with this understanding, geographers have realised that nature is a story with very material consequences that can move far beyond the intensions of the orator. For instance, in the context of the colonial European expansion overseas, the existence of a conception of a distinct 'nature' as opposed to civilisation was 'easily racialized and, in the guise of scientific racism, provided a rationale for European colonial rule over more 'primitive' cultures and peoples' (Ginn & Demeritt, 2008, p.303). This view of landscape or nature as a storied separation with material, often unjust, consequences has been noted in environmental history. Simon Schama

describes how environmental historians have also lamented the annexation of nature by culture:

While not denying the landscape may indeed be a text on which generations write their recurring obsessions, they are not about to rejoice in the fact. The arcadian idyll, for example, seems just another pretty lie told by propertied aristocracies (from slave-owning Athens to slave-owning Virginia) to disguise the ecological [and cultural] consequences of their greed. (Schama, 1995, p.12)

Even with the drawing of the human into the scientific realm of nature, by Darwin for instance, nature has remained outside of human culture. Conceptualising a 'nature' conceived as the great other, as a realm of study that the scientist is outside of, has allowed the dominant narrative to at once paint it as a 'thing' (a metaphysical trick) whilst at the same time labelling that 'thing' as inferior, or perhaps worse, condescendingly superior – as in the ideas of the innocent child in nature, the noble savage, or women's emotional and empathetic elevation/subjugation above/below men as a result of their closeness to nature – (an ethical and political trick usually distributed for/as a result of a patriarchal agenda/occurrence). This perceived inferiority can be linked to a myriad of minoritarian groups (children, women and indigenous peoples; but also North Sea Cod, rivers, wind, diseases and viruses, pests, weeds, and natural 'resources' of all kinds) by associating them with that 'thing' – nature (Plumwood, 2002). Deleuze and Guittari (1986, p.247) describe minoritarian groups as 'groups that are oppressed, prohibited, in revolt, or always on the fringe of recognized institutions'. Majoritarian and minoritarian, referring to the degree of power of a group, are distinct terms from that of the majority and minority, which refer to abundance of lack. Ostensibly 'natural' elements by far outweigh the human on Earth, yet the 'natural' remains minoritarian. The 'received' conception of wilderness, as unpopulated terra nullius, has been critiqued as a tool of androcentrism, racism, colonialism, and genocide (Callicott, 2000); these are material consequences indeed. The way nature is conceptualised has played a principle role in historical fascism (Cutting, 2016).

I could visit each instance of the use of the term ‘nature’ in environmental education research, but the review of the literature would be almost endless. What I can say is that nature is a multiplicity of a concept doing different things for different people at different times. In environmental education research it has often (and continues to be) seen in straightforward, unproblematic terms, as a good location or ideal state of being. Challenges to this view include the recent Special Issue in Environmental Education Research *Troubling the intersections of urban/nature/childhood in environmental education* (Duhn, Malone and Tesar, 2017). However, the risk in seeing ‘connection to nature’ as a straightforward educational aim, or something that we can train teachers to attain and measure through connectedness scales, is that it can be an extension of a capitalist model of education as ‘commercial professional training’.

The way out of this dead end of commercial professional training, and its motivation, which is universal capitalism, is according to Deleuze and Guattari through the ‘pedagogy of the concept’, which involves understanding what concepts are, how they function in educational contexts and how to create them ecologically, ethically and aesthetically. (Cole and Mirzaei Rafe, 2017, p.860)

Nature affects me differently now. When I hear it. When I read it. I have to pay attention to the context in which it is said or written. I have to consider what it is doing for whoever is deploying it. I have to practise this. It is a practice, the paying attention, the trying to stay alert to the doing of concepts. How do I deal with nature in my practice? I try to highlight it as a concept, rather than a location. I try to ask students to play with the concept. To consider what it can do.

\*\*

## **Holyrood Park time**

Edinburgh. Something like ‘me’ wasn’t sure what I was going to do with Jamie’s students when they arrived. Jamie was driving them up in a minibus from Cumbria and we’d arranged to meet at 11am at the carpark next to Holyrood Palace. As a group, we’d walk through the park with the aim of doing something vaguely ‘material turny’. The students were enrolled on either the MA in Outdoor Experiential Education or the MA in Transcultural European Outdoor Studies at the University of Cumbria, Jamie’s home institution. I’d applied for, and been offered, a lecturing position at Cumbria not six months before. I’d wanted to work at Cumbria in their outdoor studies department since Jamie had left Plumpton College to take up a position there. We’d worked together at Plumpton on the outdoor degree programmes for several years before he left. I stayed on for a few years, taking a sabbatical to complete my MSc at Edinburgh, and then returning for a year and a half, until winning funding for this PhD. The funding was the reason I hadn’t accepted the offer from Cumbria. Although I was greatly tempted to take on a teaching load again, and work with one of my best friends, I also remembered how desperately I wanted the PhD funding, and how desperately I wanted to complete my studies. The funding allowed me time to think and write. Time that would be swept away if I had accepted the offer at Cumbria, replaced with planning, teaching, administration. The time would be very different.

At this stage, a pencil written comment in the margin asks me ‘why am I writing about this?’ Thinking back months ago to the writing of the above passage the events were alive in my life, the writing’s life. They were there, inflecting my writing. They are the events of the thesis, environing education. My life has changed since then. Yet in so many ways it is the same. Henri Bergson describes the inescapability of a seemingly subjective experience of time. Rather than linear and wholly viewable, time is never capturable, but can only ever be suggested through a description that Bergson calls *duration*. Bergson argues that no two moments can be the same, so duration is heterogeneous and must imply movement. Bergson is adamant that no image or description of duration can evoke its nature, as our attention is always taken to an aspect of it that forgoes attention of another aspect of it. Rather duration can

only be described by altering traditional ways of thinking and placing yourself in duration by intuition. In this famous passage, Bergson's description of difference in duration reminds me of Deleuze and Guattari's description of difference as monism=pluralism, which I introduce in Haececity 4.

The truth is we change without ceasing...there is no essential difference between passing from one state to another and persisting in the same state. If the state which "remains the same" is more varied than we think, [then] on the other hand the passing of one state to another resembles—more than we imagine—a single state being prolonged: the transition is continuous. Just because we close our eyes to the unceasing variation of every physical state, we are obliged when the change has become so formidable as to force itself on our attention, to speak as if a new state were placed alongside the previous one. Of this new state we assume that it remains unvarying in its turn and so on endlessly. (Bergson, 1998, p.3)

And so on endlessly. I think I feel this as much as I understand it. Time was one of the many things I wanted to explore with the students. I knew Jamie was teaching *The Reflective Practitioner*, the module I was helping facilitate that day in Holyrood Park, with the hope of demonstrating the possibilities of worldview change to students. I use the term 'worldview' loosely and not as a technical term related to the study of 'worldviews'. Rather, Jamie's interests being well aligned (materially entwined) with my own, he has been interested in ontological assumptions and the possibilities for education to trouble these. The arrow of time is one such assumption that I was looking to demonstrate with the students by way of introducing the notion of 'deep time' and the troubling effects Scottish geologist James Hutton's insights had on 19<sup>th</sup> century worldviews. The reason that I had decided to focus on this topic was that the place – Holyrood Park – afforded such an opportunity, offering panoramas from which to depict the tropical shallow seascape of hundreds of millions of years previously, the volcanic disruption that had overturned, bent and twisted the settled ground, and, famously, the igneous intrusion that, angularly contrasting with the sedimentary limestone, offers the glimpse in deep time that Hutton saw – what better place to introduce 'diffraction' as a process *of* the world

than this ruptured palimpsest of a landscape? These are of course conceptual-materialities I wor(l)d here: *sandstone, igneous, intrusion*. They *do* certain things when worded to students for the first time. They depict worlds that are then taken up. I also wanted to explore this *doing* with the students. The conceptual becoming.

Of course, I didn't know if any of this was possible. Another pedagogic experiment. That Jamie had brought the students to Edinburgh, rather than myself travelling down to Cumbria to meet them, was a result of a similar complex meshing and folding of contingent material-conceptual events (as are all things), a diffractive 'bump'. When Jamie had mentioned to his line manager that I was planning to visit Cumbria to help on the module, she replied that I wasn't welcome to do so. Apparently turning down the offer of a job had been taken personally (and, in all honesty, I cannot fathom why). Jamie, knowing how keen I was to spend some time with students so as to think with the process, subsequently offered to drive the students up to me. What a very particular set of circumstances had led to the small group of us looking up at Arthur's seat and readying ourselves for the walk. And so on endlessly.

I had invited the students to read a chapter in the book *Stone*.

A long trip to Scotland, and I lose myself on the plane in David Abram's *Becoming Animal: An Earthly Cosmology*. The book has its problems: the cliché of the educated Westerner who comes to mindfulness through a visit to Nepal; a proclivity to speak of the wisdom of indigenous peoples, as if their earthiness were universal and simply affirmative; a reflexive disdain for technology. I read Abram's text through the meditation of a paperbound book, on a plane where a screen embedded in the seat displayed three exterior views through which I became an intimate of transatlantic clouds. Abram argues for an active ecological materiality that has much in common with new material feminisms as well as object-oriented philosophies. He arrives at his conclusions by following a rather different road (a little Deleuze, a great deal of Merleau-Ponty), but what he writes is consonant. And beautiful (Cohen, 2015, p.187)

A book, read through a book, read through a book...

'I lose myself'. Cohen touches immanence. The smooth space that holds me like quicksand, threatening and irresistible all at once. Losing ourselves is a mode of unhumaning. Unhumaning is the mode of a smooth space, to the striated state of the human. This isn't necessarily healthy, but it may produce different angles, for a while.

Of course, smooth spaces are not in themselves liberatory. But the struggle is changed or displaced in them, and life reconstitutes its stakes, confronts new obstacles, invents new paces, switches adversaries. Never believe that a smooth space will suffice to save us. (Deleuze and Guattari, 1986, p.500)



### **Becoming aware**

The next day, and I've chosen to go looking for something at Shildaig Bay, on the road to Badachro. On Google Maps the bay looks shallow, well sheltered from the Atlantic behind some islands. As I look at the satellite image I try to spy the places where the coast is rocky and where the water is turquoise. I see just the place, a few hundred metres out, to the north of the largest island. There's something attractive about the idea of snorkelling next to the sheer rock and the shallow sandy seabed. I imagine crepuscular rays. I grab my wetsuit, dried in the sun during the day, and my snorkel, and head to the car.

There's no one in this carpark. I change quickly and hide my keys. Cross the road, tread carefully on the rocks and seaweed to the sea's edge. I'm excited. The water is cold despite the blue April sky above, but after yesterday at Gairloch I am ready for the temperature. The ground is rockier than I expect, covered in clumps of seaweed atop a floor of nothing but broken shells; oysters, razor clams, horse mussels; all open and smashed and dead. Or alive differently. I wade until the water is at my

stomach. The island is across the water, in front of me. I pull up my hood. Spit in my mask. Ready myself. Place my head under. The water is clear at this depth. I swim forward across the bay, scanning the seafloor for things that catch me. That fetch me. The shells pass and lose definition as the depth increases. 5 foot, 10 foot, 20 foot below. I have some way to go, so set into a steady pattern of breathing and swimming. I spy a speck of brown ahead and as I get closer see it is a fish. Thin, it reminds me of a seahorse, it faces upwards, fins gently waving in the shafts of light at the surface, it seems to greet me. I even say 'hello fish' through my snorkel. The water is deep now, and I turn to keep swimming. Suddenly a long dark shape looms in the murk ahead, taking me by surprise. I look up, out of the water, and see a buoy floating. I look under again, to the other world, and see the long train of kelpy weed billowing downward into the deep along the rope that moors the buoy. I don't want to go near the shape. It is frightening in appearance. Wraith like. I'd read about Lions Mane jellyfish the night before. Their 'bell' can grow to as wide as 2 meters and the largest can have tentacles as long as 30 meters. I'd seen small Lions Manes with bells a few feet wide whilst sea kayaking and didn't much fancy meeting one whilst snorkeling, even if this wasn't a 'real' one. I give the buoy a wide berth.

The ground comes up beneath me as I reach the island. I see a flatfish on the sea bed, perhaps a plaice or a dab, I'm not sure if this is their habitat. I dive down to be closer, but the fish is too deep and has swum under cover. I hold myself for a second, the way I had done the day before. Again, I try not to think, I try not to sense the 'me' *I know* before the 'thisness' that might be. It is hard to do, and besides, my suit is too buoyant and I rise slowly upwards. At the surface I tread water. I am a few feet from the tall rocks of the island. They are unscalable. I look back to the mainland a few hundred metres away. I have judged the tide well; the water is slack and I am not pulled in either direction. Turning back to the island my eyes follow the small cliff as it curves away, out of view. At that point, I see it. It is swimming across the horizon line, a hundred feet away or less. Its profile is clear. It's large. At first I think it is a dog; pointed nose jutting upwards, a rhythmic bounce to its head as it swims. At that moment, I am not a person who is aware of seals. I become such a person, suddenly.



### **Transcendental empiricism of the book**

I have the book with me in the office. It arrived from Amazon last week. It arrived quickly as, on the advice of a friend, I had upgraded to an Amazon Prime account. Our friend had said, 'I'm no fan of multinational tax dodgers, but if you need something the next day for the baby, Prime is a life line'. It's interesting; the ways events build on events and how one is wrapped up in the process, both eventing and being evented at the same time. The self as a tide in simultaneous ebb and flow. I could judge my taking up an Amazon Prime account as morally repugnant, or I can consider the modes of existence it implies. The way it increases my capacities to affect and be affected. But this feels like a cop-out, at the moment. Nonetheless, the book is here.

What is a transcendental field? It can be distinguished from experience in that it doesn't refer to an object or belong to a subject (empirical representation). It appears therefore as a pure stream of a-subjective consciousness, a pre-reflexive impersonal consciousness, a qualitative duration of consciousness without a self. (Deleuze, 2005, p.25)

I'm about to do educational practice. Drumlin anchored tight and brittle grey. Four stories up and typing. *A* life. Desires run through and constitute *a* life. Traffic and fumes. Tourists walking as if sucked uphill by desire. Me, watching as if sucked out of me by desire. And then typing.

We will say of pure immanence that it is *A LIFE*, and nothing else. It is not immanence to life, but the immanent that is in nothing is itself a life. A life is the immanence of immanence, absolute immanence: it is complete power, complete bliss.

I try to understand this eventing as a life. How to talk about the things that occur, without talking of the self? How to do this while acknowledging the presence of a self unsubjected? In *Pure Immanence* Deleuze speaks of a transcendental empiricism. An empiricism that lacks a subject but which does not flatten all into obscurity. It acknowledges what Deleuze calls the 'singularity' of the event. Its capacity to produce only this. The monism=pluralism of a life. Sensing the pluralism of the monism seems to be the art of transcendental empiricism. Transcendental empiricism is the means by which we see that 'each point of view must itself be the object, or the object must belong to the point of view' (Deleuze, 2015. p.71). The way of looking literally matters. It picks out what's important. What's real. What is different about today, from yesterday? I got up at the same time. Showered in the same shower. Walked the same walk to the office, or stayed in the same flat I sometimes do, with coffee and juice on a tray in the front room, and my laptop ready. Do I feel the same feelings I felt yesterday? Or even the last time I felt the struggle? Did I feel it the same way? Or is there a world of difference? A world of difference between all of these things? Sat in my office now, I look up at the bookshelf that I have looked up at for months. What is different about it? Some of the books have moved around. Some new books have appeared. These are significant differences. But even if no book had moved, if I glance up now and glance back a moment later, the world has changed. A world of difference has occurred. They are not the same 'objects' replicated in time, I *can* see-feel-think it this way. I look out of my office window at the building over the street. It appears timeless. Yet the event of our becoming is always novel. And the more I am aware of this, the more novel it becomes. At least, I practise it more.

Empiricism truly becomes transcendental, and aesthetics an apodictic discipline, only when we apprehend directly in the sensible that which can only be sensed, the very being of the sensible: difference, potential difference and difference in intensity as the reason behind qualitative diversity. It is in difference that movement is produced as an 'effect', that phenomena flash their meaning like signs. (Deleuze, 2015, p.71)

Difference is a qualitative degree, not an either or. Never a negation. When I read this, I think of my description of a murmuration of starlings and electricity pylons in my PhD progression board paper:

*Everything* is an haecceity, unique in its becoming rather than a rendition or repetition of a set. Take, for example, the starlings in murmuration in Fig 3. Where is the murmuration? Thickening dark densities give way to sparse thin amalgamations in the shifting transience of a murmuration. The murmuration moves, is constantly becoming. One could be forgiven for contrasting the murmuration with the solid towers which suspend the power cables above the fields. The towers, firm as they appear, might be conceived as analogous to the chapters of a book. Perfectly delineated, each holding up the narrative line on its linear journey. The towers, however, seemingly produced from the same mold, can also each be conceived as having the individuality of *a* season, *a* pack, *a* climate (Deleuze and Guattari, 2004). (Clarke, 2016, p.12)



Haecceities. Credit: Owen Humphreys (<http://blogs.ft.com/photo-diary/tag/murmuration/>)

\*  
\*\*

I don't think of Earth as the Pale Blue Dot as viewed from Voyager 1, but rather of the extended plane of immanence constituting all. Nature here is a Twitter storm as much as a tropical one. I'm looking at The Guardian website which displays the headline "Soul-crushing" video of starving polar bear exposes climate crises, experts say'. There is a large 'play' arrow, seemingly pointing the way to the grave for the crawling animal. The arrow waits to be pressed like the button on a DVD player. Like a YouTube video. It seems to say 'press me', 'entertain yourself'. The bear, emaciated, waiting in the wings to be called on stage for me. By me. A few things happen at once. I feel sick. I feel tension in my arms and across my chest. I feel guilty that this has happened. I know I did this. But I also know *I* didn't. When I've made those choices - to fly, to eat meat, to have children - it's me choosing climate change. Starving this bear. But it's also not a *me* choosing. ~~My~~ desires are inside/outside. Not determinism and agency, but agency without the concept of the enlightenment human subject. Events constituting all; not predetermined but productive. There's a Möbius strip to the self. I feel guilty that I'm going to put this in my thesis. It feels opportunistic. It might help get me there, to a PhD. But it has happened as an event. It is ~~my~~ thesis. There's the Möbius strip.

Events conspire. Before I wrote this, I thought I'd watch the video. I haven't pressed play.

\*  
\*\*

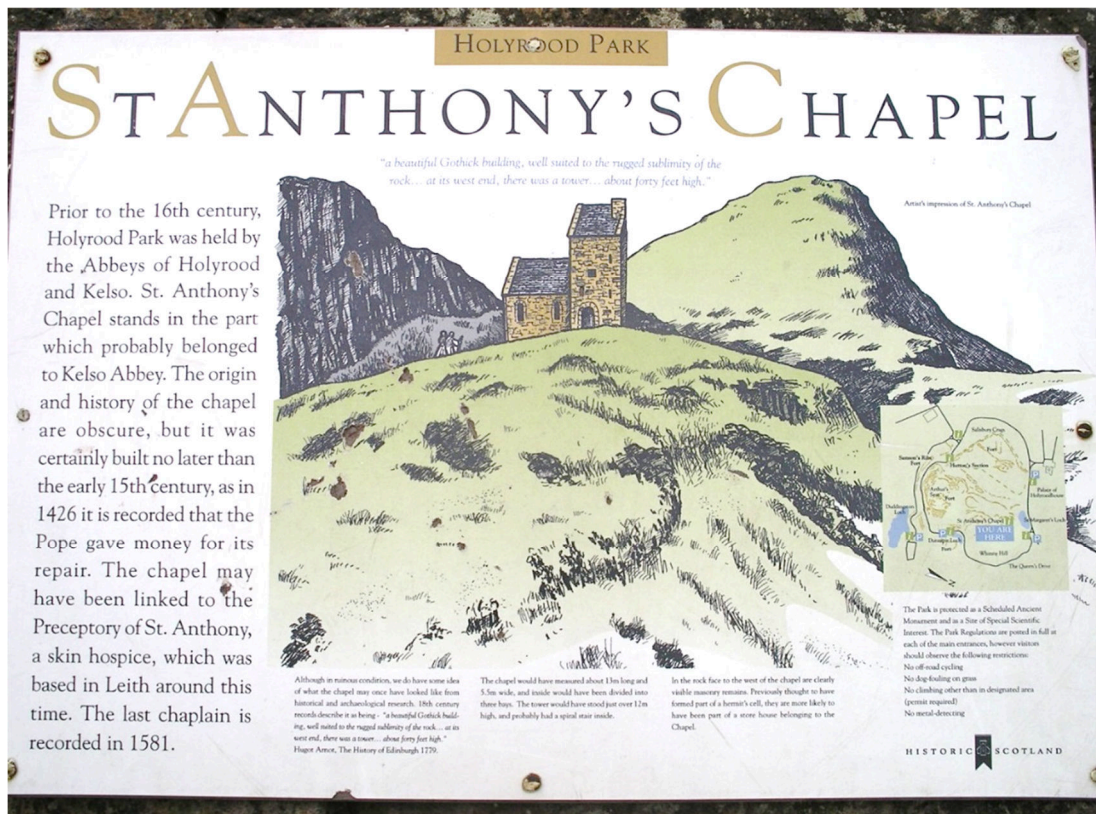
### **'A long trip to Scotland...'**

And so starts the chapter that I had asked the students to read before they travelled to meet me in Holyrood Park. The students and I had started our ascent of Arthur's Seat. Standing at St Anthony's Chapel, perched on a long volcanic rib of Arthur's Seat, we huddled for protection on the leeward side of the long stone wall. On the windward side rose the gentle path up to the base of Arthur's Seat. Before us the

vista of the city, St Margaret's Loch below and the Castle in the distance above the roof tops. I began by describing the volcano on which we stood, and pointing to Edinburgh Castle, a few kilometres away, to ask the students if they knew how the rock beneath it was formed. Some guessed that it was volcanic rock also. I then asked if anyone knew why the Royal Mile slopes up to the Castle in the manner it does. There were a few guesses before I described the process of drumlin formation, and the glacial landscape that the process required. I wanted the students to start to think about this place in big terms; in time and space, but also conceptually. In this respect, I moved on to the opening passage of Cohen's chapter. The chapter seemed perfect for our purposes, as Cohen himself ascends Arthur's Seat and muses on various insights from feminist new materialisms and his deep love of stone as he does so.

I began our discussion of Cohen's chapter by reading this passage aloud. I then asked students to comment and question. Is this diffractive practice? I asked them what they thought Cohen meant by the book having various 'problems'. My intention was to foreground the conceptual-material nature of the day and our discussions began to open up potentials for assumptions of outdoor education practice to be questioned. This short passage spread our focus; it diffracted our conversations across topics. It scattered us along a discursive line that traversed the voyeuristic nature of developing-world travel and the impacts of this potential voyeurism on overseas youth expedition participants, to deep questions about technology; its place in outdoor and environmental education, and the extent to which we can separate a 'technology' from any other material-knowledge practices we partake in; using a map and compass for instance. The intervention complexified the event.

As we left the shelter of St Anthony's Chapel I stopped briefly with the students at the interpretation board, fixed to a stone ten metres or so from the ruin. The sign refers to Hugot Arnot who, writing in 1779, noted that the chapel is a 'beautiful Gothick building, well suited to the rugged sublimity of the rock...at its west end there was a tower...about forty feet high'.



We spent some time discussing the use of the word ‘sublimity’, defining it, and looking around to see if we thought the rocks sublime. I hazarded that, perhaps the builders of the chapel placed it here for any number of reasons, including economic, and that the ‘sublimity’ of the location was further from their minds than it might have been for Arnot, a historian writing in the late 1700s. I mentioned Robert MacFarlane’s (2009) book *Mountains of the Mind* to suggest how our notions of ‘sublime’ nature have changed over time, and may, in fact, be totally invented. This suggestion received some blank looks and some nods before we were drawn onward up the path to the foot of Arthur’s Seat.

I have had difficulty in the past trying to convince people that nature is a contingent concept that is not stable, and does particular things if conceived in particular ways. I find this attempt to convince particularly important to do with outdoor environmental educators in theory-practice. Troubling this and other concepts is a dangerous business. Concepts are materially affective, they hold up whole aspects of the modes

in which we become. Jamie has asked students if he can send me a few snippets from assignment work after their time in Holyrood Park. One student noted, for instance:

During this module I was introduced to theories and concepts that were new and frightening to me in their complexity and frustrating to the point of tears when I struggled to comprehend them and I dearly wanted to retreat into my own 'cave'. [...] but at least I understand the process better now and can choose to seek new understanding – I know I must be braver...[...] this module in particular has led me out of my 'cave' but I am most definitely still exploring the brave new world outside. [...] Some recent insights gained into my political and core values were deeply unsettling and shook me to my core but they also challenged me on a number of levels & I realised the implications of these revelations would affect not only my practice but my personal approach to far bigger global issues.[...] I must let go and see where this 'rabbit hole' takes me. (Masters Student)

Disrupting the differences in ways of being, diffractive practices, are fraught with ethics. The ethical imperative to dislodge an image of thought, and the ethical imperative to respect someone's right to hold their own image.

There seems an ethical invitation to play with concepts. Rather than attempting to 'mush' together culture and nature, or overcome Cartesian dualism with a piece of sticky tape holding the subject and object together in 'interaction' or 'connection', we can instead realise that concepts are performative through our specific intra-actions and story-telling of the world. Karen Barad (2003) suggests that the realisation that concepts come to matter has paradigm changing implications for the dominant view of perceiving humans as subjects outside of their objects of observation. Boundaries, according to Barad, are created in the agential intra-actions of material-discursive events. So, there is a sense in which the process of naturing, of creating new concepts of nature, is in effect a mode of becoming of the world, in this respect it might be the connection that so many wish to attain. In ethical terms, Deleuze and Guattari argue that concept making is a political and revolutionary act, arguing that reflection and communication, mirroring pre-given elements of the world, only get us so far:

We do not lack communication. On the contrary, we have too much of it. We lack creation. We lack resistance to the present. The creation of concepts in itself calls for a future form, for a new earth and people that do not yet exist. Europeanization does not constitute a becoming but merely the history of capitalism, which prevents the becoming of subjected peoples. (Deleuze and Guattari, 1994, p.108, cited in Peters, 2004, p.224)

And so, according to Peters (2004):

The future form of philosophy, both a resistance to the present and a diagnosis of our actual becomings—becoming-revolutionary, becoming-democratic—is the role of the philosopher as physician, as the physician of culture, ‘an inventor of new immanent modes of existence (Deleuze & Guattari, 1994: 113). In philosophy of education these categories, these becomings have an easy resonance. (p.224)

I am interested in the type of experiments that allow me to become a philosopher physician, critically playing with the everyday concepts we pick up in literature and our daily lives to literally create new material-conceptual worlds. But we should also take care when playing with, conceptualising, nature. As Cutting (2016, p.112) notes, educational approaches that claim to ‘encourage a deeper emotional engagement with the natural environment may not necessarily promote liberal thought, because while there is nothing wrong with promoting a love of the countryside, how students come to conceptualize this relationship is critical’.

In a recent article, Jamie and I play with the concept of nature, by diffracting it into eight natures which we then follow along their conceptual-affectual trajectories, to see what they can do (Mcphie and Clarke, in press). With that article, we go some way in showing how critical the endeavour of creating concepts of nature can be.

\*  
\*\*

## Becoming-Seal

The seal dives, throwing up a great splash of spray. I can't see it anymore. I am aware, immediately, of how lumbering I am in the water. A becoming is never a becoming something else. It is only ever becoming yourself differently. There is not a literal becoming a seal. There is a becoming-seal. This is a becoming an other than I am. Individuating to different degrees we can aim for the political in becoming. What Deleuze and Guattari (2004) call a becoming-imperceptible, becoming minoritarian. A becoming inhuman:

Lines of flight or of deterritorialization, becoming-wolf, becoming-inhuman, deterritorialized intensities: that is what multiplicity is. To become wolf or to become whole is to deterritorialize oneself following distinct but entangled lines. (2004. P.2)

The event here, of a becoming-seal, is an affective force that alters my state of subjectivity from and towards a minor way of being; a way of being outside of the striated and majoritarian concerns of myself as a day to day subject. I become wrapped up with the concerns of the seal, not in a caring way, but in a way that switches the minor nature of the concern for seal to a becoming of my subjectivity that realises its power. There is a form of politics here.

Becoming-minoritarian is a political affair and necessitates a labor of power (*puissance*), an active micropolitics. This is the opposite of macropolitics, and even of History, in which it is a question of knowing how to win or obtain a majority. (Deleuze and Guattari, 2004, p.292)

The capacities of the seal to affect, for my *self* to be affected, are heightened out of nowhere. The seal *was* of no concern as I swam. Indeed, it did not exist. And then it did, and it mattered, and the *I* dissipated *and* changed. And what made the seal dive? An affective force, from the sea, from me? Perhaps it was curious about me. Perhaps, I thought as I swam briskly back to the shore, it was following me. I stopped and

turned several times as I swam back, scanning behind me for shapes in the murk. Later, I discover that grey seals hunt large prey, including porpoises. Leopold, Begeman, van Bleijswijk, IJsseldijk, Witte and Gröne's (2015) paper is full of gruesome images of half eaten cetaceans, and they state that 'many of the mutilated porpoises were found on Dutch shores used frequently by human bathers and surfers, and there would appear to be no a priori reason why humans may not be at risk from grey seal attacks' (p.6). I don't think this was a risk I faced, but reading Leopold *et al's* paper adds a different edge of affect to my next snorkelling trip.

\*  
\*\*

### **Practicing a life**

The internet affects me again. I am completely captivated by the bleak picture painted by Wallace-Wells (2017) in his article *The Uninhabitable Earth* (Wallace-Wells, 2017), both the Earth occurring now and the Earth yet to come. Wallace-Wells' (2017) article in the *New York Magazine* begins 'It is, I promise, worse than you think'. It is a harrowing read, describing the desertification, flooding, disease outbreaks and explosion of refugee numbers just around the corner of (post)human history. It has become the most well-read article in the *New York Magazine's* history. The article affects me unexpectedly; I enjoy it. It is compelling, convincing, *entertaining* even. The scene depicted doesn't feel virtual *or* actual. It feels like it exists in another existence; an impossible possibility owned by another world, not this one. It feels more like setting the scene for Cormac McCarthy's *The Road*. It feels more like climate fiction than a becoming-certain future we face. How do I have this response? How is it that this is what this article does to me, rather than scare me, rather than stop me in my tracks and then compel me into climate change fighting action? How is it that I go on eating meat after this?

I talk to Jamie about the article when I am visiting him in the Lake District. His partner has read it and is scared for their children. I think about my privilege here. Am I affected less because I have less to lose? I need to practise more. Practise increasing my capacities to be affected.

This is, of course, BF: Before Fen. Now the faint wonders I had about those who will (and do) experience dystopic futures are concretised in my son. Yet, the otherworldliness of Wallace-Wells' depiction places it at the far extremities of everyday thought. Yet, it seeps in. And, thinking about it now, I do eat less meat.

Practice is what we do every day as we practise a life. We can do it better; a life. It isn't something to which something else is applied. Practice is the taking part before all else. It doesn't proceed from a set of instructions or theory. Theory is practice, in as much as it is the practice of deciding what is important. What more important practice could there be?

Practice does not come after the emplacement of the terms and their relations, but actively participates in the drawing of the lines. (Deleuze and Guattari, 1986, p.203)

Practising affect; sensing pre-personal affects. Is affect ethical? Political? Ben Highmore (2010) suggests that focusing on affect highlights 'the transformation of ethos through experiments in living. Here politics is a form of experiential pedagogy, of constantly submitting your sensorium to new sensual worlds that sit uncomfortably within your ethos. There is hope here' (p.135). Gregg and Seigworth (2010, p.12) draw from Roland Barthes' attempts to form an affective ethics as a 'patho-logy'. They suggest that 'affect theories...must persistently work to invent or invite such a "patho-logy" into their own singular instantiations – not only as inventory...but also as a generative, pedagogic nudge aimed toward a body's becoming an ever more worldly sensitive interface, toward a style of being present to the struggles of our time'. Becoming affective is educational then, and yet the ethics remain opaque. The politics of affect seem difficult to pin down. But that also seems right. But, maybe finding solutions isn't the point. In *The Politics of Affect*, Brian

Massumi (2015) suggests that, like Deleuze (2015), we try instead to find better problems:

A 'better' problem is one that provides a jumping off point for others to continue from in their own way, along their own exploratory paths, for intensities of experience to come. (Massumi, 2015, p.204)

Affect does this for me. It feels like the start of a space for wo/andering further.

\*  
\*\*

### **Oak trees and emails**

A few weeks ago we talked about practice in one of my supervisory meetings. I wrote to one of my supervisors after the meeting. John is in British Columbia, so our communication is often staggered, mostly very staggered. I sat in Henderson's Café and wrote the following:

Hi John,

Sorry the meeting today was such short notice, and so early! My fault. We met for around an hour and discussed lots of things. We kicked off by talking about avoiding the type of feedback overload I experienced. I talked about my writing style and the type of feedback that that style engenders. I've been trying to move from a technical, dialectic approach in writing to something more explorative and searching. Something more uncertain. We discussed Richardson's work on Writing as Inquiry for instance. Ramsey's going to pass on some books about writing style to me.

I talked about Lacan's use of the Möbius strip as a means of thinking about various dualisms - two sided when concentrated on at any one point, but intractably one sided when considered more generally - or the

idea that the ground of dualisms slips beneath us, if we walk a little way along the strip. I have started writing about transcendent and immanent ethics in this way. Though I still feel the Möbius strip itself is grounded in immanence...(what am I saying with these dots. That there's work to do here maybe...(and these dots...?))

I talked about some experimental writing I've been doing about an encounter with a pigeon that had been hit by a car. I contrasted this with Pauliina Rautio's recent paper about living with a pigeon as a multispecies other. Rautio knew a pigeon very well, the pigeon I encountered was any other pigeon (and yet, also not!). An off the shelf pigeon. Funny, I'm only thinking now that Jamie and I talk about a pigeon in *Becoming Animate*<sup>28</sup> - I might revisit that. I talked about the concepts I was exploring in this encounter (with the pigeon), including ethics, affect, how I encountered the pigeon including the conflicts of thoughts that occurred to me, the opportunism of using the encounter in my thesis, weighing the chances of reaching it given the heavy traffic. We (Robbie, Ramsey and I) then used this example to explore the idea of being affected by things in the world. We talked back and forth about whether there was something in particular in pigeons (or pigeon like things), or in suffering, or in experiences with particular places - such as the Oak tree in Kingussie - that render particular effects. We agreed that they do. We were all interested in the origin of these effects. I was particularly interested in the way that a pigeon or a tree is never just a pigeon or a tree - thinking about Derrida and a chain of signification, but also Deleuze and Haraway and natureculture (or maybe these are the same thing!) - and thus what we bring to the encounter already.

So it was a good chat. We agreed that I'd like some space to write without setting myself a particular 'section' to get done. I've plenty of marking to be getting on with over Christmas, but intend to send something out for you all to read before the baby gets here in February!

If anyone wants to add anything to this that I missed out/got wrong/misunderstood, go ahead!

I hope all's well with you John. You're missed, but there's at least one upside to your absence; it gives me a reason to reflect/diffract the meeting through me and to you. It lets me think with the event of supervision.

All the best,

Dave

---

<sup>28</sup> Clarke and Mephie (2014).

I want to talk about that aspect of being affected; of oak trees and pigeons. I come to the pigeon in time, for now I want to talk about the oak tree. I sat under that oak tree in Kingussie, a magnificent oak tree. It *is* affective. But where does the affect come from? It isn't simply sensorial. The chain of signification, of the lively 'concepting' of the oak tree is also affective. The affect doesn't just come from an environment, even one that is *environing*, but also comes from the concepts of the oak tree. By concepts, I don't mean a cognitive schema, but something more akin to the middle movement between what is traditionally thought of as the percept of the oak (the sensorial) and the mental idea of an oak. Perhaps this movement is a percept-concept-affect. When I think of the lively concepting of a concept, I think of its overflow, in the manner Massumi (2010) describes; a concept's *force* in the world. I also think of the chain of signification that Derrida describes, or what he terms *différance*. *Différance* is the idea that meaning is constantly deferred, that there is no settled meaning of a word. *Différance* constructs a chain of signification. As I sit below the oak tree, not to clear my mind but to think of the oak tree, I may think any number of oaky things. I may start with the idea of the tree, but this may give way to trees in general, it may give way to the idea of wisdom, often signified by the oak tree, it may give way to ideas of England, and nationalism. It may give way in a related manner, to heraldry, family trees, or even the Linnaeus tree of knowledge and classification. I can never arrive at a definition of an oak tree that doesn't require other words which then also require definitions. Tim Ingold (2010, p.4) takes this idea of constant deferral into the material tree, as a percept:

Suppose that we focus our attention on a particular tree. There it is, rooted in the earth, trunk rising up, branches splayed out, swaying in the wind, with or without buds or leaves, depending on the season. Is the tree, then, an object? If so, how should we define it? What is tree and what is not- tree? Where does the tree end and the rest of the world begin? These questions are not easily answered – not as easily, at least, as they apparently are for the items of furniture in my study. Is the bark, for example, part of the tree? If I break off a piece in my hand and observe it closely, I will doubtless find that it is inhabited by a great many tiny creatures that have burrowed beneath it and made their homes there. Are they part of the tree? And what of the algae that grow

on the outer surfaces of the trunk or the lichens that hang from the branches? Moreover, if we have decided that bark-boring insects belong as much to the tree as does the bark itself, then there seems no particular reason to exclude its other inhabitants, including the bird that builds its nest there or the squirrel for whom it offers a labyrinth of ladders and springboards. If we consider, too, that the character of this particular tree lies just as much in the way it responds to the currents of wind, in the swaying of its branches and the rustling of its leaves, then we might wonder whether the tree can be anything other than a tree-in-the-air.

These considerations lead me to conclude that the tree is not an object at all, but a certain gathering together of the threads of life.

I like Ingold's description, and Derrida's idea of *différance*, as they both demonstrate the instability of essentialist positions; of trees, but also of 'nature', for instance. But, as Baugh (1997) points out, there is an important difference between Derrida's *différance* and Deleuze's concept of difference *in itself*. For Deleuze's understanding of the oak tree, we have to look at difference in another way. We can see that Derrida's difference is rather phenomenological, in that it relies on a phenomenological theory of time (Baugh, 1997).

*Différance* is the fruit of a radical phenomenology, a phenomenology that wants to think its conditions and its limits, but always within the horizon of phenomenology, that is, within the horizon of horizontality...We know, though, that Deleuze was not very sympathetic to phenomenology. (Baugh, 1997, p.131)

For Derrida, horizontality is an idea of time 'in which the future is prior to and conditions the present' (Baugh, 1997, p.128). For Derrida, becoming happens, but it is a becoming what *one is not*. It is based on a negative idea of difference. Deleuze however draws on Bergson's theory of time as duration, and Leibniz's monad, to develop becoming based on difference *in itself*. Becoming isn't defined by negation, but is affirmative. There is no empty space of a signifier to which to compare a state, there is only a flow of becoming for itself from a virtual that is real to an actual that is real:

In general, becoming-actual is a process that is not amenable to the past/present/future schema governing phenomenology and history (whether dialectical or structural) [27], because such schemas capture 'the way an event is actualized in particular circumstances/or the event as product or effect, rather than the process of becoming as such...Derrida's theory of time problematizes phenomenological time by problematizing origins and endings making both subject to indefinite differal/differing through a future that is always 'to come' and which 'delays' the arrival of the present; Deleuze insists 'it's not beginnings and ends that count but middles' (1995: 161) or the creative development of actualities out of the midst of real virtualities. (Baugh, 1997, p.138)

What is it to consider an oak tree as a non-phenomenological middle? It is not the being lost, the aporia, that attempting to get to the essence of what an oak tree is, by moving along the chain of signification, produces. If I think with Deleuze as I sit under the tree, I don't wonder at the definitional possibilities (which can always be deferred) and complain about the non-essential nature of the oak under those terms. I think of the *me-tree-sky-percept-affect-concept-etc* assemblage as an event that does things. Derrida's critique of interpretation is immanent, but it is one that assumes the point of view of interpretation itself (Baugh, 1997). It is phenomenological because it takes the point of view of *myself*, as I try to make sense of the tree.

For precisely this reason, Deleuze finds aporetics and problems of identification/identity (such as mistaking Theodore for Theatetus) to be weak and empty (1994: 132-40, 148-9; Deleuze & Guattari 1994: 138-9). Aporetics belongs to the problematics of judgment (is it A or B?), a model of thought that Deleuze wants to have done with (1993: 158-69). Thinking, for Deleuze, is 'not interpreting, but experimenting with 'what's coming into being' with actuality (1995: 106). (Baugh, 1997, p.139)

At this stage I don't try and work out what the tree is, but rather what the *event* does. Not what the tree does on its own, as the tree is not the only middle here (how can it be?), it is rather a middle *with*, as Ingold suggests; with the air, with the other threads that constitute the tree, and with me as a middle and my fellow learners who sit

nearby, also contemplating the tree. And the concepts that are put to work. I look to my left, and wonder what ideas of oak trees are *doing* to these other learners. What can I change in the assemblage?

Concepts, Deleuze and Guattari (1994) posit, are practices. Concepts are created, they are not ready made. And concepts are sensed. They affect and do things:

It is no objection to say that creation is the prerogative of the sensory and the arts, since art brings spiritual entities into existence while philosophical concepts are also "sensibilia." In fact, sciences, arts, and philosophies are all equally creative, although only philosophy creates concepts in the strict sense. Concepts are not waiting for us ready-made, like heavenly bodies. There is no heaven for concepts. They must be invented, fabricated, or rather created and would be nothing without their creator's signature. (Deleuze and Guattari, 1994, p.5)

This change in questioning, from 'what is it?' to 'what does it do?', that a Deleuzo-Guattarian idea of difference brings links up with Spinoza's immanent idea of ethics, which brings to the fore a problem of environmental education.

The question of "transcendence" is "What must I do?", which is the question of morality (a duty or obligation that is beyond being, an "ought" beyond the "is"). The question of "immanence" is "What can I do?" (my power or capacity as an existing individual within being). For Levinas and Derrida, ethics precedes ontology because it is derived from an element of transcendence (the Other); for Deleuze, ethics is ontology because it is derived from the immanent relation of beings to Being at the level of their existence (Spinoza). (Smith, 2003, p.123)

Thinking about what things do, what I can do. This is what my supervisors do, and what my email to John has done. The process of the thesis event, its process of seeking out, is an ethical endeavour, and I am not the only thing involved.

Please don't take this telling as true. I am not sure about it. Perhaps it doesn't work.

John replied to my email a few weeks ago. I haven't responded, and I'm not sure why.

\*  
\*\*

How is this event becoming? Where does the writing come from? I'm thinking as I write about the meeting. About families. Moving them and making them. About a life that is coming soon, in February, to Gemma and me.

What am I playing at, writing this nonsense? What kind of work is this? How will I get a job writing something that isn't *practically applicable*? The fear that comes from these questions seems to drop any attempt to dissolve the boundaries of myself and instead express some kind of immanent becoming. I am a human person with responsibilities. What on earth is this thesis about? What have I been doing these last few years?! This isn't a PhD.

And then I wonder about the fear. The different forms of me that are created in the flow of it. *From* the flow of it. The 'me's who are conjured into existence in the flow of it. The panicked Dave who can't sleep. The Dave who doesn't want to talk about his PhD with those who ask about it. 'It's about education. Environmental education. And philosophy'. Robbie, my first supervisor, has mentioned my 'elevator pitch'. He's right. I shudder.

And then there are the other Daves. The ones who become with the writing. The ones who dissipate with the writing. The one who is a writing. The many to come in writing.

\*  
\*\*

To add a further speculative folk dimension to this conversation I'll take a rhizomatic digression (so not a digression at all!) back to seals. *The Great Silkie of Sule Skerry* (Child 113) is a folk ballad collected by Francis James Child in the late 19th century on Orkney<sup>29</sup>. Silkies (or selkies) are changelings who, when in the water, are seals but, when on land, are human. In the ballad a woman nurses a baby and sings that she will never know her baby's father, nor the land that he comes from. Then a guest stands and says he is the baby's father, and that he is a silkie from Sule Skerry. He gives her gold and takes the child and predicts that she will marry a gunner whose first shot will kill both him and their son.

One could view the human/seal relationship in an Ingoldian (2011) sense, as a human-seal, whereby the seal thinks itself in me, along the lines of Merleau-Ponty's blue sky. Or one could look at it in other ways. The prescription of the result is, perhaps, beside the point. Rather, the opening to the affective dimension is what is important. The possibilities of affective imaginings it might engender. Folk music is one way, among many, I am open to being affected. 'Learning to be affected means exactly that: the more you learn, the more differences exist' (Latour, 2004, p.213). Similarly, climate fiction's depiction of possible worlds, and its capacity to relate its character's and place's lives to that of the reader, hold affective capabilities. Texts are bodies too:

with more meaning also comes more complexity, cognitive dissonance and dislocation. The diverse storylines of climate fiction make it impossible to think about the future in the singular way. Another way of describing these effects of climate fiction is humanization – rendering climate change a thoroughly human and social experience rather than an environmental problem. Cli-fi places the reader in plausible, emotionally wrought, complex situations in which social, technological, and natural systems condition one's experience. (Milkoreit, 2016, p.179)

---

<sup>29</sup> The Corries' other worldly version can be found here. Child only recorded lyrics, so no one knows the original tune: [https://www.youtube.com/watch?v=dSxrH8yYI\\_E](https://www.youtube.com/watch?v=dSxrH8yYI_E)

Finishing my copy of David Mitchell's *The Bone Clocks* I feel the pang of loss and change at a world that could exist in so near a future. Affect moves between bodies.

Bodies of text and bodies of flesh. Spending time with bodies you wish to know seems a good thing to do. A seal from below, coming into my becoming. I think of it now, slinking from the deep and up to my friend Simon and me, between the Isles of Muck, Eigg, and Rum.



Still taken from the video 'The Small Isles – Inner Hebrides by Sea Kayak Summer 2014' (Clarke, 2014) <https://www.youtube.com/watch?v=kDh0pxeGEwc>

Environing education. Rather than attempting to 'mush' together culture and nature, or overcome Cartesian dualism with a piece of sticky tape holding the subject and object together in 'interaction' or 'connection', we can instead realise that concepts are performative through our specific intra-actions and story-telling *of* the world.

## **Haeceity 6: The diffractive practitioners - collaborative writing-thinking-doing with students, concepts, and Walney Island (and aliens)**



In December 2017 Jamie and I visited Walney Island in Cumbria with a group of postgraduate outdoor education students from the University of Cumbria. Walney Island was formed about 15,000 years ago as till was deposited by the glaciers that covered northern Europe in the last ice age. At least, this is one story we can tell of it. This story has a particular taste. Do you recognise it? To me it tastes a bit like a geography textbook, or the oration of a natural history presenter as they walk down a long beach and talk into the camera, as if they are simultaneously on Walney Island and in my living room, which in some ways I suppose they are. There are many stories that can be told about Walney Island. As we walked with the students on that day, we accessed an app called *Seldom Seen*, on our smartphones. The app starts telling you stories of the locations you pass through; stories of the abandoned rifle

range, the delicate vegetated shingle ecosystem, and personal stories of local people. Similarly, we might focus on the story of the evolution of the rare Walney Geranium; the long process of gene variation and environmental constraints and opportunities that led to this species, found nowhere else on Earth other than this 11-mile-long by 2-mile-wide island. We might tell a story in which we lay down quadrats and count these plants to check their health. Equally we might narrate the life of the Natterjack Toad that makes Walney its home. We might objectify, subjectify, or processify the toads and the flowers (Clarke and Mcphie, 2014). Each telling would do different things.

These are placeful stories; stories extracted from the place by sorting what is found there into comfortable narratives. Till, the stuff that makes up Walney Island, is a form of glacial deposit that falls directly from a glacier, rather than being washed away by meltwater. This means it is unstratified and poorly sorted, unlike stratified drift which is the material carried by meltwater and sorted by size as it is deposited in stratified layers. Deleuze and Guattari (2004) use geological terminology to describe both 'natural' and 'social' phenomena, depicting the creation of metaphysical categories as a process of stratification. What they term a geophilosophy, where thought becomes earthly and vice versa, is useful for thinking about how layers are laid down in our discourses; for thinking about what has become sedimented in thought. When I think of research stories we might have enacted on our day on the island – e.g. using interviews with students or handing them questionnaires - I think of sedimented stories; stories I know the answers to already, and where everything remains the same. I like the idea of thinking the traces, the impressions, the fallout, of our day on Walney as till, as unsorted and waiting for different stories to be told of it. There are stories to be told, to be created, and there may also be stories that might have been sorting themselves in the days since we were there, sifting themselves as till into autonarratives as time has passed. What might it be like to shake up this till now? To tell a story with Walney Island as we go? To write *with* our day there with the students, to see what can be learned? To see what happens? Rather than telling a story already told, to instead attempt a geophilosophy, where thinking is earthly; where we sift through the till of our memories and that place.

### **Sifting through the till**

In this haecceity I borrow from Gale and Wyatt (2017) and create a dialogic exchange to wonder about that day on Walney Island by thinking *with* (Jackson and Mazzei, 2012) and employing writing as collaborative inquiry (Davies and Gannon, 2006; Wyatt and Gale, 2014; Speedy and Wyatt, 2014). This inquiry is an attempt to think with and through environmental education practice *as* theory and environmental education theory *as* practice. It is an acknowledgement of the mattering of concepts through the non-method of collaborative writing as inquiry. Gale and Wyatt (2017) suggest the disruptive and joyful potential of collaborative writing as inquiry for wondering at uncertainties and possibilities. They combine this with an ethical need for new stories, a need that is well recognised by environmental educators (e.g. Hicks, 1998; Jickling, 2010; Gough, 2015; Adsit-Morris, 2017):

[...] we are with Stengers (2011) when she says that “we need other kinds of narratives, narratives that populate our worlds and imaginations in different ways” (p. 371) and within these agonistic processes of believing we sense experiences of joy and wonder as we bring these possibilities to life. So when we describe our work in this article as “working at the wonder” we want to evoke a wondering that thinks, searches, ponders, and probes. In turn, our intention is [sic] convey collaborative writing as contributing to a complex materialist practice (Bryant, Srnicek, & Harman, 2011) that, with Stengers, “upset(s) our established categories and shift(s) our own theories” (Bryant et al., 2011, p. 15): collaborative writing as a “rare event” that can—at its best—invoke a sense of wonder to “counter stratifying tendencies” (Bryant et al., 2011). (Gale and Wyatt, 2017, p.356)

Here Jamie and I similarly combine collaborative writing as inquiry with the material turn to acknowledge the mattering of pedagogical inquiry (Snaza, Sonu, Truman and Zaliwska, 2016) in an attempt to dislodge stratifying tendencies. Till isn't stratified, after all. I have invited Jamie to write with me here to take seriously the idea of post-human authoring. I have often said that I think with Jamie - my colleague, writing partner and friend for over 15 years - when I come across problems. We live, I think,

embodied in each other's ways of thinking. When authorship is already post-human, beyond a single individual, it can be enhanced by bringing in others to write with. In this way, this haecceity is a writing-thinking-doing, where the aim is to be taken somewhere new; to be productive and creative. Of course, thinking and writing are already 'doings', but they are too often seen as operating separately. 'thinking-writing-doing' demonstrates the inseparability of these endeavours, which operates in the present; it does not so much reflect, repeating the image back on itself to look for meaning, but rather diffracts, it moves forward with what is present in the thinking-writing-doing. Our concern is for the nature of education, the nature of nature, and the nature of ourselves as practitioners. A palimpsest is a text or place which is inscribed or imprinted by different effects. Following Deleuze and Guattari's geophilosophy, texts are geological, and thus also places. In this paper-palimpsest different articulations sometimes run in parallel, and sometimes interject with each other, around diffuse problems of the practitioner and learner in/of an environment that is becoming conceptually unstable, that is *environing* (McPhie and Clarke, in press). Through this dialogic exchange, we attempt to explore how the environment can be anything other than a concept, and how concepts are anything other than material and mattering in important ways. The haecceity is less about providing answers to the environmental education academic community or ourselves, and more about an experiment in environmental education, or a process of what an *environing* education might entail. It is becoming - still only becoming - an attempt to practise immanence. To get away from solid and sedimented ideas of selves and environments and educations. Following Levi Bryant, we think of education as not a personal thing, but as dispersed across bodies:

...we should ask not what a pedagogy is, but rather what a pedagogy does. The first dimension of pedagogy consists of the question of what a teaching operates upon. To this, the obvious answer is students and apprentices. However, above all, it operates on bodies, affects, and forms of cognition. Students and apprentices are the flows that pass through a pedagogical machine, operating on body-minds. (Bryant, 2015, p.50)

Reflective practice is not quite the right term for what I think we've found ourselves attempting. The implicit humanism in reflective practice leads me to prefer the term diffractive practice. Diffractive practice, as I conceive of it, is our attempt to think past our own tendencies to humanise ourselves and our students in relation to our practice as environmental educators. In this way, it aligns well with Jane Speedy's intentions for collaborative writing:

...the continued and explicit practice of collaborative writing amongst social researchers alters the academic spaces they inhabit and the ethical know-how that they come by. In time the (albeit fragile) emergence of this different sense of scholarship and scholarly work and even, perhaps, of what it means to be a human being amidst human beings and other elements can begin to rework and expand the social imagination. (Speedy 2012, p. 349, cited in Wyatt and Gale, 2014, p.295)

For Barad (2014) diffraction is a process 'that troubles dichotomies, including some of the most sedimented and stabilised/stabilising binaries, such as organic/inorganic and animate/inanimate' (p.168). Diffractive practice is research, but it is also the doing of practice, rather than the application of research findings to practice. It is not practice which is then reflected upon. Rather it builds on notions of diffractive research and diffractive inquiry in the fold of post-qualitative research. For instance, Davies (2014) describes diffractive analysis so:

In diffractive analysis, research problems, concepts, emotions, transcripts, memories, and images all affect each other and interfere with each other in an emergent process of coming to know something differently. (Davies, 2014, p.734)

Building on Davies' description, what I call diffractive practice does not draw on data in the form of questionnaires, observation notes or transcripts of interviews. Rather, practice diffracts *with* the process of writing as inquiry (Richardson, 1994)

where writing as inquiry interferes with affects, images, memories, emotions<sup>30</sup>, concepts and research problems. Writing as inquiry - and collaborative writing as inquiry (Wyatt and Speedy, 2014) where ontological questions of what ‘collaboration’ implies are raised - form the diffractive grate that produces the interference patterns of the diffractive practice-inquiry; the newness of what is written. We, Jamie and I, write iteratively with each other, with Walney Island, with our places of writing encounters, with interactions with students, with educational and philosophical concepts, and with the thoughts that occur, creating diffraction patterns in thought; the beginnings of refrains of ideas. Diffraction is not a prescriptive method, it can rather be a rotating of a problem in different lights and with different lenses at hand. Barad (2014, p.168) wishes to practise diffractive ‘re-turning’, not in the sense of going backwards – an impossibility – but rather turning over and over again:

iteratively intra-acting, re-diffracting, diffracting anew, in the making of new temporalities (spacetime-matterings), new diffraction patterns. We might imagine re-turning as a multiplicity of processes, such as the kinds earthworms revel in while helping to make compost or otherwise being busy at work and at play: turning the soil over and over – ingesting and excreting it, tunnelling through it, burrowing, all means of aerating the soil, allowing oxygen in, opening it up and breathing new life into it. (Barad, 2014, p.168)

This imagery suggests the playfulness of diffraction. The sifting through the till of it. Taylor and Gannon (2018) note that work that is being framed as the new empiricisms or post-qualitative research calls for playfulness and creative approaches to research that allow researchers to create the not yet thought, noting that:

---

<sup>30</sup> Emotions are not the same as affects. ‘In the absence of an asignifying philosophy of affect, it is all too easy for received psychological categories to slip back in, undoing the considerable deconstructive work that has been effectively carried out by poststructuralism. Affect is most often used loosely as a synonym for emotion [...] emotion and affect - if affect is intensity - follow different logics and pertain to different orders. (Massumi, 1995, p.88)

Amongst educational researchers, this work is shaped around broad agreement that (a) the human must be decentred in favour of ‘other than human’ or ‘more than human’ within research assemblages; (b) that this decentring requires us to pay more attention to affective flows, forces and intensities; and (c) that the focus needs to shift beyond discrete objects or subjects of research to their co-constitution through assemblages, entanglements and relations. (Taylor and Gannon, 2018, p.1)

Decentering does not mean ignoring our practice. Rather, it means focusing on ourselves as different (as other than Western human subjects) as well as (or with) other things. I’m not particularly keen on the term ‘more than human’ as it seems to accept ‘human’ as a conceptual category and retain a sedimented dualism. Perhaps the term ‘all beyond humanism’ is more appropriate, with its focus on the conceptual. It means acknowledging that we are not necessarily human, as the term ‘human’ holds too much baggage for us. Instead we are unhuman. A subject undone (St. Pierre, 2004). Alien. There is an activeness in the doing of the ‘un’, as if it is a command, or something to practise: ‘You there, unhuman yourself!’. ‘I’ll try!’. The writing comes to this in time. Nonetheless, I agree with the aims Taylor and Gannon (2018) list in overcoming the staid idea of the human subject in qualitative research. Equally troubling for me is the residue of a transcendent nature in my own environmental education practice; I am hopeful in the struggle to get away from ‘the environment’ and towards something Jamie and I are beginning to call environing education (Mcphie and Clarke, in press). This pushes me to open up my practice, to diffract it and consider what comes through. Diffractive practice troubles one’s modes of existence, and allows the creation of ideas that help us to become different. A diffractive practitioner *troubles difference as they have normally conceived of it, especially regarding terms like ‘they’*. ‘Practice’ here refers to breaking up the idea of difference as that which usually separates writing, thinking, and doing to instead produce writing-thinking-doing. It is the ethical endeavour of diffractive practice, to create the new for practice, which aligns it so well with the philosophy of Deleuze and Guattari:

Deleuze and Guattari (1980/2004) charge us with actively seeking empowering compositions or assemblages – ones that enhance our power to act in the world. Those which diminish our power to act are to be avoided. Reflexive self-awareness is clearly implied as we evaluate each assemblage in which we participate, and such evaluation is an experimental, experiential and affective process that does not require reference to pre-existing or prescribed criteria or value judgements, but that allows new values to be created. (Done and Knowler, 2011, p.849)

Yet reflexivity, like reflection, is all too human. A diffractive practice spies the difference of the inside/outside implied by reflexivity; self-awareness diffracts to unselfness.

Where does one start with collaborative writing as inquiry? I started in Edinburgh, Scotland, with the thought of a minibus. Jamie started in Bavaria, Germany, with an email invitation from me. From there, we started *writing to it*:

Increasingly, we are coming to understand that the only way to continue in this sense-making and affecting is to ‘write to it’. Issues, queries and question arise – in our lives and in our writing – and we say to the other, ‘let’s write to it’. Whatever the query or the problem, it is this inducement – ‘write to it’ – that leads to new experimentations and the sensing of the indeterminate rhythms and refrains of the multiple that activates our practice. (Wyatt and Gale, 2018, 119)

To this end, what follows is a ‘writing to it’ of our day on Walney Island. We take it in turns, each authors writing is indicated by their name. There has been very little editing of what follows, save for grammatical changes and the occasional fact check. It is not quite right to say we made this decision; we were involved, amongst many other things:

Agency then, is an enactment of an entanglement of researcher–data–participants–theory–analysis, as opposed to an innate attribute of an individual human being. (Mazzei, 2013, p.779)

### **An invitation to write**

#### **Dave:**

White minibuses are a staple of UK outdoor education. I've sat in minibuses for hours of my life. I've had formative experiences in and around minibuses. Climbing on top of minibuses in the early 2000s to secure baggage for our university trips, nodding off on peoples' shoulders as the minibus drones along at the end of a long day out-and-about. Minibuses refusing to start, four hours before the ferry leaves when the terminal is a three-hour drive away. Forging lifelong friendships through minibuses. Minibuses have changed my life as they have shuttled me from existence to existence. Matt Berry, a lecturer in outdoor and adventure education at the University of Chichester, where Jamie and I completed degrees in 2006, says that many of the best tutorials he's conducted with students have been in minibuses. Minibuses are the on the way, or on the way back. They're not the destination. They are the middle. They are a space in between. Intermezzo. Alongly. Minibuses have been the gateway to experiences. A conduit of potential. Minibuses take me places, with others. On the way to windswept crags, swelling rivers, claggy mountain sides. And the less romantic: French motorway services on a windless hot day – the smell of evaporating urine inescapable. Minibuses as quiddities have certain characteristics; *what* makes a minibus? They are vans with seats and windows in. No seats? Not a minibus. No windows? Not a minibus. What you've got there is a panel van. Minibuses are portable arenas. The stands to the shifting stage of the world, viewed through an open or closed window, and beheld more intensely by exiting the vehicle, arching your back from your crouched position, breathe in, stretch your arms, look around, 'where are we?', difference, potential, hope and fear in the new surroundings. Minibuses as haecceities are never the same. The way home, for instance, was very specific. And now it comes to me as a certain *thisness*.

I'm towards the back of the bus. Tracy is over the aisle (if you can call it that. It's more of a gap you squeeze through to get further back in the bus). Josh is diagonally behind me, directly behind Tracy. We, along with 12 others, are on our way back to the Ambleside Campus after a day out on Walney Island, Cumbria, as part of the postgraduate outdoor studies course *The Reflective Practitioner*. It's dark and humid in the back of the bus. Cumbrian rain is sucked out of Gortex by the bus's heating. I can't see either of their faces, except when illuminated by the passing orange street lights. The mid-afternoon light in the north of England in December doesn't offer much illumination. Especially on a day like today; grey clouds thickly plastering the sky. Wind horizontal. Rain coming in waves, as if delivered by an army of archers, reloading and firing the heavy droplets in unison. This bus is dark. Invisible to us. Only us three. The radio volume is shifted to the front. Windows are opaque with condensation.

In this haecceitical space the three of us become a lively pack of discussion. Our topics run through the day. Pulling at moments spent in dips among sand dunes, in a council estate carpark dwarfed by grey rolling seas, stood around mobile phones in small groups as an app tells us stories of where we stand. We discuss the topics they have covered during the week, and the papers they have read. We discuss their lives. Our lives. Our discussion traverses agency and objects; what's real and what is not; reflections/diffractions of our practice as educators; of our very purpose and existence; all drawn through the events of the day. Our hopes. We've shared a day at the cusp of ideas. At the edge of thought. And at the edge of England. This day has been full of such events. I want to think these events *with* things. To conceptualise education as a dispersed event. Environing education. I want to start by thinking them *with* you.

I wonder, Jamie, about our day with your students. I want to write about what happened. But I don't want to represent it. I am claimed by immanence again.

Drowned in it<sup>31</sup>. I want to become different with the writing. To change. To disappear as me. Do you think we can explore this, as an event? Can this writing be something like a minibus journey; moving somewhere and nowhere? Creating potentials for adventure in thought, adventures *of* thought? Can we surprise ourselves? Dissipate ourselves? Creatively inquire into and past that day? With that day, and others since? But what type of questions should we even ask? We need concepts that rid ourselves of the norms of conventional inquiry.

Creative practices of concept forming, always involving active conceptualisation, are the very processual activities that trouble the reified substantialities of conventional inquiry. They are not simply about changing the concept from one thing, once classified object of inquiry, to another through practices of critical interpretation, they involve selves in doing, in engaging in affective forms of inquiry that animate doing-bodies in ethical, political, and always experimentally infused ways. (Gale and Wyatt, 2018, p.203)



---

<sup>31</sup> I often think of immanence as a swelling ocean surface. The cover of the Album *Repave* by Volcano Choir. The photograph was taken by Corey Arnold, commercial fisherman and fine art photographer (<http://www.coreyfishes.com>).

Our concept, environing education, requires this type of inquiry, Jamie. A philosophical inquiry of events. This event. I wonder what you make of this?

**Jamie:**

Well, what can I say? Many things as it happens, or so I'm told! But it's always *re-*this, *re-*that and never really *of* the moment. In academia we always speak as if we *know* something. But knowledge is just as invented as all the other 're-presentations' we like to convey to each other. Numbers, words, pictures, presentations, re-search! They're never *the moment*. That's always already gone. So I'll attempt to speak from here, where I am now, rather than somewhere else – in history, in academia, in space, in place, in time.

I'm sat at a homogenised plywood desk in a hotel room in Bavaria (that was always something else). It's snowing outside. It's stifling inside. Dry, warm-hot air conditioning in a box of a room with muffled German conversation going on in the corridor outside. I don't speak German very well so it simply sounds like gagged sound. This is probably important information to you as it sets the scene and tells you what might be co-producing this event, at this time, as 'I' (an assembling event) attempt to re-collect (there I go again, with the *re's*) a time already gone, when we (you and I, Dave) were on a minibus, going somewhere with some students...again. The collective agency producing this event right now involves a desk, a laptop, a desk light, a bottle of water, a runny nose, dry warm-hot air, a background hum, an aching back, the excitement of performing my presentation tomorrow morning – involving all the 'props' that will co-produce my distributed agential performance: my son's fairy wings (for enacting Deleuze and Guattari's *Wasp and Orchid*), a wolf mask (the one that Aldo Leopold shot), prismatic lenses (to 'see' different versions of *nature*), etc.



If I was perfectly honest, I would say that I really don't have a clue as to 'what' (a *quiddity*) is writing this now. My hands are moving on the typeface and my lips are silently mouthing the words I'm writing, as I sniff, scratch my nose and wonder what, or even where, the me to me is that is supposedly 'controlling' this event. I doubt there is a location I could pinpoint. However, there are many multidirectional relations I could mention that may give rise to these words being typed. No corrections. Just stream-of-consciousness...what I've been taught!

So, the minibus. The windows, steamed up, frame the landscape, a scenic mobile production. Still seems 2-dimensional until we get there. I wonder what my embodied memory re-members?

What we are seeing here is that time is not given, it is not universally given, but rather that time is articulated and re-synchronized through various material practices. In other words, just like position, momentum, wave and particle, time itself only makes sense in the context of particular phenomena. [...] The "past" was never simply there to begin with, and the "future" is not what will unfold, but "past" and "future" are iteratively reconfigured and enfolded through the world's ongoing intra-activity. (Barad, 2012, p. 66)

It's obviously not the event at the time as that moment has passed and morphed into something else, something new, a palimpsest of furious myriad things that I could never hope to pin down, like the cruel practice of pinning butterflies to a wall. Nothing static, nothing still, just flows and occasional bulks of embodied memory coming to the fore. Where's that? No idea.

The line-system (or block-system) of becoming is opposed to the point system of memory. Becoming is the movement by which the line frees itself from the point, and renders points indiscernible: the rhizome, the opposite of arborescence; breaks away from arborescence. *Becoming is an antimemory*. Doubtless, there exists a molecular memory, but as a factor of integration into a majoritarian or molar system. (Deleuze & Guattari, 2004, p. 324)

I can still *feel* the faintest of emotions though, from that day. I ~~was~~ am (there is no past, only a past in the present...makes sense) slightly uneasy about the day, whether some students will not like/get/appreciate/want the incredibly challenging content that I'm delivering. Angry/puzzled/curious faces staring at me, expectantly, waiting for me to unwrap a parcel of knowledge that will make everything come clear, make sense...something I don't have. I only have more questions. That's an uneasy feeling that sometimes makes me sad, exhausted, self-loath, excited, tired. It's warming having a friend there with me, someone who I can simply say, "Dave, what do you think" and then stop talking and relax, breathe a little easier, and drift off, just for a moment or two, gather my thoughts, my truths, untruths and nontruths, and then re-appear, rested, with something new to say, something fresh, something controversial perhaps. Perhaps I shouldn't say it. Perhaps it's too ... too late, I've said it. Confused faces, red faces, blotchy faces (the effect of affect – forces of encounter), trying to take in what I've just said. Years of Enlightenment knowledge rammed into their skins, into their lungs and then I've just gone and said something that unravels/unlearns all that embodied bulk, in a moment. I didn't

think about the ethics of that statement before I said it. And I know some of this stuff, this knowledge, can be life-changing, yet I still did it! Whispery voice inside (my skin?) says, “they may not have wanted to know/hear that little gem”. It’s like that moment in The Matrix, when Cypher wants back in! But they can never get back in. That’s my fault! But where does the responsibility for that lie? I am a moment. I’m a physical moment, always becoming something else, something more, something merging (now, with you, with the electronic page, with the keyboard, the chair, the topological and invisible part of us that gets sucked up into space, to that satellite and then back down to somewhere else on the thin skin of the planet, to someone else – a cyborg self, to merge with them, their thoughts, their embodied memories, perhaps yours?).

Trying to do diffraction, to get away from reflexivity. Just another concept, that performs, that behaves and dances ecologically. Sitting in that pub after being in the sideways rain on the beach at Walney was toasty. You explained diffraction to the students. That’s what they wanted. An explanation, preferably a simple one. Why did you do it? (Sorry, I wrote over 800 words when you asked for less than 700...I don’t care!!!).



**Dave:**

I knew you'd write more. It was futile when I wrote to write less. There's always more to say. And, some of those words aren't *yours* anyway. This isn't the same as saying some of them are quotes. As you say, are any of those words actually *yours*? If there is no 'you' to you or 'me' to me, is this collaborative writing, or something else? Maybe it's not a collaborative writing (Koro-Ljungberg & Ulmer, 2016). What's going on?!

Now I'm sat with my 3-week-old son, Fen, in our flat in Edinburgh. Outside it's snowing (what's the 'it' here?). Of course, it's simple to say I've changed since Fen arrived, and since we were on Walney Island, Jamie. But how do I write this change? How do I write with him/not him, now? There was no 'lightning bolt' when he arrived. No grand sea-change. He hasn't been anywhere near as disruptive as was promised by advice givers. He feels more like a welcome visitor, for now. So what do I fear? The potential for it to go differently? There is a virtuality; an eventing horizon of becoming in what we have now; so *hygge* with the snow outside and Fen sleeping calmly. How does this become the "clunky intimacy" of the father-son event (Pelias, 2002; Wyatt & Adams, 2012)? I write with that fear, among others.

What has changed in the writing event of us all, here? By here I mean this virtual-actual space that you also describe. The non-static potential of you on email, now, talking to me about this Special Issue on new materialisms and environmental education, and potential reviewers of the papers submitted by our colleagues. Gemma to my left, talking sweetly to Fen, to calm him. The little red squiggles that remind me I can't spell simple words. They push my fingers onto the delete key, and to (re)type. And then you, the reader, wondering what word in the last two sentences I couldn't spell. More than you'd guess, probably. And then, *all the others*. The other writers who write through/with/of me/us/event, themselves events written through by others, themselves written through by others...and...and...and...

An experience of a loss of the author and a loss of oneself multiplied by two. Writing without a plan happens, this virtual event surprises the writers themselves, and many tiny voices within the writers get disturbed. Writing appears almost the same but not quite. Scratch that. Writing almost never feels the same. Scratch that. Many writers writing in the same space, colliding. Sometimes. Never really. No, this is not a collaborative writing. (Koro-Ljungberg and Ulmer, 2016, p.101)

...so, let's ~~collaborate~~/not collaborate. Let's write about Walney without a plan and change the past in the present, as we always do. Let's write and see what happens. I'm writing with Walney Island; the dunes, wind, students, graffiti, plastic bag poking out of sand and chat that took place and is taking place now. *This* writing-thinking-flat-Fen-Gemma-internet-Jamie is environing education as much as *that*, Walney, was. I'm cautious of the idea of a text/lifeworld split as Payne (2005) suggested there is. Rather, I wonder if text and discourse never escape the lifeworld. To write seems to be to be embodied. And text *is* a body, but not the only body. And bodies are concepts. Plastic and malleable in that way. Concepts are material things *of* the world. Not abstractions. No discourse/matter divide. The *recollection* of Walney is always a *collection* of Walney and more. But this collection is not one of things given a priori. It is always an event. As is the here and now, which has always passed. Both events, on Walney Island and here in my flat, are material-conceptual becomings. There can be no conceptual abstraction from the world, the *representation* is always a presentation - the problem that troubled environmental education in the mid 2000s (Hart, 2005).

So an environing education has no care for the entering and existing of doors and places, or whether I'm on my laptop or on Walney Island. The learning happens along the line of my eventing of these becoming places. It is rather more concerned with playing with itself *alongly* (Ingold, 2011). In the same way that life is an occurring process both indoors and outdoors (conceptual categories both 'in' the world), it is an occurring process of both matter and discourse (one considered 'in' the world, and one considered to be abstracted from it). Ingold (2011, p.155) notes, 'in this way the alongly integrated knowledge of the wayfarer is forced into the mould of a vertically integrated system, turning the ways along which life is lived

into categorical boundaries within which it is constrained' (Ingold, 2011). To tell someone all they are up to is discourse, narrative, text or post-structuralism, and not real like embodied experiences, is to place them in a category that is not given a priori. I contend that discourse is experienced. There is no escaping the ecology of words and concepts, and the trophic torrents of which they find themselves. Concepts are nature (8) too (Mcphie and Clarke, in press).

And you ask me about diffraction. Are we drawn to diffraction as an attempt to place-people-place mingle alongly? To change reflective practice to diffractive practice? And...and...and...diffraction's movement gets us past the etic-emic split of discussions of the environment, nature and place. It allows the wayfarer to disrupt the categories that someone else places them in. Diffraction, for me, complicates the subject. It helps us live alongly. If I reflect, or am reflexive, I remain as a subject, just moved elsewhere. If I diffract, I write-think-do myself anew as I notice the difference that is made. Diffraction seems a useful concept for environing education. For imagining haecceitical selves (Clarke, 2017). I can't tell you why I tried to explain diffraction to the students *then*, I can only explore the difference your question makes *now-just gone*. The disturbance patterns left by that day, and the ripples that change them, made by the pebble of your question. What does it do? It makes me wonder about practice. Is this what I-you am/are trying to get to with the students? (and if so, where does this intention come from; not 'us' surely?). To help them, help me/us/(something else), get beyond our human selves as enlightenment subjects vs an 'out there' nature? But, as you say, do students even *want* that? Or, what is the wanting/not wanting that is occurring of students as events? That conversation with Josh and Tracy on the minibus. It was lively, generative, but also combative. Entrenched positions were taken, thoughts rallied and outflanked. Critique was both negative *and* generous (Taylor, 2016). But who were these positions taken by, if not us as humans? Were concepts battling *of* us, perhaps?



**Jamie:**

I imagine those positions were taken by a variety of multiple assemblies of things (thinking their cultures/environments thoughts) and simply passed off as positions taken by autonomous biological humans. Then, someone can be to blame, to have responsibility and agency. But that's too easy, too simple, too bound by the organic skin. There's another invented concept that performs rigidly – *organic*. I prefer the inorganic (or something in-between – the *ecotone*). It stretches the body much further – topologically – and is much more useful as a concept to think with because it doesn't staticize. It doesn't prevent my be(com)ing from ending at my skin – remember when I explored this using tattoos and graffiti (Mcphie, 2017)? An extended body hypothesis? Inorganic skin allows my embodied memory, my body, to extend into other things (and them into me, as a porous *haecceity*) – phone, laptop, address book, family. They are all important too, Dave. Consider this next example that Karen Barad (2007) uses to emphasize this point. It's Sandy Stone's

description of encountering the physicist Stephen Hawking<sup>32</sup> when he lectured at the University of California:

Exactly where, I say to myself, is Hawking? [...] Who is doing the talking up there on the stage? In an important sense, Hawking doesn't stop being Hawking at the edge of his body. There is the obvious physical Hawking, vividly outlined by the way our social conditioning teaches us to see a person as a person. But a serious part of Hawking extends into the box in his lap. No box, no discourse; Hawking's intellect becomes a tree falling in the forest with nobody around to hear it. Where does he stop? Where are his edges? (Stone, cited in Barad, 2007, p. 159)

Hawking+*inorganic* speech synthesizer (+ myriad other things) co-produce rapid air pressure variations that eventually becomes sound when a perceiver with an ear drum joins the assemblage, not so different from Hawking+*organic* voice box (that one would consider as part of *him*). Also, the initial thought process did not *begin* in Hawking's pineal gland in his brain did it? Thoughts and concepts are co-generated by multiple phenomena and as such, cause-and-effect sequencing is multidirectional  $\leftrightarrow$  and complex, rather than linear and unidirectional  $>$ . In Hawking's case, the speech synthesizer *pushes back*, influencing the thoughts themselves. In this way, we cognize *with* external components, from laptops to snowflakes – although this is now being written back home in Cumbria, there are snowflakes falling right now outside my window and so they begin to think *with* me, adding an extra icy weight to help my fingers depress the keys on my laptop, that also takes me back to Germany last week, changing the terrain of that memory, morphing it into a *becoming* rather than a preserved snapshot in time. Where are our edges? Our inorganic skin is always pulsating, flexing, temporary, topological.

So, there is no *sound* of a tree falling in a forest if there is no operational ear drum included in the assemblage/process to hear it (it would be only changes in air

---

<sup>32</sup> Author of 'A Brief History of Time' (1988), Stephen Hawking contracted amyotrophic lateral sclerosis (ALS) in 1963 leaving him paralysed. His voice is partly co-generated by a speech synthesizer and a single muscle in his cheek.

pressure), just like there is no rainbow without an observer. I agree with Deleuze, Monism=Pluralism. Therefore, yes Dave, I agree, education is a dispersed event, involving topologically distributed bodies of all kinds, including concepts – like pedagogy. Yes, concepts were battling *of* us that day/now, always becoming, environing education.

‘Deleuze and Guattari (1994) write on how concepts and practices “link up with each other, support one another, coordinate their con-tours, articulate their respective problems” (p. 18)’ (Taguchi, 2016, p.213). I think this is because concepts *are* practices in themselves. Concepts perform ontologically, not merely epistemologically. Concepts have agency. Or rather, they perform agentially. They are not only a re-presentation of reality, they *make* reality, for the re-presentations themselves are also made of matter. Therefore, concepts are particularly relevant to education, aren’t they? ‘Rather than being a linguistic representation of a separate material entity, the concept has an important pedagogical quality of shaping and enacting events of life and, thus, reality itself (Deleuze & Guattari, 1994)’ (Taguchi, 2016, p.213). In *What is Philosophy?* Deleuze and Guattari ‘formulate the task of the pedagogy of the concept and the urgency of practising it’ (Semetsky and Masny, 2011, p.448). Focusing our attention on learning about how concepts work (ecologically) and what they *do* could be of particular relevance to education research. As a result of this thinking, Taguchi and St. Pierre (2017, p.643) declared ‘concepts—acts of thought—are practices that reorient thinking, undo the theory/practice binary, and open inquiry to new possibilities’. I think this is the exciting potential that is a result of conjoining the material turn with the ontological turn with the linguistic turn. Thus, concepts perform *onto-epistemologically*, *onto-methodologically* and *onto-pedagogically*. Further, in our other paper in this Special Issue, after Barad (2007), we highlight how concepts – specifically nature – also perform *ethico-onto-epistemologically* which could be of particular concern to environmental education research.

Concepts really can undo a variety of binaries, from theory/practice and indoors/outdoors to nature/culture and organic/inorganic. But they are also stubborn, challenging and epistemologically inaccessible to many. This can create anger, barriers to learning and feelings of inadequacy. These are also ecological processes. The student's reactions to our concepts on that day also performed trophic torrents. There is an ecology of affect just as there is an ecology of concepts. I worry that our disruptions and diffractions of certain romantically idealized notions of 'nature', 'the outdoors', the 'organic', and perhaps more significantly 'the self' may lead some students down paths of unproductive nihilism and depression (not that nihilism always leads to depression as I feel I have a very healthy nihilistic outlook). So, yes Deleuze and Guattari, there certainly may be an urgent need for a pedagogy of the concept because at the moment when I introduce these ideas it's too stark for *the Cyphers* and some students just want back into their caves/Matrix/rabbit holes. The Overton Window of acceptability needs shifting so that there are even more looks of wonderment and even less of horror. Either that or we need to find another way of introducing these concepts that isn't so terrifying.

By the way, this doesn't feel like collaborating. You're here in many respects – as a bunch of concepts - but none of them are 'Dave the percept'. There really is something substantially different about a perceptual presence as opposed to a conceptual one. So, we're only really collaborating topologically, using our extended inorganic bodies to fly back and forth across cyber-space to write this. So, this doesn't really feel like collaborating. It's much more like entangling or colliding, like what Koro-Ljungberg and Ulmer (2016) said – so let's *collide* some more. Here I come Dave, I'm about to press the send key to transport this part of my body over to you...perhaps you'd better move over a little! (Also, now you've gone and extended the word limit to 1,000 for my collision-response, I've gone and written 1126...not including this extra bit! Do you see how this works yet?).

**Dave:**

It's strange, reading that never felt like a collision, or colliding; at least, not until you told me you'd gone over the word limit (and yes, I see how this works). It felt more like an old friend telling me things I know; things that you and I have talked about and both experienced in different ways over the last few years. Perhaps we are too attuned in our thinking? Perhaps we should collide with others in our writing, to see what happens. Dance different dances. There are intensities of entanglement, of course. Let's go to the pub. Or rather, back to the pub that we sat in with the students, to escape from the wind and rain of Walney Island. As you say, I tried to explain diffraction. We sat in an awkward circle. I had a pint. Some students ordered pizza. As I talked it felt as if some of the students were entangled, whilst others were colliding. Others still orbited peripherally. Yet we were all becoming alongly; people, pint, pizza and all. Diffraction as a concept played out in different ways for different students. *ethico-onto-epistemologically*. For some it seemed liberating, for others it seemed distancing. Specific positions were taken. You and I were given a free stage to talk. Our authority filling the voids. Some students said nothing. Others courted our authority, butted up against it, nodded politely or enthusiastically. You're right to talk about the politics of the ecology of concepts and the way we can collectively try to take care in our approach to them. Whilst conceptual, they are immensely affectual. Perhaps this is another example of immanent ethics. The care to be taken (by who/what?) in the affective force of encounter of the ecology of concepts. Challenging given images of thought so that we, the students and you and I, might think our ontological selves differently, and thus expand our capacities to affect and be affected. But do students always want their power increased in this way? Who's to say that it is an increase in power? The ethics is in the pedagogy; the manner we broach concepts, but is also in the concepts themselves. As you say, concepts are important, and can have world changing consequences.

So how did I broach diffraction? I (re)member speaking in examples, of ripples on the surface of water, of our bodies in the circle and the ways our ideas and discussions changed the events we were all participating in. I (re)member being asked, by Josh I'm sure, what this means for his practice as an outdoor educator.

How to tell him what I have talked about a little above, the long road of thought that you and I have walked from outdoor adventure education to what we perceive, with others, as the ethical requirement to challenge the very notion of being human? And the environment? Josh is faced with a world changing concept. I think our approach to concepts is similar but importantly different to that of *threshold concepts*, that Mayer and Land (2006) introduce. Their book *Overcoming Barriers to Student Understanding: Threshold Concepts and Troublesome Knowledge* argues that:

in certain disciplines there are ‘conceptual gateways’ or ‘portals’ that lead to previously inaccessible, and initially perhaps ‘troublesome’, ways of thinking about something. A new way of understanding, interpreting, or viewing a topic may thus emerge – having a transformative effect on internal views of subject matter, subject landscape, or even world view. (Mayer and Land, 2006, p.i)

This description doesn’t get to the world changing nature of the type of concepts you and I are discussing. Philosophical concepts don’t provide different ways of thinking *about* something. They provide different ways of thinking about thinking, and reality, and thus what matters and what comes to matter. Different ways of thinking about everything. Josh is not faced with a concept that might change his worldview. For me, the container of the human subject who ‘gains’ different worldviews in Mayer and Land’s conception of curriculum, of education, is radically altered by a concept such as diffraction. Philosophical concepts, such as environing education, are of a different order to concepts that make up the more citizenship or literacy approaches in environmental education:

the philosophical concepts of Butler, Foucault, Derrida, and Deleuze and Guattari that Colebrook and others think with (e.g., subversive repetition, power, deconstruction, body without organs) are quite different from familiar concepts of education and the social sciences (e.g., cognition, race, culture, role, free market) that can overdetermine inquiry as much as method because philosophical concepts do not identify, organize, consolidate, and represent experience under the sign of the concept. Instead, they reorient thought. (Taguchi and St. Pierre, 2017, p.643)

Environing education seems to change both ideas about what it means to think the environment, and what it means to think education. It borrows from the ethical and pedagogical endeavour to enact micropolitical incisions, to stay clear of new grand narratives by instead playing with concepts; as explored by de Freitas and Palmer (2016). But further, it borrows understandings of the limitations of any attempt at an environmental *education after* posthumanism (Pedersen, 2010). Commenting on the way environmental education has approached posthumanism (at least, commenting on Stables and Scott, 2001, and Bonnett, 2004, who both invoke a posthuman environmental education), Pedersen (2010) notes that:

To see education as a remedy for everything gone awry in modernist humanism is not only to apply an instrumental view of education, hoping that the crises of humanism can be fixed by appropriate methods of teaching and learning, but also to cultivate the naïve idea that education can locate itself outside of ideology. (p.245)

The risk is that education is employed as an attempt to overcome dysfunctional humanism with other forms of humanism in the guise of the idea of education being enacted. Can we try to think of practice as not educating humanist subjects, but playing among eventing percepts, affects and concepts; eventing with them? I think some environmental education approaches to posthumanism, new materialisms, or ontologically oriented inquiry generally, have moved on since Pedersen (2010) asked if the posthuman was educable. We can see this is the case by looking through other articles in this special issue for instance. And so, I think we should think of education not as a discipline that can be wielded instrumentally, but instead as a dispersed process of becoming whose endpoint we can never predict. Accordingly, Colebrook (2017) asks *What is this thing called education?* She notes the problem of conceiving of education as anything other than philosophy (Colebrook, 2017).

To think of education as a part of the humanities may seem to at least have the virtue of freeing it from the quantitative pressures of social scientific, neoliberal, and biopolitical managerialism. And yet, it would be more radical again not to make claims for the ways in which threatened aspects of education, such as art and music [or environmental education?], form healthier happier humans, but to think of all learning as *inhuman*. To tie education to philosophy—to open problems and transformative encounters—would be as destructive to most of what counts as philosophy in its current form as it would be to education policy. (p.654)

To be open to problems and transformative encounters might mean thinking of education as the eventing nature of the problems of life, where life is conceived as *a* life, as immanence. This seems to mean both environing *and* unhumaning. Posthumanism might be the philosophical perspective, but unhumaning is the activity. I prefer the term unhuman to inhuman, which is used by Cohen (2015) and Colebrook (2017), as inhuman can also mean to be unlike a human, but also to be cold-hearted or callous. Unhuman is more generally understood as lacking human attributes. The attributes I think I lack are such things as independent agency; a mind which is separate from my body; a body which is separate from the world; rational thought. At least, I haven't yet rid myself of these beliefs. Perhaps it is more accurate to say I am attempting to become unhuman. I am unhumaning. Becoming unhuman. Becoming *alien*. This education no longer feels like *educare*, like a leading out or a facilitation. It feels more like an attempt to become alien from stable ideas of ourselves, or of ourselves as stable. An Alien pedagogy. This doesn't mean becoming alienated, at least not from the world. Alien comes from the Latin *aliēnus*, meaning belonging to something else. By keeping the category of the human on the move, by always thinking of ourselves as never settled, but always belonging to something else. This isn't the same as, for instance, Bogost's alien phenomenology, where he attempts to see what it's like to be a thing. Rather my meaning of alien is closer to Haraway's (1992, np) use of monster in her description of cyborg subjectivity: 'A cyborg subject position results from and leads to interruption, diffraction, reinvention. It is dangerous and replete with the promises of monsters'. Becoming alien is not a destination (personally, I think we are all already aliens), but environing education seems to be an attempt at alien pedagogy. Haraway (1992)

seems to warn of the placeless, or space oriented futurity of the concept of the extraterrestrial. So, becoming alien must be an earthly endeavour. It is always an attempt at becoming immanent. Of the world. How many different ways can we become earthling aliens? The earth with all it entails, especially concepts. There's also something wonderfully *alien* about the idea of us being aliens. That we can never know the otherness of ourselves fully, even as we enact it, we can only attempt to reach it and shake the human that we are so used to believing in. We cannot even know the 'we'. There's something so alien about the inorganic Hawking you discuss, for instance, Jamie, just as there is surely something so alien about the me *of* this café on Easter Road in Edinburgh. Belonging to the otherness of it. Never human. A totally different (in)human who has been here before and done things in this way. Constituted of a billion others, bacterial and authorial, affectual and conceptual. Environmental education becomes environing-alienating. If we make the human alien. This Café on Easter Road in Edinburgh becomes an opportunity to start. This seems less and less like an environmental education, and more and more like *lifing*. Always an attempt and an experiment. (Now looks who's over the word limit! It wasn't me. The aliens did it...)

**Jamie:**

*We come in peace. Shoot to kill?* (There are always hidden dangers that come with the promise/s of monsters).

Back at my desk – no snow. You mentioned *educare*. I know one version of this word/concept not from a privileged education – where the ones who can afford it learn a romanticized and hierarchical Occidental language that simultaneously emancipates and oppresses – but from becoming a dad. It means providing nourishment. The first milk passed from mother to infant, colostrum, provides some of the best nourishment (education) I can think of. Utilizing microorganisms and nutrients, it educates the digestive tract to provide healthy antibodies in response to invading viruses. And due to the bodily contact, it also educates warmth, care, emotion, wellbeing, attachment, love...nourishment – in both directions. I want my baby's bodies to know how to do this. Jane's environing education to our children is

one of the healthiest I can think of. I want *my* body to know how to do this (educating my body). But I didn't get it. I got a bottle and a dummy. A bad education? It wasn't my mother's fault, it was the zeitgeist that did it, thinking our (patriarchal) cultures-environments thoughts at that time – and still.

~~Funny~~ that the area where we went with the students still has one of the lowest rates of breastfeeding in England. It also suffers from high rates of deprivation, including alcoholism, teenage conceptions, diabetes, long term unemployment, violent crime and self-harm (Public Health England, 2016). Is that a bad education? And should we have taken our students there, in amongst the litter on the beach, diffracting the aesthetics of the litter so that it almost becomes beautiful decay, with all the problems that plastic promotes? Should we have profited pedagogically from an unhealthy environment - even though it was a 'nature reserve' -, from the impoverished people who live there? One's ill-health is always another's health. Something always profits. I've since been back with the same students, Dave, to do some psychogeography/schizocartography (see Richardson, 2013) on another module – *Know Your Place* – to explore the power relations that warp and weft through Barrow and Walney. One of the students asked me if it was ethical for us – with a particular epistemological access – to be there, wandering the back streets of people's lives collecting the urban run-off (the 'data') in a similar vein to the anthropologist examining 'the native' or the naturalist narrating the lives of flora and fauna for the consumer, the onlooker, rather than the participant or even the 'spectator' (Boal, 1979). Perhaps. Is it healthier to do it *with respect*? Or what Deborah Bird Rose calls 'responsive attentiveness' (Rose, 2004)? Or not at all? And there are always hidden dangers of cultural and class appropriations. There are always hidden monsters.

So, is environing education about health then? Healthy bodies, healthy environments, healthy relations, healthy respect, healthy becomings, healthy *lifing*, healthy aliens? Could we look to nourishing instead of educating then? Nourishing our way through life. Surely this would have very different implications if we

thought of environmental education as nourishment. Passing nutrients on. Perhaps we'd notice the fast food a little more blatantly. You know, the romanticized version of *nature* evident in articles throughout environmental education? That's fast food. Or could we notice how learning entails entrophy, trophic torrents and ecological adaptation? Nutrient exchange isn't always healthy. Some become more nourished than others, causing eutrophication or blandification. A political ecology of the oppressed is just as relevant to environmental education as learning the life-cycle of a pond.

But where can we go to explore and further this futile attempt at *knowing* the other, the environment, the self, the alien, if not education, if not academe? Do we need more of the same? Knowledge isn't knowledge. Knowledge is so fraught with power. It's so historicized, so made up, so fictionalized. Perhaps we need another fiction to diffract it. Perhaps we need a *speculative fabulation* (Haraway, 2011) or a *speculative fiction* for a healthy alien pedagogy. On this matter, I'm in agreement with the late Ursula Le Guin. Thinking with her protagonists in her science fiction novels she tackles issues of racism, sexism and colonialism, as well as prescribed knowledge garnered from an Enlightenment pedagogy. She highlights *matters* of historicity and challenges the idealisms of utopian yearnings. Her stories aren't simply reflections of real life, they are diffractions of it, as well as continually becoming it, each time they are read anew. Hers is what I would call an alien pedagogy, with the added bonus of extra/inner/other-terrestrial imaginings. For me, reading and thinking with Le Guin has been an otherly-terrestrial education, useful in diffracting more traditional pedagogical ethico-onto-epistemologies.

Or Noel Gough when he said 'critical readings of science fiction texts ~~should~~ be integral to both science and environmental education and that the narrative strategies of postmodern fiction ~~should~~ be incorporated into their story-telling practices' (Gough, 2011, p. 607, *sous rature* added – replace with 'could').

Or Donna Haraway when she decides to explore ‘worlds full of unsettling but oddly familiar critters who turn out to be simultaneously near kin and alien colonists.’ (Haraway, 2011, para 1). She asks, ‘How might a speculatively fabulated SF art object help morph eroded and disowned no-places into flourishing and cared-for places?’ (Haraway, 2011, para 5). ‘To care is wet, emotional, messy, and demanding of the best thinking one has ever done. That is one reason we need speculative fabulation.’ (Haraway, 2011, para 9).

So, maybe that’s what’s needed for the students, Dave. A speculative fabulation that *environs* education and attempts to nourish an immanent ethic of care via an alien pedagogy. But the promise/s of monsters will undoubtedly emerge with the alienating threat of the alien vitality, as it always does with me. That life may be articulated in *all* things is so repugnant to so many people. It’s almost as if the inanimate lifeless spectacle is preferable to a messy vibrancy. I get scowls, Dave.

Dave, I want to finish by integrating Steven Shaviro into our collaboration/collision if I may, as a third voice/assemblage? As well as the Whiteheadian author of a semi-generous critique of speculative realism, named *The Universe of Things* (2014), he wrote the introduction to a collection of short science fiction stories by Gwyneth Jones, also named *The Universe of Things* (2011), named after a passage from Shelley’s *Mont Blanc* poem in which he discusses ‘The everlasting universe of things’. *Take a breather*. In one of Jones’ stories, also named *The Universe of Things* (too much?), an auto mechanic meets an alien who asks him to fix ~~her/his/its~~/their car. The mechanic turns off the machines that usually do the repair work and decides to fix the alien’s car by hand. Actually, I think I might have mentioned this story to you before. But it’s particularly poignant to our collision now as our environing education has wandered into a realm of aliens, speculation, materials, distributed agency, extended inorganic selves, environ(mental) health (Mcphie, 2014) and fiction. So, I’m just going to let Shaviro and Jones do the talking in this particularly long quote if that’s ok?

Shaviro and Jones:

In the course of a long evening, as he works on the car, the mechanic has an epiphany – or a hallucination. He experiences, for a moment, what the aliens’ “living world” is actually like: his own tools seem to come alive. The experience is disconcerting, to say the least. “He stared at the spanner in his hand until the rod of metal lost its shine. Skin crept over it, the adjustable socket became a cup of muscle, pursed like an anus, wet lips drawn back by a twist on the tumescent rod.” The living world is obscene and pornographic. Existence is suffocating and unbearable. Everything is suffused by “living slime. . . full of self, of human substance,” but somehow rendered other. This is what happens when you have “succeeded in entering the alien mind, seen the world through alien eyes. How could you expect such an experience to be pleasant?” The mechanic is terrified and nauseated. All he wants is to return to the loneliness and security of the customary human world: a world in which objects remain at a proper distance from us, because they are “dead, and safe.”

[...]

The story therefore posits something like what Jane Bennett calls vital materialism: the recognition that “vitality is shared by all things,” and not limited to ourselves alone (Bennett 2010, 89).

But even as the story intimates this, it also dramatizes our fear of the liveliness of things. In the mechanic’s experience, wonder turns into dread. The sense that everything is filled with “human substance” flips over into the paranoid vision of a menacing alien vitality. The magic of a fully animate world becomes a nightmare of Cthulhu. We are threatened by the vibrancy of matter. We need to escape the excessive proximity of things. We cannot bear the thought of their having an autonomous life, even if this life is ultimately attributable to us. We are desperate to reassure ourselves that, in spite of everything, objects are, after all, passive and inert. (Shaviro, 2014, pp. 46-47)

So, how can we make the familiar unfamiliar with our students? And *vice versa*? An alien pedagogy? An otherly-terrestrial pedagogy? Maybe we could cover everything in skin, like in Jones’ story. An extra-dermatological pedagogy? An inorganic pedagogy? Yes, it *feels* like environing education now. I know we were doing it earlier, but after colliding a little more, shedding more of the *enlightened* organic

skin that we're soaked with and freeing up our co-produced ruminations, the forces of affect *feel* more like environing. Concepts flew/are flying Dave. It became a little more intense as we went along(ly?). I feel a little more alien now. A little more inorganic and distributed. My skin has spread. I do enjoy thinking with you Dave – whatever/wherever you are.

(I was under! It was Shaviro's fault!)

### **Post-script on diffractive practice**

So, the thing that came together, the haecceity that produced the writing above, has tailed off and become different again. Another '...and...'. I (Dave now<sup>33</sup>) want to write a little about where I think we arrived in our thinking-writing-doing. It has not been the more usual type of environmental education scholarship. More traditional environmental education research might have been concerned with other aspects of our day. I can well imagine a conversation, perhaps by other academics, focusing much more on the 'place' of Walney Island, but as I said before the conversation began, the island was only one multiple material aspect of many that may have 'come up' for us to explore with our post-nature post-human orientation. Indeed, I stipulated that there *are* 'placeful' stories that *could* be told; concerning the geraniums, or the toads for instance. But there is a lingering dualism in focusing on these aspects of the day. Upon submitting our conversation to a leading environmental education journal, Reviewer 1 noted:

At this stage I am missing the geranium, the glacier era, missing the stories told by locals in the smartphone's application, missing the students, missing the grasses, missing the smartphones, missing the wind, missing the thinking feet of wayfarers, missing Walney island who has never been present with-yet.

---

<sup>33</sup> Jamie won't return to write in the thesis. From this point the use of different fonts demonstrates different voices that, whilst different, are all mine.

This type of ‘missing’ - a feeling of loss that the reviewer seems to have felt while Jamie and I focused on the things that piqued our interest of *and from* the day rather than theirs - seems to reach out to a particular understanding of materiality as ‘placeful’, i.e. as not interested in the doing of the concepts at play in the education that has been and is at work. Reviewer 2 seemed to have experienced a similar sensation:

Indeed, any ‘actually existing environment’ appears to [have] been wished out of existence and the purpose seems to create new texts rather than new worlds (though of course, in the view of the textual turn this can be overcome by saying that texts are worlds, and that texts constitute worlds). When I say that the environment has been ‘wished out of existence’ I mean that despite its presence in the title, and despite the claims that this is a ‘placeful’ text, the actual place- Walney Island – is decidedly absent. There are some references to it of course, but the materiality of it in a geographical sense, is missing. It could be anywhere. If this is a ‘geophilosophy’, then the emphasis is on the ‘philosophy’ rather than the ‘geo’.

Reviewer 2 seems to feel the need to separate once again what I feel Deleuze and Guattari are attempting to draw together, or rather to think as never separated; thought and materiality. ‘Walney Island’ does appear in the title, along with many other things, including students, concepts, and writing-thinking-doing. All of these things are ‘environmental’ in that they are *of* the world. To focus our attention on some aspects that a sedimented thought has reduced to a delineated set of ‘geo’, or ‘environmental’, is precisely what we are attempting to explore beyond. This attempt poses fundamental problems for environmental education as a pedagogical endeavour. Geophilosophy places the emphasis on the effects of concepts as much as the effects of anything else we might pick out of the world. It is interested in the movement across affect, percept and concept. In their chapter in geophilosophy in *What is Philosophy?*, Deleuze and Guattari (1994) note:

Can we speak of Chinese, Hindu, Jewish, or Islamic "philosophy"? Yes, to the extent that thinking takes place on a plane of immanence that can be populated by figures as much as by concepts. However, this plane of immanence is not exactly philosophical, but prephilosophical. It is affected by what populates and reacts on it, in such a way that it becomes philosophical only through the effect of the concept. (Deleuze and Guattari, 1994, p.93)

It is this idea that we are attempting to begin to explore in our 'writing to it'. This isn't easy, and one could argue that we have not done this well enough, or one could give direction as to how this might be done better. But to fall back to the separation, to the sediment that we are interrogating, feels like a misstep. Of course, these requests are the prerogative of the journal.

What is the alien that Jamie and I, with others, evoke? According to Rosi Braidotti (2018) the alien abounds in posthuman writing: 'the empathic bond to non-human, including monstrous and alien others, has become a posthuman feminist topos' (Braidotti, 2018, p.9). Braidotti (2018) notes that there is an important focus in posthuman feminisms on the manner in which the human subject can be reconceived in terms of its material constitution of biological others, as, for instance, 'transcorporeal human-animal compounds' (Aliamo, 2010), or 'trans-speciated selves' (Hayward, 2008). Further to this there is the non-human alien that constitutes the human in terms of technological mediation, the cyborg feminisms of Donna Haraway as well as the nature that is the digital life of human becomings (Braidotti, 2018). These are important conceptual moves that deterritorialize the Western human subject across the earth. They unhuman. That is, if they are concepts that are enacted, they may produce particular effects through their mattering. My interest, however, is pulled not to the animal, but towards the power of concepts, and thinking of lines of conceptualisation as alien others that move through the constitution of subjectification. The 'concepts battling of us' that Jamie and I describe above, is the alien within and without that I am drawn to. The posthuman practice of ethics through affective conceptualisation.

## **Haecceity 7: practicing immanent ethics**

Direct discourse is a detached fragment of a mass and is born of the dismemberment of the collective assemblage; but the collective assemblage is always like the murmur from which I take my proper name, the constellation of voices, concordant or not, from which I draw my voice. (Deleuze and Guattari, 2004, p.93)

Xeno-glossic. Alien speak. Words belonging to others. Other ideas. Other people. Other modes of thought. Other bodies. This body is made up of alien languages. The human cells provide about 20 thousand genes; the instructions for making a person. But the human microbiome, all the others that help me be human – in my gut, on my skin – the microbes. All together the number of genes required comes out between 2 and 20 million (Gallagher, 2018). I am far more other than I am ‘me’. Tim Morton suggests that *the whole is less than the sum of its parts*. I think this works with being human. The human is less, far less than the sum of its parts. The human is a wisp of an idea of the body environing. The human is a will-o’-the-wisp. A fen-fire. Ignis fatuus. A bioluminescent apparition produced by microbes. An amorphous haecceity that shouldn’t be given too much credence. Tempting though it is to follow its warm glow, deep onto the moor.



### **‘Good’ problems**

In this haecceity I struggle with the aliens within and the ways I am an alien without. Scratch that. The aliens that lie, transversally, across any fictitious boundary of the self. By alien, I don’t mean little green men, but rather the *others* that I already am and that I become. Or that are before *I am* as I occur. The conversation between these aliens is an ethical one. It is also one about ethics. Or perhaps this is the same thing? The inquiry is always ethical; towards matters of concern. A struggle with ethics

dwells in this thesis as a faint refrain. Here I take up the conversation more directly, for now at least. This voice, this direct voice to you, is a form of direct discourse made up of many other narratives that constitute me, these are the aliens. The alien languages. In *Haecceity 4: becoming rocked* this voice is steady. It becomes more unstable in *Haecceity 5: practicing environing education*. In *Haecceity 6: the diffractive practitioners* it is joined by another, my colleague, Jamie, an alien that constitutes me, but is also troubled by exploring where concepts come from and on what they act. Here, in this haecceity, the direct voice is troubled once more. It is broken up. I am breaking up. Attempting schizoanalysis in an effort to seek out the ethical. What are the things that constitute the inside-outside of me? The drives that constitute the me-event? Each drive working in a different context. Arcing a different trajectory. Pulling me in different directions. Deleuze and Guattari (2004) refer to the art of examining these lines as schizoanalysis:

What is your line of flight? What is your BwO, merged with that line? Are you cracking up? Are you going to crack up? Are you deterritorializing? Which lines are you severing, and which are you extending or resuming? Schizoanalysis does not pertain to elements or aggregates, nor to subjects, relations, or structures. It pertains only to *lineaments* running through groups as well as individuals. Schizoanalysis, as the analysis of desire, is *immediately practical and political*, whether it is a question of an individual, group, or society. For politics precedes being. Practice does not come after the emplacement of the terms and their relations, but actively participates in the drawing of the lines; it confronts the same dangers and the same variations as the emplacement does. Schizoanalysis is like the art of the new. (Deleuze and Guattari, 1986, p.203, emphasis added)

You have to practise ethics to become. Rather than thinking of myself as a contained subject, I instead attempt to create myself as a subjectless individuation constituted of multiple worldly lines of desire. Something new. The BwO (Body without Organs) is the practice of living and is created through desire actualising the world: 'It is not a notion or a concept but a practice, a set of practices. You never reach the Body without Organs, you can't reach it, you are forever attaining it, it is a limit.' (Deleuze and Guattari, 1986, p.149-150). For me BwO is the practice of always attaining a different body, the practice of unnormalising my body; to consider my body as not readily understood or understandable. To try to remember to think of my

body as not necessarily ending at my skin, or, indeed, necessarily made up of domesticated organs. Rather, the BwO is a practice of ethics, of conceiving of the self in different ways. Ethics is always a practice of moving concepts, deterritorializing their bodies and arriving somewhere new.

The "individual" has no prior or transcendental unity. The individual remains multiple. Once we see ourselves this way, we can begin to free ourselves from the fascist organizing principles that structure and define us and the free flow of our desires. Only then—not ahead of time, but only through an experimentation or active exploration— can we discover and test the limits of what we can truly do and become. (Lundy, 2014, n.p.)

In *Becoming Rocked* I touched on the question of what environmental education is supposed to orient itself to, if there is no essential environment to conserve. There are multiple reasons I wish to pursue this question. As I have moved my interest from outdoor activities as a means to promote personal growth in learners in my career, and begun to consider the manner in which we might educate to help deal with the various crises we face, the move beyond a strict nature/culture dichotomy has been attractive as a means to tackle the crises of mind, or perception (Bonnett, 2012; Clarke and Mcphie, 2014). The realisation that a single definition of ‘nature’, that is inclusive of culture (or vice versa), cannot be reached, there is no ideal nature (Mcphie and Clarke, in press). Instead we can play with the concepts that generally constitute our conversations about nature and culture. Whilst Jamie and I focus on nature elsewhere, diffracting it into eight variations (Mcphie and Clarke, in press), here I focus on me, as an event of subjectification that might, ostensibly, be ‘connected’ to nature. This move leaves me wondering about many aspects of my life, not the least of which is to ask, as an educator, how I should orient my theory-practice. What is ethical? What is the ethical imperative of a flat ontology? What ought I do? These are not problems to which I offer solutions (at least, not final, settled answers). They are ‘good’ problems. According to Massumi (2015, p.204), a ‘good’ problem ‘is one that wears its inconclusiveness like a badge of merit: a token of its problematic service of inviting and inciting’. They are endless problems for

life. The ethics, for me, is in pursuing them. Further, Deleuze identifies the search for good problems moving past the notion in philosophy that problems are given ready made, and that the philosophy entails finding their solutions. For instance, Wasser (2017, p.63) notes how ‘a view of problems as ready-made neutralises the activity of thought in problem-formation. Moreover, it masks the degree to which problems are determined within already- existing fields of relations.’. And so, these questions are located in a specific assemblage of a ‘me-doing’ event. The me-event is more than one envioning. It is a plurality of *environings*. A life in multiplicity. For instance, the me-writing, -deleting and -formatting these words. The event of becoming with students. The event of non-hylomorphically making the thesis. But also the event of reading (others thinking similar/different things) as well as thinking-learning-concerning. Careering. Driving. Fathering. Consuming. Capitalising. Thinking. Aliening. And...and...and...

I find it hard to separate the event of inquiry from the event of *a* life. Not my life. *A* life. How can I think these things with a different concept of the subject? A subject as haecceity. And it’s hard to separate the event of all these events from the event of being concerned. How do these modes of being not always crash into each other, or pop up within each other at unexpected moments? Why should we think these categories pre-exist each other? The assemblage is always undergoing an education, *a* life. When Colebrook (2017, p.649) draws on Sloterdijk (2013) to state that ‘philosophy, so some claim, has always been a pedagogy—not so much concerned with knowing but knowing well’ I can’t help but nod, and see *methodology* as both of these things also. Methodology picks up the fundamentals of the world, whatever we think they may be, and runs with them, either to reproduce the same differently – difference as repetition - or difference in thought. The effects of these productions are the process of education – keeping thinking the same, or making it different. Keeping it on the move. But methodology is always applied to matters of concern. Indeed, it dictates them. Rather like Eisner’s pedagogical notion of curriculum as deciding what is important by its inclusion or omission, methodology does the same thing by asking ‘where to next’, ‘this is important’, or ‘here’s the gap’; and stipulating the medium: ‘pay attention to this as you go’, ‘these are the rules’, ‘this is

what validity is', and 'only *this* is real'. It dictates the conversation. These matters of concern are always present. Is it possible that inquiry without methodology, without rules, will be more likely to produce different thinking, education as difference, as Taguchi & St. Pierre (2017) suggest? I end up writing without methodology, but rather a process of life dealing with problems in the assemblage of life in which I am imbricated. An attempt at practicing immanence. Perhaps in the attempt and in the practice is where ethics lies. Not as a destination, but as a process of inquiry. That is not to say *my* life receives an education that is ethical or environmental – I don't gain knowledge – as it is not really *my* life. It is a life. I use the term life in the Deleuzian sense:

Life is not a foundation, but better conceived of as *desire*. What something *is* is its self-formative and self-transformative relation to the forces it encounters. (Colebrook, 2017, p.653)

Life as desire is the event occurring now; the 'self-formative and self-transformative relation' of the me-thesis event. In this haecceity I experiment by breaking myself up as a human subject with ethical responsibility to try to map some of the multiple desires that constitute me, as a desiring event, as a haecceity. I look for the alien. Try to make the familiar alien. As practicing immanence in plural ways. As a becoming academic (does one ever arrive?); as someone who is coming to terms with the Anthropocene epoch, what Paul Kingsnorth (2017) might term a recovering environmentalist, doubting the impact of the 'environmental movement'; as a person in front of a computer; as a person I once was; as a person to come.

Before this attempt at talking to myself, let me discuss immanence and ethics some more.

\*\*

## Immanence and ethics

This haecceity is one story of an immanent ethics. It's not the 'right one'. It won't be sealed up and polished. It's not supposed to be seaworthy. It's a mess. Bits and pieces fall off of it and there are cracks everywhere. Stick your finger in and break it apart if you like. Or take it up, see what happens. And it's not a unitary story. It's already a multiplicity. It is only an attempt. It has to be:

. . . proclaiming "Long live the multiple" is not yet doing it, one must do the multiple. And neither is it enough to say, "Down with genres"; one must effectively write in such a way that there are no more "genres," etc. (Deleuze & Parnet, 1977, pp. 16-17, cited in Jackson, 2017, p.9)

How is an haecceitical self an ethical subject? There are layered voices so let's try to tease them apart. The voice of *Haecceity I: A middle* for instance. Is this one mode of 'me' as opposed to others? When I started this thesis, I started in a different voice, a different timbre that did different things. I talked back to it. Do you recall? I talked back to it in this voice, this slightly different voice that is as much thinking-feeling as thinking. That voice, the voice that talked back. That is closer to this voice. My voice has changed over the years since I wrote those initial passages. My modes of existence have shifted. There is less certainty. They continue to shift. To do battle. To compete as lines of desire. They event, and are evented, are eventing. In the event, the constitutional event, is where ethics lies:

To the extent that events are actualized in us, they wait for us and invite us in...[i]t is a question of attaining this will that the event creates in us; of becoming the quasi-cause of what is produced within us, the Operator; of producing surfaces and linings in which the event is reflected, finds itself again as incorporeal and manifests in us the neutral splendor which it possesses in itself in its impersonal and pre-individual nature, beyond the general and the particular, the collective and the private. It is a question of becoming a citizen of the world... Either ethics makes no sense at all, or this is what it means and has

nothing else to say: not to be unworthy of what happens to us.  
(Deleuze, 1990, p.148-149)

This is an ethics of response to the events we are of. It is a worldly pre-individual ethics that aims to increase the capacities of modes of existence. To increase a body's capacity to affect and be affected.

How does one determine a mode of existence? Smith (2012) notes that both Spinoza and Nietzsche take the body as their territory of the evaluation of modes of existence. Spinoza determines that we should consider bodies in terms of their capacities to affect and be affected. So, rather than categorising a body by the 'abstract notions of genus or species', i.e. homo sapiens, we instead consider what it is affected by and what leaves it unaffected, what it draws its power from and what diminishes its power (or destroys it), and considering how far it can go, or what a body can do (Smith, 2012). And so, Smith (2012, p.154) notes that the first feature of an immanent ethics is that it 'replaces the notion of a transcendent subject with immanent modes of existence that are determined by their degrees of power and relations of affectivity'. In the *The History of Sexuality* Michel Foucault demonstrates how the idea of the subject has changed throughout history, and also how the idea of the subject at any one instance is imbricated with the particular material and political economy of the time (Smith, 2013). Foucault called this milieu an apparatus (*dispositif*), Deleuze called it an assemblage (*agencement*). For Deleuze the ethical act is the identification, the evaluation, and the creation of modes of existence (Smith, 2012). To the first of these questions Deleuze and Guattari focus on the body and its capacity to affect and be affected, not as a subject, but as an assemblage. In this respect, in *Capitalism and Schizophrenia*, they identify four basic types of assemblage: so called 'primitive' societies; state apparatus; nomadic war machines; and, capitalism (Smith, 2012). None of these modes of existence exist in a 'pure form'; there is no reason why modes of existence (defined by their affects) cannot be established differently. Indeed, Deleuze and Guattari urge that we look at the 'micro' scale to identify the lines of modes of existence in concrete examples.

They describe how the pursuits they variously name ‘schizoanalysis, micropolitics, pragmatism, diagrammatics, rhizomatics, cartography - have no other object than the study of these lines...to study their dangers, to mark their mixtures as well as their distinctions’ (Deleuze and Guattari, 1983, pp.71-72, cited in Smith, 2012, p.156).

I wonder where the definition of modes of existence, as delineated by their capacity to affect and be affected, leaves the task? If I think of affect as a wave or flow it seems hard to draw a line that separates ‘parts’ of even various ‘me’s. The lines are a line in that they come from an ‘other’ that constitutes me. That runs through me and onward of me. In the constituting event is where I gain some purchase, some say in what happens. It is here I must try not to be ‘unworthy’ of the event. This ‘actor’ ‘delimits the original, disengages from it an abstract line, and keeps from the event only its contour and its splendor, becoming thereby the actor of one's own events - a counter-actualization’. (Deleuze, 1990, p.150). This notion of counter actualization is the site of resistance.

Deleuze’s concept of transcendental empiricism might be useful here, where the process described as *a life* is recognised by the differences between differences. In this respect it is difficult to talk of absolutes and the ‘identification’ of my modes of existence. The practice is therefore as much an identification as it is an act of creation and experimentation. Some examples come to mind, Kathleen Stewart (2007), for instance, describes herself in the third person, wrapped up in the everyday ‘ordinary affects’ of life in America. In this way her modes of existence seem to be a post-self experiment in creating and describing *a life* affectively. Different again is what seems to be Clarice Lispector’s (1973) experiment in subjectification, where her modes of existence are painted, mirage-like and shifting, from page to page. One moment she writes ‘a fantastical world surrounds me and is me’ (p.60) and the next she is ‘a fruit eaten away by a worm’ (p.60). I’m still not sure how one creates *and* identifies modes, all at once. Perhaps you just do it. What does seem to be the case is that these are not autoethnographic accounts that identify and describe one’s life. They are experiments of *a life*.

According to Daniel Smith (2012) the second or perhaps proper task of an immanent ethics will be the evaluation of the modes of existence. For Smith (2012), if modes of existence are defined by their capacity to affect and be affected ‘then they can be evaluated by the manner in which they come into possession of their power’ (p.156). To this end, according to Smith, what an ethics of immanence criticises is ‘anything that separates a mode of existence from its power of acting’ (p.157). Deleuze and Guattari, building on Spinoza and Nietzsche, enact a political and ethical project across their oeuvre to reveal modes of thinking and transcendent concepts that limit a body’s ability to affect, or to go to the limits of what it can do. They identify how transcendence gets in the way, how it captures modes of thought, how representation is based on a logic of reason that is a construction built upon a state philosophy prescribing the real, the nature of moral judgment, difference as negation and what it is possible to think. This state philosophy binds us to the majoritarian order. According to Smith:

When Spinoza and Nietzsche criticize transcendence, their interest is not merely theoretical or speculative (to expose its fictional or illusory status), but rather practical and ethical; *far from being our salvation transcendence expresses our slavery and impotence at its lowest point.* This is why Foucault would interpret [Deleuze and Guattari’s] *Anti-Oedipus* as a book of ethics, in so far as it attempted to diagnose the contemporary mechanisms of “micro-fascism” – in psychoanalysis and elsewhere – that cause us to desire the very things that dominate and exploit us, and that cause us to fight *for* our servitude as stubbornly as though it were our salvation. (Smith, 2012, p.157, emphasis in original)

Accordingly, in *Anti-Oedipus* and *A Thousand Plateaus*, Deleuze and Guattari set about describing the conditions under which a mode of existence can come into full possession of its power, in effect creating a new mode of existence.

Following this, it is an *active* form of affect, whereby bodies are capable of affecting *themselves*, that is required for the creation of new modes of existence. This seems the ethics of the diffractive practice I described earlier. With ‘autoaffection’ Deleuze combines the Stoics (with their notions of ethics as *self-transformation*); Spinoza

(and his definition of a mode by its capacity to be affected and particularly the means by which to render *active affections – where bodies’ affect themselves*); and Nietzsche (and his concept of the *will to power* as the invention of ‘new possibilities for life’, as a ‘transvaluation of the value positing element’ in which Nietzsche criticises the guilt of sin in the transcendent moral judgment of Christianity (Smith, 2012, p.157)). How does an affective body increase its affective capacities? According to Smith (2012, p.157) ‘the question of auto-affection is the object of some of Deleuze’s most difficult and penetrating passages’. This leaves me a little relieved that I find it so hard to follow, while at the same time being drawn forward by intrigue and hope in the possibilities it seems to suggest. The self, as defined affectively, affecting the self, as defined affectively, does seem complex. And yet the echoes of the other haecceities, of *Becoming Rocked*, *Environing Education*, and *The Diffractive Practitioners* also seem obvious to me. There is a refrain among and toward a better practice. Besides, why should it be simple when, according to Brian Massumi:

This is what process-oriented exploration does: complexify its conceptual web as it advances. It tries not to reduce. It tries not to encapsulate. It does not end in an overview. Rather, it works to become more and more adequate to the ongoing complexity of life. This means that it does not arrive at any final answers. It does not even seek solutions, It seeks to re-pose the problems life poses itself, always under transformation. The goal is to arrive at a transformational matrix of concepts apt to continue the open-ended voyage of thinking-feeling life’s processual qualities, foregrounding their proto-political dimensions and the paths by which it comes to full expression in politics (taking the world in the plural). (Massumi, 2015, p.xi)

I’ve already used this quote in the thesis. Is it against the rules to use the same quote again? Why should it be? It’s different here, and yet is also a comforting reminder. In *Becoming Rocked* I drew on Mark Halsey and Noel Gough to consider that nature is the *possible* masquerading as the *real*. I wonder here if the same can be said of me as the subject, as a process of subjectification, where my modes of existence can, in some way, reach into themselves to explore what is possible for the subject, as a

becoming different in a manner that attempts to go to the limits of what it can do. This isn't really about describing the 'what is' of my modes of existence, but creating the 'what if' of them (Gale, 2016).

What follows is an attempt to auto-affect. To create new subjectivities by creating/identifying haecceitical modes of existence and to ask 'what if'. I enact a conversation with haecceitical selves that follow their lines of desire. When I first started this attempt, I began to name the voices in the conversation. There was 'Theory-Dave' who brought various authors points of view to the discussion. There was 'Practitioner-Dave' who wanted to know how to apply what was being discussed. There was also 'Environmental-Dave', for instance. But as the conversation progressed, as I talked to 'myselfes', different voice, desires and agendas cropped up within the voices. I couldn't hold one position in the face of the competing positions that wanted to come through, to crop up. The titles I had given the voices no longer 'represented' them. They were their own things in their becoming, not bound by a signifier that has been predetermined for them. So, I have removed these labels. Instead I present the flow practicing autoaffect. This will involve a confession.

\*  
\*\*

### **Some alien lines**

The view from the window was of the university playing fields. Green grass under blue skies. I remember this. Sitting at my desk in Chichester, I realised that I probably knew that I had failed my PhD by about the halfway point. It was coming up to summer 2009, my final year of study. As I packed the contents of my desk, looking back over what had happened over the previous three years, I wondered at my inability to either complete the thesis or to quit earlier, when I knew my heart wasn't in it. The last year had been a battle of guilt and hope between these poles.

These were not joyous days and I won't dwell on the darkness I lived. Suffice to say that this memory, those memories of Chichester, of falling behind in my work, of friends leaving town, of my family being far away, of not possessing the faculties to get *it*, this, done, of judgment all around - real or imagined. Of the struggle with my then supervisors. The many, many memories. They hold me bodily; they affect me now. They may even be one of the most significant drivers in me arriving here, of this particular conceptual and physical space. That is an affective force. I can't pin it down as the drive to attain a PhD. It is not as simple as a redemption question. There is no such simple explanation. I am here for many reasons, some serendipitous, some pushed by the flows the subject 'Dave' rides and plays upon. And yet, *this* me is with me. It hovers around and comes out of me.

\*  
\*\*

A bountiful line. A rich tapestry is frayed. Pull a thread. I stutter. A stutter. and...an overspill. The line is tripped, beyond yet of. I see it coming, take it and hold it down, to see it off. To see it off. The line event that makes.

\*  
\*\*

I'm sat in front of a computer right now. I can still feel the buzz of my late morning coffee. I'm looking forward to getting this piece of writing finished so I can go for lunch. I'm trying to balance the agendas of the other lines, which is itself a line. Maybe I'm day-to-day Dave. I remember that time as well. Our thesis, what there was of it, was about ethics and outdoor education. Sad times indeed! But, remember, you are creating modes here, not simply identifying them. You sound, if you don't mind me saying, like a limit on what might happen. You claim to not be an attempt at redemption, but there is a morality lurking here, a transcendent aim which inflects

these memories with guilt. Get past it. Break it open. Destroy it. ‘Which lines are you severing, and which are you extending or resuming?’ (Deleuze and Guattari, 1986, p.203). Indeed, which? Perhaps this is an imperative. There is not one way to be a ‘real academic’. A PhD, as a noun, is a transcendent attainment. It blocks you up and gets in the way if you think of it as anything other than a process whose title can be left behind. A PhD is not a quiddital category. No experience of doing a PhD is the same. Many people will need to go to a different degree of effort depending on how they match up with their subject area. Besides, people don’t get PhDs, assemblages do, it takes the right events to conspire together. The right place, the right topic, the right supervisors, even the right weather. I’ve quoted Haraway (2015) before, but she’s right: ‘[n]o species, not even our own arrogant one pretending to be good individuals in so-called modern Western scripts, acts alone; assemblages of organic species and of abiotic actors make history, the evolutionary kind and the other kinds too’ (p.159).

I remember telling John, one of my supervisors here at Edinburgh, that I could not complete a traditional qualitative inquiry, I don’t have it in me to write that way. I know! I tried! Doing a PhD this way, thanks to the world that new reading has opened up to me, is easier. Not easy. Just easier, for me. It is here, in this mode that I find a joy. Tamsin Lorraine’s (2011) notes that an immanent ethics means that we realise we are not masters of the world, but that we can ‘attempt to be as skillful as we can be in working with the forces moving through and beyond us in ways that move us or increase our joyful power.’ (p.165). This is the counter-actualisation of the actor that Deleuze discusses in *Logic of Sense*, and I see this as meaning that our practices of living require practice; I think of this thesis as an extended practice in ethics.

\*\*

The glass of water comes to lips.  
A lip-glass-water-suction.  
The brittleness of glass.  
Where is the choice?  
I didn't make it?  
*It* didn't happen.  
Somewhere between an unconstituted two.  
A line of desire that makes and is made.  
A glow, fire like, picks up the sounds of my son.  
This glow grows. Is the growing I make and follow. My shoulders ease.



So, these are some (non-static, perhaps arbitrary, one telling, selecting them is a cut, they do certain things) of the modes of my existence. But they aren't in 'me', rather they constitute me and extend virtually before and after my constitution. I become something of a dissipative structure. A propagation of lines of desire. I can't pin down the subject as 'me' in this flow. As Massumi (1986, p.xii) points out: 'What is the subject of the brick? The arm that throws it? The body connected to the arm? The brain encased in the body? The situation that brought brain and body to such a juncture? All and none of the above'. It is possible to pin down the subject at each point here, and yet each of these pinnings would be one telling of multiple possible stories. Further, these lines of desire can't be judged against a moral principle to care for the environment. That impulse is already there within a vague amorphous Social-Environmentalist-Dave who raises his head at times in relation to certain environmentally-culturally established 'environmental issues' that he finds affective, which carries embodied assumptions about the nature of the world, as if I am a thin sheet of metal hammered against the anvil of nature-culture. No doubt this 'Dave' creeps within the other drives in different forms – these divisions are arbitrary of

course. That part of me can't be cut out or reinserted depending on a moral code I choose to follow. It has come from somewhere and it is going somewhere. It is materially present within my modes of being already. The question is about how far I can go with it. How far my capacities allow me to become with it. 'This is the sense in which becoming is the process of desire' (Deleuze and Guattari, 1986, p.272). But how do I assess modes of existence against each other, and themselves?

\*  
\*\*

He's surprised with joy. Or joy has surprised him. It is hard to tell which came first, if either needed to. Eyes so wide. How can a mouth be held in such a shape? Round with wonder, peaked at the edges, in happiness. Pure affect. He knows no

*l.*

\*  
\*\*

Maybe I can help. Daniel Smith (2011) notes for instance that:

Modes are no longer "judged" in terms of their degree of proximity to or distance from an external principle, but are "evaluated" in terms of the manner by which they "occupy" their existence: the intensity of their power, their "tenor" of life. It is always a question of knowing whether a mode of existence— however great or small it may be—is capable of deploying its capacities, of increasing its power of acting to the point where it can be said to go to the limit of what it "can do." (Smith, 2011, p.67)

What can my body do? This point raises questions about not just assessing qualitative modes of existence, but also of pushing the lines of desire, the drives of modes of existence that have been qualitatively assessed, as:

A Spinozan–Deleuzian notion of affect is inherently orientated toward a future of becoming-other. In a world in which individuality is defined according to the capacities afforded by a situation, “you do not know beforehand what a body or a mind can do” (Deleuze, 1988, page 125). A conventional conception of agency falls short in light of this statement, as it fails to grasp that an action is always an uncertain experiment with unknown capacities. (Roberts, 2012, p.2516).

This becoming other is also becoming yourself. Difference in itself. Choice, or agency, remains an important part of ethical practice, but it is not the type of choice that we would attribute to a subject. Instead agency is distributed across human and nonhuman assemblages, or at least is not strongly situated only in a human body (Bennett, 2010). Any judgement is thus inflected with a host of desires from elsewhere.

\*  
\*\*

He fashions my choices. He lives here. On the screen. Inflection. Is this right? A line runs, it picks up speed and swells. Its origins are dispersed and untraceable, though a tuberous growth of capitalism rolls in its core.

Another line. This one slight, narrow. Yet it is sharp. It comes at an angle, from underneath. It sings. It resonates. It stutters. They meet in the event. Inflection occurs.

\*  
\*\*

Smith (2012) also touches on this problem, asking: ‘How can one evaluate modes of existence using criteria that are immanent to the mode of itself without thereby

abandoning any basis for comparative evaluation?’. This is the heart of it. This is the question. It’s the ‘good’ problem (Massumi, 2015). How does an immanent ethics judge itself immanently? How can an immanent principle be followed and not attain the transcendent status that bring good and evil back? Smith goes on:

It is this problem that lies at the heart of an ethics of immanence, and Deleuze’s response to it is a rigorous one. A mode of existence can be evaluated, apart from transcendental or universal values, by the purely immanent criteria of its *power* or capacity (*puissance*): that is, by the manner in which it actively deploys its power by going to the limit of what it can do (or on the contrary, by the manner in which it is cut off from its power to act and is reduced to powerlessness). (p.147-148)

It is a qualitative judgement, not a binary one. It is a vector. Ethics is a movement to attain what you *can* do.

\*\*

Be still, in the event. No. Become still in your becoming. Close your eyes. Play. Play at the borders of thought. Take the things. The hums. The pressures. The temperatures. The scents. Draw them through each other and constitute new borders. Hum-pressure-temperature-scent. Attempt. Always attempt.

\*\*

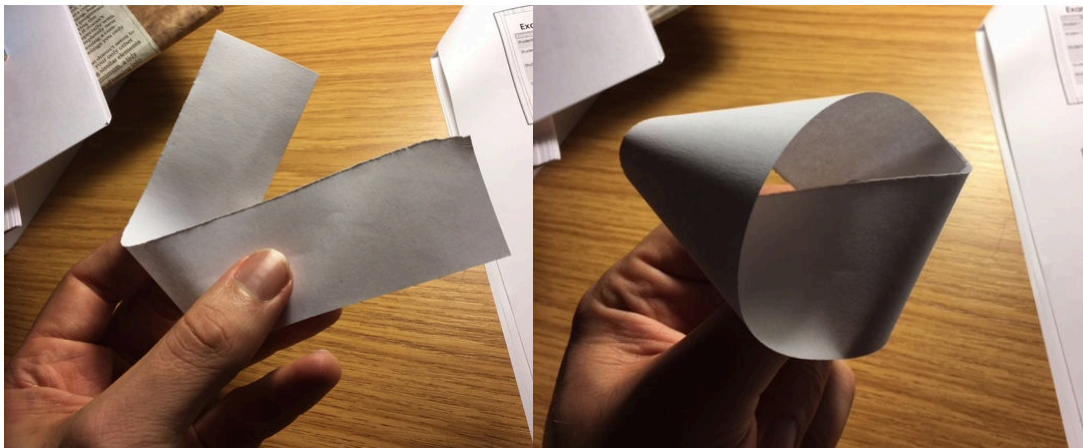
And yet I am still left wondering about the very idea that an ethics can be written in this way, as an instruction which can be followed. Would this not make it transcendent again? In an early draft of this haecceity I initially thought that establishing what an immanent ethics meant for environmental ethics would give me direction for developing pedagogy, and myself. This is exactly the kind of grand

scale thinking I want to now avoid. I think I see now that this idea depended on an immanent ethics prescribing something for me to follow (which would have then been transcendent, ultimately limiting what it is possible to do, getting in the way of creating new values). Immanent ethics seems to be much more about the present and my going as far as I can in my capacities, as a situated event. Here is the Möbius strip of immanent ethics. I stop and think about this for a moment and follow my thoughts into the same spiral again:

-immanence–transcendence–immanence–transcendence–immanence–transcendence-

When I am of immanence I see that any principle I abide by must be *of* the world itself. It has come from somewhere and is going somewhere and is always changing. Or rather, that there are principles manifesting of the world which are not objectively morally ‘right’ but which it is strongly my desire to adhere to. Anti-fracking, let’s say, is becoming of my body. Striations created by the flux of geology-people-planet-history. For instance, looking after the environment...and there I go. I take a step into the dualism. Not that dualisms are bad per se, but that I want to explore beyond the constantly rehearsed ones here, or at least make different dualisms, even if by accident, to see what I might do differently. Rearrange the furniture. So, I bring my thoughts back anew. What about strong transcendent ethics? The ten commandments or the categorical imperative? The golden rule or rule utilitarianism? Aren’t these *of* the world also, despite their claims or aspirations to the contrary? Isn’t transcendence always grounded on a smooth space? Should I (not that it’s tempting) choose to stick to these moral laws, is that not also immanent and occurring *of* the world? By ‘buying into’ immanence this seems to become the case. It becomes the field or ground from which everything is drawn, no matter its claim to the contrary. Transcendent ethics is actually always immanent. It is not a separate category that is the negation of immanent ethics. Immanent ethics is difference in itself (this is like the problem with inquiry, positivist inquiry is located on an immanent plane, even if it doesn’t realise it). If I follow the ten commandments I will always pick up a bible, glance at the page and read. This is a material process of the world. I will then follow the rule in a worldly manner, each instance of action novel

and non-repeatable. The rules are not cookie-cutter replications. They are different each time they are read and enacted. And yet, something binds the repetition. There is not a radical departure of the events of one instance of ‘you shall have no Gods before me’ to the next. But the process between them is one of becoming. Or rather. The line along which the events occur are related. Here’s the intractable Möbius strip of immanent and transcendent ethics. The figuration of the Möbius strip is useful for thinking about dualisms. Named after August Ferdinand Möbius, the ‘strip’ is an object which has the property of only having one surface and one edge. Interestingly when I look at any one point of the strip, I can see that it has an opposite side, and yet when I track my eye, or a pencil, along the face of the strip, I see it is only one side.



To make a Möbius strip, take a strip of paper, rotate one end of it  $180^\circ$  and join it to the other end of the strip.

Lacan proposed the Möbius strip as an alternative to various dualisms in psychoanalysis, including love/hate, inside/outside and truth/appearance. Palombi (2009, p.356) draws on Lacan’s use of the Möbius strip to suggest that there ‘is no identity but only a process of identification that accompanies us throughout our existence, obliging us to reflect and to redefine, in every single point, that which belongs to us and that which is extraneous’. The Möbius strip as a path of life is a constant questioning of where I begin and end. Of where the alien other that is me

resides. The Möbius strip is also put to work by Elizabeth Grosz to think beyond the mind/body dualism. She draws on Nietzsche, Foucault and Deleuze and Guattari to ‘undermine the pretensions of consciousness to know itself, to exert a guiding direction, to be the site of rationality’ (Grosz, 1994, p.xiii). It’s not surprising to find someone who has thought of the Möbius strip as a useful figuration for reflective practice in education (Kidd, 2015). The Möbius strip, as well as the concept of affect, works well to help me think about environmental ethics as an eventing process without a subject. Not as a saviour to replace all, but as an experiment to see what it does. As a life practicing immanence.



I make and follow the lines.  
They catch the inside-outside of me.  
That attempt.  
That first attempt at a PhD.  
It weighs in me. Heavy and heavy.  
Get free of it. Kill it off.  
That last Christmas. I never wanted to end.  
To go back to University.  
To the campus, hiding.  
A pile of unfinished marking.  
Nocturnalism.

Now, a weight from the past and a weight from the future meet in event.

Desertification stretches forward.  
Don’t hide from the impossibility. ‘everything will be ok’.

The world is changing.  
'So what? Worlds change.'  
Not like this.  
Not like this.



Why am I stuck on this? On ethics? The transcendent, single I of 'Dave' may limit my capacity to affect and be affected, but it is ethics, ethics itself that debilitates me. The constant desire to attain the way to do it. I know ethics is not 'out there', and yet I keep trying to find it. The *ought* of ethics is stuck in me. My conception of ethics stops me from going to the limit of what I can do. I go around and around on ethics.



2018. It's the hottest day in May for some time. I have been at a reading group this morning. We are reading *A Thousand Plateaus*, slowly, over months. We are doing other things as well. Exploring what it *is* we are doing. The thisness of it. We are writing to help explore this. I find these meetings buoy my feelings about work. I haven't written about these reading groups in this thesis, yet. But now I feel I need to. Just a little. Just to get it out. This doesn't feel like it's for them, though I know Jonathan, at least, will read this. Nonetheless, I want to write this.

Today I come away affected in a different way. I think I upset somebody. They said as much. I'm not sure what happened. I thought I was in a space that perhaps I wasn't. Or perhaps others weren't. I've been walking. It's the hottest day in May for some time. I think about how I handled it. I came to read what I'd

written there, after our reading, after they'd said it, and I stopped for a moment. The most unplaceable of sensations. I'd missed a step. Fallen through something and changed. Everything changed.

\*  
\*\*

These practices, these experiments will always be of a minor type. Affect is the theory, or practice, of examining the manner in which bodies are affected and affect. Agency is present throughout the process of affect in the sense that bodies are called to act by their material capacities and the virtual real. The (post)human, as a particular propagation of materiality, is a body with its own affective capacities among other bodies, as material propagations, with their own affective capacities. In this sense affect is nondeterministic as 'rather than avoiding human intentionality altogether, the challenge is to situate it within a wider ontology of nonhuman forces' (Roberts, 2012, p.2520). According to Brian Massumi (2015, p.3) the use of the term 'affect' allows:

a way of talking about that margin of manoeuvrability, the 'where we might be able to go and what we might be able to do' in every present situation. I guess 'affect' is the word I use for 'hope'. One of the reasons it's such an important concept for me is because it explains why focusing on the next experimental step rather than the big utopian picture isn't really settling for less. It's not exactly going for more, either. It's more like being right where you are – more intensely.

Bowden (2015) depicts the Deleuzian approach to agency by distinguishing between voluntaristic and expressive notions of agency:

The key idea behind the expressive conception of agency is that actions are in some sense primary in relation to the intentions that animate them. This is what sets the expressive conception apart from 'voluntaristic' approaches to agency, where intentions are thought of as primary in relation to actions.

Bowden (2015) explains that, from a voluntarist perspective, an action is split into two separate elements: an intention, followed by a physical movement. Further from the voluntarist perspective the agent in an action has a ‘privileged and unrevisable access to this prior and causally efficacious intention, which is accordingly more or less fully specified in the agent’s mind’ (2015, p.75). This is agency as we commonly understand it, and as it is most often conceived in relation to normative ethical decision making. It’s also the way I generally understand my actions in the world. For instance it’s what I think happens when ‘I decide’ to write this sentence. For Bowden (2015) in an expressivist understanding of agency an agent’s

intention is not incorrigibly known by the agent, and is not artificially separable from the action itself, such as this unfolds, and produces effects, in shared or public space. In other words, for an expressivist, to say that actions are primary with respect to intentions is to say that actions ‘express’ (or ‘manifest’, or ‘communicate’) their agent’s intentions, and at two levels. Firstly, intentions are said to be ontologically inseparable from the unfolding of the actions that manifest them in the actual world. Secondly, the action from which an intention is inseparable is non-isolatable from a public ‘expressive medium’ in which the meaning and purpose of the action can be articulated and clarified. (Bowden, 2015, p.75)

In this regard, Bowden perceives a distinction between agents and patients in Deleuze’s writing. In my reading, Bowden seems to agree with, for instance, Jane Bennett, that we cannot locate an intentionality solely within the human. However, he then seeks to place an intentionality elsewhere within a receptive social milieu which interprets an actor’s intentionality. I agree that this interpretation takes place (as I have already stated, that *I* decided to write this is what I commonly think, and what those who read it will commonly interpret), but this does not mean that intentionality needs to occur, in a concrete sense, be ontologically inseparable from the action, and then be perceived by a social milieu for where it is ‘articulated and clarified’.

\*\*

It's the hottest day in May for some time. Edinburgh buzzes. Not like the summer. Not so busy. But there is life everywhere, in this heat. The buildings direct my path, I avoid their shadows and soak the sun up. The bus? Not today. I'll walk home. At least, I've found myself walking.

Lundy (2014) thinks that life is best lived as a practice of strolling. He says this is an ethical practice:

Deleuze thinks the best sort of life is a light and active one that is lived as an exploration of our own bodies, our own desires. In other words, as I have said, an ethical life is very much like a stroll through life. It is about affirming becoming, multiplicity, and chance. It is about expanding horizons, through new possibilities and new connections. It is about finding out what is possible for us, what our minds/bodies can do. It is about being bold in the face of chance and the arbitrary and irregular flows of life. Instead of forcing ourselves into a particular mold that will shape our life to resemble some prescribed model of "the good life" we need to recognize that this model is a fantasy and that we must rupture the mold in order to find the truly good life that lies beyond it. (Lundy, 2014, n.p.)

As I stroll I think of John Lundy's paper. I think of the virtual real before me, the opportunities it affords. This seems to jar with ethical prescriptions to: recycle, drive less, eat well. To fit into an 'environmentalist' mold, a 'good citizen'. That is, of course, unless I think of these things as enabling my capacities, rather than closing down my choices. I stop at traffic lights. Wait for the green man. 'My choices', the haecceitical self's preferences are dispersed beyond, and lay scattered in an assemblage.

\*  
\*\*

Now, be careful not to critique Bowden (2015) in a negative sense, remember, you're supposed to be being creative! Think instead about what his text does. It's made you write what you've written for instance, that and the desire line that you are springing from. But it has further implications also.

\*\*

I missed a step. Is it getting hotter, this May day? I've been speaking to Gemma and now, as I hang up, I feel the heat worry me. It troubles me. I missed a step, and I am airborne. The liminal space of wake dreaming, and the sudden fall. It is the constant shadow. The question that lies behind everything, hanging in the air – quite literally.

I look down. My legs sway below me. The bright ground drops beneath me as I rise. The buildings fight the brightness with their grey; could they be cleaned with a pressure washer? How would they look? 20 foot up, I see the road, a thinning line below.

It is in the line of environmental care that the struggle takes place. It meets the line of romantic critique. And they dance in affective encounter.

\*\*

Yes, I struggle with that too, the generous critique. Anyway, when I think of my agency I must think of what I'm capable of doing, I don't have a radical freedom to be other than I am. The virtual is real, just not yet actual. I am a multiplicity of competing desires. There's you, for instance, a type of 'post-qualitative-Dave'. You seem to really want to understand this way of thinking. And there are others, some of which win out over others at different times, the educator, the father, the husband,

the loner, the friend, none of which are strictly delineated, each of which with its own genealogy which is also a geology in that it is laid down as strata through a complex process of becoming. Through me-in-the-human-natural-cultural-milieu the world is stratified into various understandings and desires which are spatially expressed. It seems it is in the interpretation of these desires that Bowden sees a socially produced post-hoc 'expressive' intentionality. For me, however, intentionality seems too strong a term. I instead think of myself as the result of flailing and anticipating. Attempting and wishing. Desiring. Realising what just happened. Not really intending. Hoping.

\*  
\*\*

He's there when I get home, of course. 'Welcome to the end of being alone inside your mind', as Brandi Carlisle puts it. But I, we, were never alone, nor inside our minds. Our bodies don't even end at our skin. What is skin but stuff of the world? His was of another body; Gemma's. Why should a gap of air make a difference? We're already full of air. This otherness lives in me, is growing of me. It belongs and yet is totally other.

\*  
\*\*

Deleuze and Guattari (2004) discuss the process by which stratification of desire occurs as consisting of both content and expression. They call this a double articulation. I understand content as the realm of the selective processes that lay down the strata and expression as the manner in which the formed content is presented. Deleuze and Guattari suggest this double articulation of content and expression is present at all levels of existence, be it culturally, organically or physico-chemically, and indeed that these broad strata interpenetrate and fold into

each other in processes of becoming organised by abstract machines, meaning that no level of strata is superior to any other. Deleuze and Guattari discuss these ideas in the third Plateau, *10,000 B.C.: The Geology of Morals (Who Does The Earth Think It Is?)*. This seems a play on the title of Friedrich Nietzsche's book *On the Genealogy of Morality*. *On the Genealogy of Morality* is an historical analysis of the development of moral values as an idea. Whilst Deleuze and Guattari do not mention the book, or Nietzsche, in their third Plateau, it seems as if theirs is an explanation of the process by which all things come about in physically processual ways, including, and this seems inferred and not stated plainly, human morality. So it seems to me that whereas Deleuze and Guattari attempt to demonstrate the *content* of becoming, Nietzsche attempts to demonstrate its various *expressions* in the form of the becoming (genealogy) of modern western moral values. That is, where Nietzsche explains what has happened in the history of modern western reasoning about moral values, Deleuze and Guattari offer an explanation of the process by which this came about, applicable not only to moral values, but to the laying down of islands and river beds and the morphogenesis of snouts to mouths, and then language. The link to the concept of 'anthropocene', where human actions/intentions can be understood as geological, seems resonant. Nonetheless both approaches demonstrate how the moral is something that exists apart from the idea of me as a morally responsible actor. I am suffused within the flow that creates me, and so, in this regard at least, my agency is dissipated. *Of the world*. Interestingly I would place the various strains of my multiplicitous self within this distribution, as my various desires tug and pull at each other.

\*  
\*\*

How many 'me's have I been today?

Whose interests have I manifested?

Perhaps 2, 3, 4? More?

Perhaps this is the wrong way to go about this.

'Me's are amorphous. A multiplicity. Endlessly shimmering selves whose boundaries cannot be mapped.

A raw edge fades.

A self lunges forward, only to be subsumed by another, and another.  
Hold one steady, if you can. Examine it. Does it sing? Do you want to follow it?

\*  
\*\*

This seems more productive. You're saying that whilst your agency may be distributed to, for instance, your mobile phone as an object<sup>34</sup>, as it decides which news notifications to update you with, or leaving you behind entirely, we might talk of the agency occurring in any thing that gains its power by holding your attention. You're talking about your agency being split around competing lines of desire? Can you give an example?

\*  
\*\*

Maybe I can help here. Let's start with suffering. Making my way to and from work in Edinburgh I pass underneath a railway bridge. This is a dark and smelly place. It is wet from the rainwater that seeps through from the track above. And it is busy with traffic which either seems to be queueing from the nearby traffic lights or speeding well above the 20 mile an hour limit. It is also a place that is alive with pigeons. I like pigeons as examples of species that confuse a strict urban/natural divide. I also like the way they demonstrate the *processness* of their ongoing coming into being of places. Their intra-actions of mating, dancing, bin-scrap collecting, and defecating. I can also see beauty in them, their blackboard-chalk rubbed bodies which sparkle

---

<sup>34</sup> Andy Clark, among others, has done significant work in this area (e.g. Clark, 2006).

around the fatness of the males' necks in iridescent greens and purples, as they bob to attract females. Or bully them. It's hard to tell what's going on. But I also find pigeons frustrating. When I walk through crowded streets with pigeons on the ground they always seem to evade people's feet in the most unreasonable manner possible, finding themselves cornered and then needing to burst into flight from under me and into my face. I don't like this. And yet, at the same time, I do. Under this bridge, however, it is the echoing coos from above that betray what threatens to fall on me as

I pass underneath and makes me pull my collar close and dislike pigeons again. A few weeks ago, as I reached the bridge on my walk home from the office, I stopped at the sound of erratic flapping. In the middle of the road was a pigeon, wings at odd angles, desperately trying to get into the air. A car passes, and then another, barely missing the bird. It's desperate. What happens to me now? I feel its fear. Or something comes up within me in such a way when I see the desperate bird, and if I had to label it I might call it fear, but this doesn't seem to do it, the process, justice. Scratch that. Something comes at my body from the desperate bird in such a way as to change me. Scratch that. My body reacts to the sights of the desperate bird.

Scratch that. Body reacts to sights of. Scratch that. Body-changes *is* sight of desperate-bird. Scratch that. Body-desperate-bird.

Can I reach it? The road's busy, and I'm behind a barrier. Is it making its way to the side? No. What does it say about me if I don't do something? (I promise I thought this). Can I use this in my thesis? (I thought this too). There's a space, maybe I can reach it, could I stop a car? What would I do with a broken pigeon? RSPB. There's a thud and some feathers float in the air. An envioning education.

If I think of the experience of having these thoughts arise in me, they seem to come all at once and yet separately, they arise from different directions, with different hopes attached to them, or perhaps latching on to them. I distinctly recall wondering if this experience and my inaction is representative of the way I respond to environmental degradation occurring around me more generally. And then thinking that, 'well the pigeon is just an articulation of the world here, and now the world's just being articulated differently'. This is a manifestation of the apolitical critique of

flat ecological ethics. However, this last thought that occurred to me is, I feel, outweighed by the affective charge that constituted me, and the tone of the event of wanting to help the bird and ease its suffering is one that I prefer, as a mode of existence. The preference is moralistic and empathetic, it is a learned, naturalcultural, but is also a mode of existence that extends my joyful capacity. I feel somewhat lost again. Perhaps a flat ecology doesn't work ethically on a plane of reason. Perhaps trying to explain it is pointless. Perhaps it requires a plane of affect.

So, did one of these modes of existence outweigh the other, and trump it so to speak? Was the agency of one of the lines of desire that gave rise to my thoughts successful, whilst another not? I don't think so, instead there is the tacking of the sail boat, or the paddling of the canoe. Each thought-feeling pushed against the other, was assessed by another, and gave rise to the event of cars passing, pigeons flying, or not, and me standing there doing nothing, and then writing this. If I think of the lines of desire that constitute me as kin to the lines that force the car to move, the pigeon to duck under my feet, or fly up into the air, I can think of a world full of moving desires. Here, agency itself does not exist solely in the human actor but is rather spread in the things with which we are imbricated. Note: I don't turn to suffering as a moral base from which to build. I did not rationalise the pigeon's suffering and imagine myself in its position. Rather, suffering constituted me through fear, pain, and panic, as an affective force. But these feelings don't exist in me individually, they are part of the collective social force of humaning which my body undergoes. They are naturalcultural. I am not in relation to a pigeon, which is *out there* somewhere, I am wrapped up with the thisness which is a me-pigeon process<sup>35</sup>. The phrase 'I am a pigeon' means different things depending on the image of thought being involved.

\*  
\*\*

---

<sup>35</sup> For more about pigeons as *processes*, rather than *animals*, see Clarke and Mcphie (2014).

Ok, but this doesn't seem like a straightforward explanation. Something feels opaque here. How can non-organic bodies be affected?



Well, the non-organic has a form of agency. Jane Bennet surmises the notion of material agency in this way:

the agency of assemblages of which I speak is not the strong kind of agency traditionally attributed to humans or God. My contention, rather, is that if one looks closely enough, the productive impetus of change is always a congregation. As my friend Ben Corson helped me to see, not only is human agency always already distributed to 'our' tools, microbes, minerals and sounds. It only emerges as agentic via its distribution into the 'foreign' materialities we are all too eager to figure as mere objects. (Bennett, in Khan, 2009, p.93).

So, whilst humans can be responsible, they are never solely responsible. Again, Donna Haraway notes that all things make history, not just humans. The railing and the passing cars are not impassive objects that stop me, the subject, from heading out to the pigeon. They are lines of desire enacted by/of the world. That is not to say they are right or moral, but they are immanent. Jane Bennet's notion of agency goes further still in the dissipation of the moral agent. And yet her intention is clearly political:

Would politics become less centred around the punitive project of finding individual human agents responsible for the public problems of, say, an electricity blackout or an epidemic of obesity, and more concerned with identifying how the complex human–nonhuman assemblage that's churning out the negative effect holds itself together – how it endures or feeds itself? Until we do that, political attempts to remedy the problem are likely to be ineffective. (Bennett, in Khan, 2009, p. 92)

To this end, I should blame myself (what there is of *it*) less than I do (or the Environmentally-concerned-Dave should blame himself less than he does), as the responsibility for suffering is distributed among material events (including of him). In short, the identification of an ‘himself’ as an a priori category is an ontological mistake. What is being contested with the idea of affect:

are the peculiarities inherited through the notion of ‘man’ that came into consciousness at the time of the Renaissance. This is the idea of man, heightened by Kant into a self-conscious, autonomous, individuated being – who, in the capacity for rationality was elevated above nature, and with it other species, by his [sic] accounting to the self for the self. (Latimer and Miele, 2015, p.8)

The medium by which events of desire come together to create possibilities is that of *affect*. Affect is used here not as ‘emotion’, but rather in the Spinozan sense of the capacity to affect and be affected. This is because, as Deleuze recognised, Spinoza rejects the mind-body dualism and ‘the assumption that the mind can control the passionate body’ (Thanem and Wallenberg, 2015, p.240). The ontology of affect is intimately associated with its epistemology and its ethics. With affect, there are no positive or negative connotations, no good or evil, as to place such judgements upon it would be to moralise from the outside:

Spinoza makes a distinction between morality and an ethics. To move in an ethical direction...is not to attach positive or negative values to actions based on a characterization of classification of them according to a pre-set system of judgment. It means assessing what kind of potential they tap into and express. Whether a person is going to joke or get angry when they are in a tight spot, that uncertainty produces an affective change in the situation. That affective loading and how it plays out is an ethical act, because it affects where people might go or what they might do as a result. It has consequences. (Massumi, 2015, p.11)

This ethics is epistemological because it affects the nature of critique as well as the location of knowledge, which cannot be in the mind alone; knowledge becomes real, ontological. And so, epistemology is rendered worldly, affective, and political, in effect becoming an ethico-onto-epistemological matter (Barad, 2007). With affect it is no longer possible to pin down a position, to then scrutinise its identity as tenable or not. To do so 'is an almost sadistic enterprise that separates something out, attributes set characteristics to it, then applies a final judgement to it – objectifies it, in a moralizing kind of way' (Massumi, 2015, p.14-15). Rather Massumi (2015) suggests a need for 'other kinds of practices that might not have so much to do with mastery and judgement as with affective connection and abductive participation'. In academic work:

...it requires a willingness to take risks, to make mistakes and even to come across as silly. Critique is not amenable to that. And it suffers as a consequence. A critical perspective that tries to come to a definitive judgement on something is always in some way a failure, because it is happening as a removed from the process it's judging. Something could have happened in the intervening time, or something-barely perceptible might have been happening away from the centre of critical focus. (Massumi, 2015, p.15)

This is an ethical movement of affect, because one can't tell what the outcome is going to be. 'So you have to take care, because an intervention that is too violent can create rebound effects that are unpredictable to such a degree that it can lead to things falling apart rather than reconfiguring' (Massumi, 2015, p.43). Ethics must therefore be carried out in a minor key, or using a minor voice (or in this case minor voices!). Practice must be micropolitical. Roberts (2012) suggests two main implications of affect. Firstly that 'we can no longer grant the human subject a monopoly over creative intervention in the world' and secondly that 'new materialists raise fundamental questions regarding modes of human intervention, such that we can no longer grant the mind a monopoly over the body' (Roberts, 2012, p.2518). Thanem and Wallberg state that:

Beyond challenging the mind–body dualism, this highlights the dynamic capacities of the body. This is a question of the body’s power to affect and be affected by other bodies, independently of any will power of the mind. Moreover, it involves a complex reality of affective relations between bodies who all seek the good, powerful and joyful life by enhancing their capacity to affect and be affected by others. (2015, p.241)

So here I am exploring the lines of desire I have identified and some of the manners in which my capacities along these lines are affective and affecting both between themselves and other bodies.



What is the affective double move? Floating above Edinburgh. 400 feet up. I feel the slightest of breezes on this, one of the warmest days on record for May. I reach out and take the city by its corners. I find its corners and lift it up. Pull it up close to me. I feel David Hume Tower first. It touches my chest, gently folding against me. The cars do not slide or fall as I wrap myself in the city. They seem stuck in their places, as do the people; magnetised and yet going about their lives. Salisbury Crags become my collar, as I pull Edinburgh Castle, atop the Drumlin hood, over my head. The cloak city is warm and buzzing. It hums a warm compost of life. I sit in the cloak city and place my hand gently inside the pocket.

My fingers touch a shape: it is Gemma and I arriving in 2015, looking for somewhere to live. My fingers trace a line and find my first supervisory meeting; they feel my hopes and they pull away. My palm brushes tiny sculptures of our life, practiced; of writing, Gemma working, trials, and then our son.



This makes sense to me, but I am left with a wonder about where the value is placed in a quote like this. The problem is one I return to throughout this haecceity; it is a ‘good’ question (Massumi, 2015): Who dictates the preferred micro/macro-politics, even if I try to operate at the micropolitical level? What would be different about ‘environmental thinking’ here, from more conservative or essentialist understandings?

\*  
\*\*

The city cloak feels hotter now on this May day. I worry for the people. I reach for the collar, but there is no button or zip. I look down to my feet to try to lift the cloak, but I see it does not end. The city cloak turns to fields and the rising Pentlands ahead of me, the hot sun unrelenting. I turn to lift the city cloak from behind, but there is the Firth of Forth, stretching out the Scottish Coast and the North Sea before me. I try to walk, but I don’t move. I place my hand in my pocket.

\*  
\*\*

Here is one answer: I think, perhaps, that plucking this question out of the material implications of asking it, as if it doesn’t *matter* if you step out of politics for a second, to consider ‘what is of value?’ too far, may be a risk. It matters, physically, what questions I ask, or perhaps how long I spend asking them. I am an activist in that I am acting in the world already, micropolitically. I am eventing. I talk to people; it has fallout. I buy food; it has fallout. I eat meat; it has fallout. I drive my car; it has fallout. I drive my car less; it has fallout. I walk; it has fallout. I smile as I hold the door for someone; it has fallout. I sing, when the mood is dark, when the hope is low,

when the rain is hitting my tent at 5 o'clock in the morning, the group is tired of walking, the sun isn't risen, the ascent to come is steep, the rain drums harder, I sing, loud, happily, 'build me up buttercup'; it has fallout.

It's not only that spending three years wondering about the correct macro-political direction might be the 'wrong' thing to do. It's that I can't stop being micropolitical. Even by not doing anything particularly micropolitical I have an effect. If I spend too long wondering how to become a piece of resistance, I resist nothing and am complicit. I, as a haecceitical event, have material consequence and fallout.

\*  
\*\*

My finger is being held. The lightest of firm grasps. I'm sure he is sleeping. I look down at my arm and follow it into the pocket. As I walk inside the heat is stifling. The light of the sun is behind me as I head deeper. I walk along my wrist to him. He is asleep. I lay down, close my eyes. And sleep.

\*  
\*\*

St. Pierre, Jackson and Mazzei (2016) describe how the American Psychological Association, the people whose referencing convention I am currently following, aided the American government in the torturing of prisoners at Guantanamo:

On a larger scale, millions of refugees flee their countries fearing torture, rape, famine, and death, and wealthy nation states refuse them, fearing the Other who is too Other. On a global scale, the Anthropocene, the newest geological era, scientifically confirms and marks the slow, creeping human impact on and destruction of our

planet. Front page news articles report devastation from melting ice caps, floods, droughts, hurricanes, and tornadoes caused by deteriorating climate conditions we can't unwind, reverse. Even science, long the cure for the problems of human existence, can't fix this one. Man-made destruction of the planet is underway, and it's not a stretch to say we're now living in a disaster movie....What kind of existence have we created? What conditions have produced such a profound failure of ethics? Is it possible to imagine a different existence, a more ethical mode of being? (e.g., see Braidotti, 2013a). How we think existence, the nature of being, ontology, is a profoundly ethical issue, one that becomes increasingly urgent. (St. Pierre, Jackson and Mazzei, 2016, p.3)

St. Pierre, Jackson and Mazzei are articulating a current which runs through this thesis: that our ontological assumptions impact our ways of being in the world, and our ethical possibilities. The idea of environmental degradation as a problem of mind is not new to environmental education. For instance, Michael Bonnett (2012) describes two prevailing responses to environmental crisis. The first is based on how we might continue to meet current ends in a more intelligent way, with no fundamental change in our conception of our relationship with the world, the second is to tackle environmental degradation as a problem of thought.

\*  
\*\*

So, as a line of desire, you are drawing on post-qualitative literature which has an ethical orientation within it. This is to be expected from you as you will defer to the academic discourse to provide solutions to political problems. Here you perceive an overlapping in the manner in which post-qualitative literature, in this case St. Pierre, Jackson and Mazzei (2016), position the political possibilities of post-qualitative research with literature in environmental education, which suggests that there is a fundamental political issue: namely that of the possibilities our current modes of thought, or our image of thought, allows – the crisis of perception. You, as you introduce St. Pierre, Jackson and Mazzei's work (2016), is the voice of *Becoming*

*Rocked*, seeking to demonstrate how the dissolving of boundaries (i.e. nature and culture) somehow solves the problem of a crisis of perception, opening up the potential for pushing the ‘limits of the possible’. This seems a similar case that St. Pierre, Jackson and Mazzei (2016) are putting forward, writing ‘outside’ of the discipline of environmental education. Your capacities derive from the literature you come across and your inclination to attempt a form of academia that you have learned from your academic education. For you, we are embodied and embedded in the materiality of the world, including in our research performances/practices (MacLure, 2013). Knowledge is thus always situated and contextual, but is *also always a political and thus ethical performance* (Kruger, 2016):

Because we gain knowledge through unfolding with/in the world, all our research endeavours are affective and as such always already political. That is, they concern power relations (in the Spinozist sense).

This means that they are also ethical. It is, however, an ethics that moves beyond recognition of the other based on a shared vulnerability towards an affirmative ethics based on interconnectedness, co-poiesis and becoming-with the other. In conducting research, we need to carefully consider whether the relations we enter into, and the relations we make possible through our research – human and nonhuman, organic and inorganic – are sustainable and extend the power of the other to act to its fullest degree. (Kruger, 2016, p.88)

Objects do not pre-exist encounter, and so it is not ‘interconnection’. Nonetheless, the environmental affect of all methodology is its political pedagogy. There is an ecological politics of affect in the pedagogy of methodology.

\*  
\*\*

Hold on, all this stuff about ‘interconnectedness, co-poiesis and becoming-with’, doesn’t this reveal a moral preference? Doesn’t it smuggle in transcendent moral principles?



There does seem to be a conflict here. So, is this the Möbius strip again?



Right, remember you're *of* the plane of immanence. Upon this plane 'Deleuze and Guattari appeal to the immanent criterion, inspired by Spinoza and Nietzsche, of affirming the active and joyous extension of our power for action in the assemblage of which we form constituent parts' (Lorraine, 2011, p.115). So this 'co-poiesis', etc, is a situated practice, which is not to say a local one per se, as effects occur topologically along the lines of our capacities to affect assemblages and vice versa.



Wait. What?



It seems to me as if the notion of becoming is important here. If we think of ‘co-poiesis’ as a self-making between two, as the terms ‘interconnectedness’ and ‘becoming-with’ also suggest, we retain the notion of two *beings* distinguished a priori, which are then related. But Deleuze’s notion of increasing my capacities to act, my power to act, operates on an immanent plane devoid of beings. Difference as affirmative, rather than negative, means that the plane is in flux and motion, or becoming. So, to increase my capacities to affect, I can’t just extend myself willy-nilly to pre-given categories of difference, but have to ‘hook-up’ with what is happening. Tamsin Lorraine (2011, p.120) puts it like this:

The increase in power at issue for Spinoza is thus not that of conquest, mastery, or control, but rather of composing relations with other bodies that require no diversion of one’s power into warding off the effects of another body on one’s own relations of speed and rest.

\*  
\*\*

So, this ethics seems like a compromise in which you match up with the flows of the world that increase your capacities to affect and to be affected.

\*  
\*\*

I remember receiving this email from student I had never met, Randy Campbell, and feeling empowered. Feeling like the work I had done had *affected*. Randy sent me a link to a YouTube video in which he presented his work. My capacity to affect had come back and affected me. I seemed to *spread out* in some way. Was this autoaffection? When I included this email in an earlier draft of my thesis, one

of my supervisors felt that it might seem like I was trying to *prove* my approach, using emails as evidence in some way. I suppose that is true. This email felt like becoming an academic. My power to affect was being evidenced by the email. It was an opposite feeling to the one I got when I read Professor Bill Scott's blog post – I will come to this. But this spreading out, this getting out of myself as inaffectual; I felt this same *spreading out* when I heard from Colin Wood. Colin, are you there?

\*  
\*\*

Subject: becoming animate - a note of thanks

Hi David,

I thought I might drop you a note to say that I used your article yesterday as part of a third year module on Environmental Approaches to Outdoor Adventure. The students pre-read for the lecture, identified key arguments and defined the terms in small groups, I guided them through some key passages and then they considered the implications alongside last week's reading (Hill and Brown 2014) in small student led debates. 3 hours of concentrated study!

As you can imagine they approached it with considerable trepidation as it is a very hard read, but really got a lot out of it - indeed one lad took me aside afterwards to say that it had really changed his whole way of thinking.

Next week i have set them Phil Mullin's paper (2014) on conceptualising skills within a participatory ecological approach, so there is a bit of a conceptual shift ... hopefully they will critique that with relation to your paper and that should spark some lively debate... and some more soul searching.

So, many thanks - nice to read an article that is prepared to explore an original line of thought in a literature that too often relies on emotional understanding of terms (place, nature etc) and thus rushes to conclusions without questioning either ontology or theoretical foundations.

all the best  
Colin

(personal email received 7/10/16)

\*  
\*\*

Now, this is affective in the way that teaching so often is. The sensation that you have made a difference. That you have played a part in forging ‘a people yet to come’ (Deleuze and Guattari, 1986, p.345). But the ethics of affect are multidirectional: ‘it had really changed his whole way of thinking’. I am reminded of my time on Walney Island with Jamie, and with the students. Concepts are powerful things. Who am I to wield them?

\*  
\*\*

But it is not a you to you. It is the eventing that has sent out this affective line. ‘...the earth asserts its own powers of deterritorialization, its lines of flight, its smooth spaces that live and blaze their way for a new earth’ (Deleuze and Guattari, 1986, p.423).

\*  
\*\*

Another way I become alien is by making music. I write songs about constituting myself; about relationships to things and places, and how they affect me<sup>36</sup>. I've been writing songs throughout the process of doing my PhD. The songs are about doubt, about trying to find a position to which to relate. Sleepless nights, the effects of new knowledge, losing weight and becoming strange. Knowing things all along. And yet not knowing what's happening. Slowly finding things. Support of loved ones. Catching a little self in the fire. Building bones. In the process of writing, playing and recording I feel grounded somehow. Deleuze's concept of the refrain is an obvious example.

You've got me all in pieces,  
Walking on my squares now  
And low,  
Telling me which way to go

Writing these songs is political in a minor sense. At home. Reading. I stop and look around the room. I feel something. An absence that I know how to fill. Not as harsh as this though. It's more like something tugs at me, and I know that responding will ease me. I've done it before. The tug gets stronger. In writing music - in the moment, as I play, not with a pen and paper, but with a guitar, somewhere to sit, and a view out of a window – in writing music, I hook up to the events of a life. I take them, those things that affect me, that threaten me now. This is a space where the selves that need allaying can be counter-actualised.

I pick up my guitar and place it on my lap. It's better already. Pull up my sleeve. Left hand to the neck and the warm smooth wood. There, that's it. Fingers to strings. And play. I'm somewhere, someone else, immediately.

---

<sup>36</sup> Some of the songs are here, if the reader is interested:  
<https://soundcloud.com/daveclarkemusic>

The arts produce and generate intensity, that which directly impacts the nervous system and intensifies sensation. Art is the art of affect more than representation, a system of dynamized and impacting forces rather than a system of unique images that function under the regime of signs. By arts, I am concerned here with all forms of creativity or production that generate intensity, sensation, or affect. (Grosz, 2008, p. 3, cited in Jackson, 2016, p.184)

\*  
\*\*

So, after all this, what is an immanent ethics? Perhaps I've formed the question incorrectly. Ethics is not a what, but a this. It's this attempt, right here. It is probably any attempt to increase the capacities to affect and be affected. The obvious space for these ethical attempts are in minoritarian contexts, where majoritarian discourses and structures don't allow for the idiosyncrasies of the world to each increase their powers to affect. That's why Deleuze's ethics is an ecological one, because if we all, each thing as haeccectical moment-events, are to increase our powers to affect and be affected, then no one overriding story can be given too much power. No person, no state, no ideology, no philosophy, no paradigm or research approach, and certainly no ethics. An immanent ethics is one of plurality *and* monism. It is an attempt to think outside thought. To overcome transcendent assumptions of the logic of thought. It senses the folly of looking outside the world for stable structures that might pin down a single story of the world, yet it recognises the multiplicity of reality. Massumi notes that many philosophers have attempted to think a nomadic thought, drawing particular attention to Spinoza:

A Thousand Plateaus is an effort to construct a smooth space of thought. It is not the first such attempt. Like State philosophy, nomad thought goes by many names. Spinoza called it "ethics." (Massumi, 1986, p.xiii)

Ethics is reality forging.

\*  
\*\*

I opened this haecceity by quoting Deleuze and Guattari (2004). By having them speak through and for me. But this isn't really a speaking *for*. It's more of a speaking together. A speaking *with*. I want to finish the haecceity by continuing that quote, where it left off:

I always depend on a molecular assemblage of enunciation that is not given in my conscious mind, any more than it depends solely on my apparent social determinations, which combine many heterogeneous regimes of signs. Speaking in tongues. To write is perhaps to bring this assemblage of the unconscious to the light of day, to select the whispering voices, to gather the tribes and secret idioms from which I extract something I call my Self (Moi). I is an order-word. A schizophrenic said: "I heard voices say: he is conscious of life." In this sense, there is indeed a schizophrenic cogito, but it is a cogito that makes self-consciousness the incorporeal transformation of an order-word, or a result of indirect discourse. My direct discourse is still the free indirect discourse running through me, coming from other worlds or other planets. That is why so many artists and writers have been tempted by the séance table. When we ask what faculty is specific to the order-word, we must indeed attribute to it some strange characteristics: a kind of instantaneousness in the emission, perception, and transmission of order-words; a wide variability, and a power of forgetting permitting one to feel absolved of the order-words one has followed and then abandoned in order to welcome others; a properly ideal or ghostly capacity for the apprehension of incorporeal transformations; an aptitude for grasping language as an immense indirect discourse.' The faculty of the cuer and the cued, of the song that always holds a tune within a tune in a relation of redundancy; a faculty that is in truth mediumistic, glossolalic, or *xenoglossic*. (Deleuze and Guattari, 2004, p.93-94, emphasis added)

My language is mediumistic. It isn't mine, but rather speaks through me whilst also speaking of me. A nonsense, referring to itself in tongues. It belongs to the other. It's alien-speak. A xeno-glossary. This otherness constitutes my conscious mind. This alien indirect language makes up my *self*.

## **Haeceity 8: Another, different, middle**

In this haeceity I end without ending. I partly agree with Ben Highmore (2010, p.135) when he writes ‘A commitment to descriptive entanglement is hard to sustain for long and harder still to shape into academic conclusions’. I feel I could keep on entangling, and indeed I do, a little. But I agree that academic conclusions are hard to gather from threads which complexify. In this haeceity I discuss becoming an academic.

### **Affectively becoming an academic**

I’m aware that peers will read this. Perhaps even friends or family – though this is less likely. I hope that the PhD in some way contributes to conversations surrounding environmental education and post-qualitative modes of inquiry, but of course I’m scared that it won’t, that perhaps it’s all been said before; or worse, that it doesn’t even make any sense. What is this wanting to contribute? Is this the hope of an increase in my capacities to affect? If so, this increase seems to come with the converse of increasing my capacities to be affected. Being affected by new openings and opportunities, but also showing an underbelly, and chink in an armour. I wonder about Bill Scott’s (2017) blog post of April 2017, where he described the Call for Papers (CfP) for a Special Issue of *Environmental Education Research* that Jamie and I had published as ‘babble’. After quoting a large section of the CfP, Bill told his readers: ‘There's no question that this is babble, but is it more (ie, worse) than that?’. I’m still not sure what he meant by this. Nonetheless I found the affective shock of reading it on my computer screen quite debilitating. Bill Scott is a well-known and, to my knowledge, well respected academic of environmental education. At the least, he is well established. I’m an early career researcher who is trying to get their PhD. My heart rate picked up and my mind went into a fuzzy mess of questions. The first thought that came to me was, how can an educator call something that someone has obviously considered, and thinks is important, ‘babble’ in a public forum? Why

wouldn't someone like this be...*nicer*? If they disagreed, aren't there more ethical, empathetic ways to go about expressing it? By contacting me privately for instance? Or writing a more nuanced blog inviting discussion? Does Bill have no inclination of the effects of his writing? Does Bill have a responsibility to mentor? My next question was, is what I'm doing 'babble'? How will I get a job if people like this think that?

\*  
\*\*

August, 2016 in Cambridge. We'd just watched a keynote presentation by Professor Marcia McKenzie at the European Educational Research Association Network 30 ESER (Environmental and Sustainability Education) PhD Student seminar at Homerton College. Marcia asked us to form small groups and answer some questions. Bill was in my small group and it was the first time I had talked to him. I don't remember the details, but I think Marcia had asked us to consider why we were doing what we were doing, i.e. why environmental education? I was as honest as I felt I could be and, without talking about ideas of lines of desire or affect, I tried to explain that, whilst I was driven by empathy to reduce the environmental and social suffering in the world, I was also a product of a society that *wanted* these things, and that, as much as this, I want a career; to be secure and stable for myself and my family yet to come. I think I tried to explain that this wasn't a calculated decision and that, in fact, it was almost out of my hands; it was bodily, or rather it ran *through* my body; that capitalism is a strong mode of my being, no matter how much I don't like that fact. My being there, doing 'environmental education', was just as much the habits of capitalism manifesting in the particular event of the me-career nexus as it might be any other nobler intention that 'I' might have. I distinctly recall Bill mentioning 'wanting a career' back to me at some point in our conversation. I recall thinking that he didn't seem impressed by this. Though perhaps I imagined this.

Affect happens in encounter. Bodies do not interact, they intra-act. Intra-action is always situated and local and co-constitutive of bodies.

...ethics emerges as situated responsibility, becoming and solidarity. It is local and specific to material phenomena—demonstrating that ethical being involves (allowing) the proliferation of being. Following Spinoza, ethics becomes something that is not only relational, but recognizable in its ability to enhance the powers of life and the entities in an assemblage (Bazzul, 2018, p.76)

Now, reading Bill Scott's work with Andrew Stables from a decade and a half before, I wonder at Bill's choice of word, 'babble', in describing the CfP. Did he not, at least once, share these inclinations when, with Stables, he wrote:

To understand the environmental crises, and to make sense of environmental education, we need a post-humanism, or at least a new, modified or extended humanism for a postmodern or new modern age in which the continued health of non-human nature is no longer something we can take for granted. (Stables and Scott, 2001, p.273)

I wonder what differences Bill sees between this and the call that Jamie and I put out, in which we said that new materialists argue:

that contemporary environmental, economic, geopolitical, and technological developments require novel articulations of nature, agency, and social and political relationships, and that means of inquiry that privilege consciousness and subjectivity are not sufficient for the task. (Clarke and Mcphie, 2017, n.p.)

Perhaps he thinks we've gone too far? Or perhaps he is not happy with our language. Stables and Scott (2001) go on to encourage critical thinking and application of post-structuralism to environmental education theorising. And I *feel* that those authors, writing in 2001, would be encouraged by recent, further work on post-humanism and new materialisms in environmental education, in a way that the Bill Scott that

authored the ‘babble’ post doesn’t appear to have been. My feeling is that Bill’s label of ‘babble’ indicates that he sees either the words we use, or their ordering, as in some way opaque. Helena Pedersen (2010, p.244), reading this same article, notes how:

A posthumanist environmental education would emphasise the role of cultural studies in the understanding of science and involve a critical engagement with humanist modernity at all curricular levels, including the tacit assumptions underpinning environmental education programmes and the notion of sustainable development itself. Still, Stables and Scott’s (2001) vision of posthumanist environmental education curricula remains rooted in humanist regimes:

A post-humanist, as well as a postmodernist, critique is called for; at the very least, a retrospective on the aims and means of modernity; at its most ambitious, a reworking of humanist assumptions with a view to greater valorisation of the non-human, though this will inevitably emanate from and respond to human concerns: for example, increasingly recognising non-human life as necessary and not just as desirable and self-renewing resource. (pp. 277 278)

In the above analysis of a posthumanist environmental education, there is little space for the various forms of multispecies agencies, identities, and cross-formations of lifeworlds increasingly highlighted by cultural studies (including animal studies). The ‘human’ is still conceived as the rights-granting, voice-giving, and value- ascribing uncontested authority, and the use value of a posthumanist curriculum is modestly expressed as a ‘greater care for ecology and the environment’ (Stables & Scott, 2001, p. 276)

Not wanting to resist the pull of the potential pun I can see how all of the quotes above ‘babble’. The ideas in them seem to have been rising through the bedrock of thought to the surface for years in environmental education, changing in terms of terminology and nuance, but still questioning the fundamentals upon which prevailing thought about ourselves rests. The analogy is as obvious to see as it is irresistible to write; babbling brooks carve great valleys. Concepts that babble also matter.

How to respond when a major figure in the field accuses me (along with innumerable others) of harbouring faulty assumptions, and zealously urges others to ‘avoid embracing’ my effort to contribute to (environmental) education theory? (Greenwood, 2008, p.336)

What is this sweeping critique that David Greenwood, Jamie and I experienced? Different conversations, different topics, different intensity, even, but still a form of critique far removed from Latour’s (2004) call ‘towards the gathering’.<sup>37</sup> Far removed from an immanent critique (MacLure, 2015). How can this be in education? In *environmental education*? Could there be two words that should evoke more care? And what is the ‘or worse’ of the blog posts title? After quoting our call for papers, Bill writes:

There's no question that this is babble, but is it more (ie, worse) than that? The "*the taking up of new materialisms is not merely a retreat into obscure philosophy*" point suggests that the editors understand the problems of communicating these ideas, even if they can do nothing about it. (Scott, 2017).

An ethics I work with immanently here is the ethics of academia, layered atop the ethics of environmental care (are they not the same?). Together they form the ethics of environmental scholarship. Conceiving of these ethics immanently I seek to auto-affect. To go beyond the limiting *affects* of reading Bill’s critique of the call for papers, the bodily affects I felt that stopped me in my tracks (and still raise my heart rate when I visit his blog to copy the quote), and to instead develop active *affects*. Rather than holding on to the dejection, this immanent ethics leads me to question how we write about each other in environmental scholarship; others as others, human

---

<sup>37</sup> I’m not intending to draw a comparison between David Greenwood’s work, or his achievements, and my own. It is the form of critique at work that I critique (whilst recognising the irony involved here!). Massumi’s (2015, p.14-15) point bears repeating: traditional critique is a ‘sadistic enterprise that separates something out, attributes set characteristics to it, then applies a final judgement to it – objectifies it, in a moralizing kind of way’. I draw on Greenwood to echo my situation, and the ‘how do I respond’ question he raises, but also to illustrate traditional critique’s prevalence in environmental education research.

and non-human. How do I create the haecceity of the me-us-event (the borderless body beyond, but sometimes closer than what might traditionally be called my body) with new capacities, in the event of encounter with Bill's blog post? How do I extend what a body can do, how do I move further to the limit?

Perhaps one way I *am* extending my capacities to affect is through the internet. In the issuing of the Call itself, my reaction to Bill's blog, the process of editing a Special Issue and, specifically, the online nature of these events. Drawing from Haraway's (1985) Cyborg Manifesto, which disputes the solid distinction between human/animal/technical, and indeed Deleuze and Guattari themselves in their imagining of an inorganic life, it is quite possible to conceive a body as extended through the printing process, telephones and, more recently, the internet. I think, 'no, this is all outdoors and the environment, even the online world'. New types of environing. In his critique of dominant 'first wave' ecocritical pedagogy, Garrard notes (2010, p.242):

From the perspective of place-based ecocritical pedagogy, the online environmentalism of a Facebook group lacks the moral seriousness and emotional traction of lococentric commitments. The truth is, though, that at present we simply do not know what works.

I've written elsewhere about problematising the indoor/outdoor binary, with Deleuze (Clarke and Mcphie, 2014). And besides, I don't think I can talk about the environment as a thing over there which needs to be educated for. I am the lines environing. I have to talk about the ways I am becoming now and the things I can do about that. The ways I can put concepts to work.

The capacity for bodies to affect and be affected has increased in the digital era in a way that Deleuze perhaps foresaw. Smith (2012) reminds me that an immanent ethics is always about the present and thus will always be different and un-prescribable. He notes how Spinoza, Nietzsche, Foucault and Deleuze each describe the conditions

required for new modes of existence to come into being in different ways at different times. For Deleuze, it is often the minor, which he opposes to the molar, which is the site for the creation of new modes of existence or becomings. The molecular, or lines of segmentation, make up bodies, along with other lines; minor lines, and lines of flight (Deleuze and Parnet, 2002). Rigid lines of segmentarity mark bodies by, for instance, the demarcations between being of your family, of your school, of your job, and then of your profession. But these rigid lines are present in bodies in other senses also:

These details of our existence, which are essentially historical, although they may sometimes take a form biologists think belongs to their domain (i.e., gender, race, body shape), segment us in different ways, slicing and dicing us this way and that so that we adhere to the conventions and demands of the *socius* itself. (Buchanan, 2007, n.p)

Buchanan (2007) suggests that, rather than the obvious attraction to consider the internet straightforwardly as an extended body, or as the realisation of a body without organs, we can instead think of its abilities to limit and extend affective capacities through the extent it promotes molar lines of segmentation or minor lines of becoming. For Foucault, limitations are put on a body's capacity through societies of *discipline* and their modes of enclosure such as the institutions of family, school, prison, the military, etc. For Deleuze, societies of discipline are in decline. What is needed is an immanent ethics in response to the emergence of societies of *control* operating in a molar fashion (Deleuze, 1992; Smith, 2012). In this way the internet becomes a site where lines of segmentarity are present in our online footprint in the form of information held about us in the digital sphere, but the internet is also a site of resistance to such segmentation. The internet is morally neutral, though, like the rest of the world, it is both a space of capture and resistance; it is a site of ethics.

Other online lines come to mind, perhaps more relevant to my auto-affective attempts at becoming an academic. Molar lines of segmentarity exist in, for instance, author bibliometric measures in the form of h and i10 index scores in google scholar

profiles; in researcher scores on commercial sites such as Academia or Researchgate; or when you encounter paywalls when accessing journal articles. For instance, the h-index is a 'bibliometric' which has been proposed to be 'a representative measure of individual scientific achievement' (Hirsch, 2007, p.19193). This is so much the case that Hirsch (2007) suggests that the number can be used as a shortcut to decide the value of an author, recommending that 'the h-index is a useful indicator of scientific quality that can be profitably used (together with other criteria) to assist in academic appointment processes and to allocate research resources' (Hirsch, 2007, p.19198). My h-index is currently 3. That's my worth. In the life sciences scores can run into the 100s. In general, the ranking of academics in terms of a quantifiable 'impact' produces material consequences in terms of their career prospects and access to funding. The achievement of funding is another barrier to an academic career. Often, advertisements for academic posts will require that applicants have already been awarded external funding as an 'essential' on their criteria. Yet, in my experience, there is little information or opportunity to do this. The world is diced up between those who have gained external funding, and those who have not. In this way the ubiquity of academic work in certain areas or on certain problems is decided by the funder, rather than the inquiring academics themselves. For instance, Jamie, Marcia, Monique Blom (a multidisciplinary artist based in Alberta) and I applied for funding to carry out a participatory action research project on walking in British Columbia in 2017, linked to the World Environmental Education Congress. The funding body decided none of the applications they received were worth funding, despite the fact that our application strongly contoured their requirements. In a similar manner, the way in which academics are assessed by their ability to publish in academic journals with a high impact factor is another line of segmentarity that exists in the online sphere. Indeed, the editor-in-chief of *Nature* has noted how he is 'concerned by the tendency within academic administrations to focus on a journal's impact factor when judging the worth of scientific contributions by researchers, affecting promotions, recruitment and, in some countries, financial bonuses for each paper' (Campbell, 2008, p.5).

Deleuze (1992) notes how in the past, societies of discipline were made up of two poles: the individual, or *signature*, and the *number* which indicated the individual's position within the mass. Societies of control, by comparison, focus instead on a code, or password:

in the societies of control...what is important is no longer either a signature or a number, but a code: the code is a password, while on the other hand the disciplinary societies are regulated by watchwords (as much from the point of view of integration as from that of resistance). The numerical language of control is made of codes that mark access to information, or reject it. (Deleuze, 1992, p.5)

The paywall that surrounds academic research means that many academic works that may be useful to the public are locked behind an expensive barrier (Cordova & Sherman, 2017). In societies of control, your 'dividual' self is permitted or declined access. Deleuze (1992) describes how 'Guattari has imagined a city where one would be able to leave one's apartment, one's street, one's neighbourhood, thanks to one's (dividual) electronic card that raises a given barrier; but the card could just as easily be rejected on a given day or between certain hours' (p.7). These systems are becoming more ubiquitous. Indeed, I used such a card to get into work today. To access research studies, philosophy and theory you will need the right password, or the system will have to recognise you. Looking up a paper just a moment ago, I entered my password into Shibboleth, the gateway allowing entry to some academic institutions, but not others. The term shibboleth originates from the Bible. When escaping a failed attack on Gilead, the Ephraimites crossed the fords of the River Jordan. The residents of Gilead were able to stop them at the crossings, asking everyone who passed to say 'shibboleth'. The Ephraimites were not able to pronounce this word and so their identity was revealed. 'Forty and two thousand' Ephraimites were killed. In this world I am currently privileged. I have the password to most areas. There are few places to which I do not have access in terms of published material. But this could change easily if I leave the University.

And there are other passwords at work in academia. Honan and Bright (2016) suggest that the terminology of qualitative research has become what Deleuze and Guattari would call ‘overcoded’. Here the very terminology, in this case of academia, becomes the password that allows access.

These passwords are used to create the identity papers to pass through into academia (Spivak, 1996); they are the *shibboleths* – words like semi-structured interviews, participant, interviewer, interview schedule, informed consent, observations, anonymity, confidentiality, transcription, coding categories – “overcoded” signifiers that produce a “uniformity of enunciation, unification of the substance of expression, and control over statements in a regime of circularity” (Deleuze & Guattari, 1987, p. 135) that are used in the text to permit recognition and entry into this new world. (Honan and Bright, 2016, p.726)

I can imagine a reader finding this point ironic. The same can be said about Deleuzian terminology in academia; that it has become a ‘regime of circularity’. I wonder about the writing I’m doing. Is it for the reader to learn something, or to help me understand something? When I write ‘haecceity’, some readers might feel a closing down of access, while I feel an opening up of possibilities. Like any language, it has to be learned. I return to Kathryn Strom, who I mentioned in *Haecceity 1* for noting that it doesn’t make sense to say you are ‘Deleuzian’:

Reflecting on my own nonlinear journey from a teacher who had no use for theory or philosophy, to one whose career (at least in part) hinges on it, I believe now that both the inaccessibility of language and the discourses surrounding these bodies of thought probably played a part in my initial resistance to engaging with them. After all, I was a *teacher*, not a scholar, philosopher, or any other of the particular categories who were *allowed* to theorize. In perpetuating those discourses for myself, I closed myself off to different, wonderful, affirming types of thinking for a long time. (2018, p.112)

\*\*\*

I'm not so sure why I'm writing about this. It just happened. I'm interested in the way my subjectification is becoming online. The futurity of myself as a self. As a self differently. Who is the human subject? We're not replicated by a mold. Each in our becoming is an instance like no other, in different ways becoming animal, becoming technical, becoming molecular (minor, resistant, political, guerrilla, nomad, deterritorialized, revolutionary, smooth), and becoming molar (established, segmented, sedimented and stratified, striated). Each a thisness. Perhaps an ethical self walks attentively through this process. Feeling when to put down roots and find a territory, and when you should find a gap between the molar structures - a space to send out a line of potential, follow the lines of desire whose tenor seems fruitful. Perhaps I'm worried about becoming caught up in a perpetual battle to gain access, to improve my score, to up my impact and to gain funding. It sounds like a trap. These things seem to push at me like passive affects that limit. But if I gain access, won't that increase my capacities? Perhaps this is what being an academic *is*?

\*  
\*\*

Hold that thought. 'What'? 'Is'? No, *this* is becoming an academic. This attempt. It's something you are forever attaining. Not a category which you can settle down and become comfortable in. It is becoming.

\*  
\*\*

A job has just been advertised: 'Lecturer in Outdoor Learning'. I read the job description and wonder if I fit? In scanning the advert I am reminded of an article written by Pete McDonald (2000) which I came across during my undergraduate degree. The article has stayed with me for several reasons, not least of which was its

lamprooning of one of my lecturers at the time. I look up Pete's article on the academicisation of outdoor leadership. It makes me laugh, with its intelligent dismissal of 'sociologese' and 'educationese'. I wonder what Pete would make of this thesis? Some of it, perhaps, might speak to him. Though I doubt those bits would have been the 'theory'. No matter how practical it is, theory has to be learned, like any practice. I think Pete and I would get on. I feel I could convince him that this, this thesis, for me, is a practical and useful endeavour. Much like an adventure up a mountain or on a river, adventures in thought can be powerful learning experiences. I am not concerned, at this stage, at the inaccessibility of the work I have done. As I advanced earlier, I hope readers take from it what they like.

I look at the advert again. I know I will apply. I have to. I wonder if, with this thesis, I have troubled the very job I'd be applying for. How would I even fit in? Besides, others will apply for this job, of course. Others with more papers, more experience, higher h-index scores, and funding, though I don't think these are the things that this particular teaching team are really interested in, there may be others involved in the process who are. These things I want to resist. The controllingness of having to jump through these hoops. Leaving the hoops in place for others to have to jump through as well. Helping construct the hoops. And where does this leave me anyway? 'Environmental education academic' is pretty niche. Not many of those come up on job websites. 'Environmental education academic critical of themselves as an individual human and the environment as a thing' seems an impossibility.

So what are the alternatives? How to resist molar academic forces? Deleuze notes that 'the societies of control operate with machines of a third type, computers, whose passive danger is jamming and whose active one is piracy and the introduction of viruses' (1992, p.6). It's not hard to visualise the state reducing the capacities of its citizens through jamming social media. And it is easy to find examples of activists pushing at the limits that the control society places on us. Brian Knappenberger tells the story of Aaron Schwartz in his 2014 documentary *The Internet's Own Boy*. Schwartz endeavoured to create free access to academic information through pirating academic articles, which he downloaded systematically and illegally from JSTOR.

Schwartz was a research fellow at Massachusetts Institute of Technology (MIT) at the time. Upon discovery of his activities Schwartz was arrested on campus by MIT police and a U.S. Secret Service agent. Federal charges were brought carrying a maximum of 50 years in prison and a \$1 million fine. A plea deal was offered to Schwartz in which, if he pled guilty, he would serve 6 months in a low security prison. Aaron Schwartz refused, and later committed suicide within a year of charges being brought. That same year he was posthumously inducted into the Internet Hall of Fame.

It's easy to think of Researchgate and Academia as pirating sites, set on free access to information and the sharing of academic scholarship, but these sites are for-profit, and who knows what they do with the data on their users? For my own part, I know I use other means to reach the corners of the academic internet still off limits to me despite my official pass. *Sci Hub* was created by Alexandra Elbakyan in 2011 when she was a 22 year old graduate student in Kazakhstan. I think Deleuze (1992) would agree that Sci Hub is an active piece of resistance to the corporate society of control he describes. In the six months between September 2015 and February 2016, the website, which could be described as a kind of Pirate Bay for academic content, received 28 million download requests worldwide (Bohannon, 2016). Sci Hub's motto is 'to remove all barriers in the way of science'. The statistics on its use reveal the extent to which it is used in the world's poorest countries. For instance, in Iran the number of download requests was 2,629,115, in India 1,946,052 and in China 2,349,385. For comparison, in a 6-month period 2965 download requests were sent from Edinburgh; 1,268,158 were sent from Tehran. But it is not just the levelling nature of Sci Hub that makes me think of Deleuze; it is also the micropolitics it enables. Whilst Bohannon (2016, p.511) notes that data on Sci Hub usage 'generally looks like a map of scientific productivity, but with some of the richer and poorer science-focused nations flipped', it is also interesting to look into the data, to see what stories are being told:

Someone in Nuuk, Greenland, is reading a paper about how best to provide cancer treatment to indigenous populations. Research goes on

in Libya, even as a civil war rages there. Someone in Benghazi is investigating a method for transmitting data between computers across an air gap. Far to the south in the oil-rich desert, someone near the town of Sabhā is delving into fluid dynamics. (Bohannon, 2016, p.511)

Searching the interactive map myself, I find that the most downloaded paper in the central region of Uganda is titled *Insecticide-Treated Plastic Sheeting for Emergency Malaria Prevention and Shelter among Displaced Populations*. Of four papers downloaded in Bujumbura, Burundi, in the 6-month period, the most popular is a synopsis of the educational theories of Paulo Friere. On the highly fishing-dependent Faroe Islands, someone has accessed the article *Experience Of Unemployment For Fishery Workers In Newfoundland*. Where do these stories of resistance leave me? Sci Hub is a freeing rhizome of connections and lines of flight. It facilitates an increase in the capacities of bodies to affect and be affected. I would be very happy for my work to be accessed via Sci Hub, should anyone ever find it useful.

Deleuze's work is about finding what works for you. It's not about *getting it all* (Strom, 2018). In my role as becoming editor of a Special Issue I am aware of the society of control in which I operate and the manner in which I may be able to actualise minor politics and lines of flight. I consider the history of *Environmental Education Research* and remember a colleague telling me that *From Places to Paths* (Clarke and Mcphie, 2016) (which used a Deleuzian rhizomatic methodology) wouldn't have got in to the journal in the past. I wonder about the types of scholarship that have been 'allowed' in the past, and the types of scholarship that I might help facilitate now. For instance, Gough (2012) notes the negative potentials of double-blind peer reviewing as a form of 'policing' of knowledge. Through the internet, a new type of nature is being created (Mcphie and Clarke, in press). My capacities to affect and be affected are increasing constantly. I am in contact with 29 contributors for the Special Issue from around the world. I have only met 5 of these people in 'real life'. That is, I *have* met 29 contributors in 'real life'. Just real life differently.

## Contributions?

I am thinking of submitting some of what I have written in this thesis to a special issue of *a/b: Auto/Biography Studies* entitled *Life writing in the Anthropocene*. When I saw the Call for Papers I immediately wondered if this is what I had been attempting all along: an *immanent* life writing in the Anthropocene. For me, ‘life writing in the Anthropocene’ signals the end of ‘eco-biography’, if eco-biography is to be understood as “a type of autobiographical text that enables nature or landscape writers to discover ‘a new self in nature’” (Perreten, cited in Pryor, 2017). This might sound odd because, as Pryor notes, ‘ecobiography remains a largely unexplored form of autobiographical text.’ It has hardly gotten off the ground. And yet, in the Anthropocene, there is no Nature in which the self might become new. As I have mentioned, according to those who advocate the term the Anthropocene marks the point at which humanity has overcome the great forces of Nature. However, there is a further reason why ecobiography, and in fact the Anthropocene itself, can have the ‘sense’ with which we think them upturned; their definitions hold within them a persistent assumption of the Western world; that there exists, or did once exist, a thing called Nature. According to Farr and Snyder (1996), ecobiography constitutes:

a life-story constructed according to a pattern divined internally through the Self’s interaction with the external environment, especially Nature, the multiple exchanges between which (re)present a kind of ecosystem of the Self. All the various voices of the Self, conscious or unconscious, plus the environment within which and against which they speak, comprise the dynamic network of that Self’s ecosystem. (Farr and Snyder, 1996, p.198, cited in Edlich, 2010)

Yet the existence of this Self, and this Nature, seem hardly tenable. A critical life writing in the Anthropocene challenges both traditional and ‘new’ Nature writing to work past or trouble stable notions of selves and environments.

It is to Deleuze and Guattari’s geophilosophy and particularly the concept of immanence that I have turned to approach this problem in my work. I am interested

in the (im)possibility of a critical (non)nature writing which, conversely, is also an activist (post)autoethnography. Perhaps the ‘non’ and ‘post’ are interchangeable, but I feel the ‘(im)’ is important for indicating that I feel this form of writing is may be something that we can only attempt, not necessarily something achievable. I stress the ‘critical’ and ‘activist’ here to highlight the ethical orientation of this writing, but ethics is not straightforward either, and this writing takes a particular interest in an unfolding, lively and lived ethics, which is how I think of immanent ethics. For instance, this may be contentious, but I don’t think this type of writing would take up ostensibly ‘environmental’ problems or locations as its focus, per se. At least, it *could* do this, but the classification of each category would be retroactive. One could write to reach the point at which the immanence of events is forwarded, rather than a spatially or temporally pre-given category, such as Nature or Self. Indeed, Deleuze and Guattari (2004) do this themselves with their opening discussion in *A Thousand Plateaus*:

Why have we kept our own names? Out of habit, purely out of habit. To make ourselves unrecognizable in turn. To render imperceptible, not ourselves, but what makes us act, feel, and think. Also because it's nice to talk like everybody else, to say the sun rises, when everybody knows it's only a manner of speaking. To reach, not the point where one no longer says I, but the point where it is no longer of any importance whether one says I. We are no longer ourselves. Each will know his own. We have been aided, inspired, multiplied (Deleuze and Guattari, 2004, p.3).

To make imperceptible what makes these authors ‘act, feel, and think’ is to render imperceptible the assumptive ground which we think the names ‘Deleuze’ or ‘Guattari’ rest upon. That is *the human*, as a stable and straightforward concept that we have a strong claim to knowledge over (through arborescent knowledge practices in traditional physiology, psychology or sociology, for instance), becomes troubled. The writing in this thesis at once succeeds and fails in attaining posthuman-postnature ecobiography. This seems inevitable given that this way of seeing is something that is constantly practised, attempted, and never achieved. If the Self and

Nature are also 'habits', then what is a life writing that reaches this point of understanding? The least we can say at this stage is that it will not forgo the I or Nature in its writing, but it must treat these things very differently to the ecobiography described above. It can no longer understand the Self as a transcendent category that is necessarily rationale, privileged, removed, reflective, 'in here', and subjective. Further it can no longer understand Nature as a transcendent category that is irrational, unprivileged, noble, balanced, 'out there', and objective. To reach this point is to reach a realisation; a way of understanding reality that informs all else. I think of the process of attaining this way of thinking as an environmental education in its broadest sense, or as *environing education*. In this thesis my attempt has been to think with theory, to use juxtaposition and creative forms of writing to tell an educational story. It is an education not so much for 'the environment' as for intensifying life. What haunts accounts of Nature in environmental theory and research, including ecopedagogy, is a spectre of a transcendent environment to which an often implicit transcendent moral principle is applied. This is not necessarily a *bad* thing. An immanent ethics is not necessarily *better* at dealing with 'environmental' problems. But importantly, this is because this way of seeing doesn't see them as such. It is not oriented towards finding solutions to axiomatic problems, but rather to exploring the conditions that constitute problems and increasing affective capacities. Further, an immanent ethics locates itself on the threshold of occurring instances that are thrown up in life, and its orientation is to micro-aesthetic ruptures and resistance to homogenising and striating accounts, such as Self or Nature. And so, this orientation troubles various environmentalisms, as articulated by Mark Halsey (2007). Immanent ethics is not an instrumentally applicable ethics. It is not *for* something and it does not have an intention or destination, such as 'sustainability'. This may make it completely unsuited to many problems we face in macro environmental terms, however, the scale of a micropolitics of an immanent ethics also render possible radical changes and reorientations. To the problems that interest me, to exploring the depths of our operationalised concepts in environmental education and life writing, it is the ethics which is produced by my understanding of the world, by an immanent ontology, and it is the ethics that I am drawn to attempt, even if some might see the result is fiddling while Rome burns or, indeed, 'babble'. I

want to stress that it is *not* fiddling while Rome burns, or ‘babble’. It is a serious/playful attempt at exploring the ethics of problems, rather than arriving at solutions. It follows the spaces left by critiques of essentialism in the most apt manner possible for a thesis: through experiments in writing. It can seem a form of heresy. At the risk of extending the Nero analogy too far, an immanent ethics might be seen to question the burning. However, I think it looks for the pockets of life hiding under unstable concepts. There are plenty of others who are attempting the important work of arranging fire engines and diverting watercourses (too much Nero?). This ethics, however, will attempt tiny changes to the nature of Self and Nature and, in turn, inquiry, to see what happens. Environing education involves a necessary double movement across planes, producing an inquiry into (non)concern for the (non)environment.

Nardizzi’s (2017) image of ‘envirning’, as a harrowing and affective state ‘in which death and otherworldly agents press upon – and sometimes into – the human figure’, speaks to what might erroneously be thought of as the ‘flip side’ of envirning, but is rather a constitutive element, or alternative perspective of the same: the posthuman. Huff (2017, p.279) notes that posthumanism challenges most aspects of autobiographical and, I think, autoethnographic practice —‘the autonomous self, the pact between author and reader, the foregrounding of the human—in favor of focusing on the relational, the material, and the umwelt to suggest a radical reconceptualising and reconstruction of life narrative, much less life writing’. This is a fundamental shift, away from writing with its human audience, and instead towards worldly interaction, or intra-action, as Karen Barad (2007) suggests. Posthuman life writing would foreground practice, and writing (as well a concept creation), as a form of practice, could only ever constitute a useful space for its intensification rather than tell its full story. It would focus on participation in forms of expression that exceed reliance on delineated sets. And so, I will not try to claim that what I have produced is a complete form of posthuman autoethnography, for that can only be practised elsewhere, in the living of it. But it is my start.

Further to these points, the thesis is an example of what an enviroing education has taught. In terms of becoming an academic, it is highly sensitive to the hidden or null curriculum of methodology itself, as a potentially unexamined enactor and reinforcer of ways of being. That is to say, enacting research methods simultaneously enacts environmental educations (to whatever ends). This inquiry attempts to be immanently ethical, in that it is curious about the research process, is situated and relational, to my/a life, and in that it tries to avoid attributing effects to pregiven, habitual, or dominant concepts of categories, representation or transcendence - for instance the human Self and Nature. This being so, the thesis process has produced in me a lingering doubt about my capacities to describe or prescribe an instrumental pedagogy for the environment. This is a significant shift from where I started the PhD process. Rather, now, I see potential in autoaffective practices: practices of counter-actualisation whereby I can enhance my capacities to affect and be affected through creating/playing with concepts. This is being practised through learning to write aesthetically, tentatively, collaboratively, and creatively, as a form of ethical inquiry within the PhD process.

As I sit here in a small village in Kent on the 27<sup>th</sup> of July 2018, as the temperature reaches into the mid 30s around the country, I hope that I am able to take up the opportunities for this form of ethics as they arise in coming events, including in writing, and with students. To not be unworthy of what happens in the constitution of the haecceities that I become of.



Jamie's question: 'How can we make the familiar unfamiliar with our students?'. I wonder about this. About the 'unfamiliar' of it. About me, and how I can become unfamiliar to myself in a process of learning how to educate further. How to counter-actualise. I am writing in a café, again. It's the café my Deleuze reading group usually meet in, though they are not here. It's not our day. I have just left Gemma

and Fen at Waverley Station to board a train to London. His first trip away without me. It being early I decided to walk through Edinburgh and ended up here. ‘Checkpoint’. The place feels unfamiliar, on the wrong day, and without the right people. I’ve sat at the window, away from our usual booth at the back. I just had something I’ve never had before. It’s called a Long Black. It’s a style of coffee. It was unfamiliar. But this doesn’t seem enough. Or at least, it doesn’t seem right. It doesn’t seem like the type of unfamiliarity that I am getting at with affectively becoming alien. Haraway’s cyborg is useful for thinking about the ways that I affect other bodies. Or how my body becomes inorganic. An alien cyborg. *The borg*. My body is spread across the internet. But is also hurtling south, to London. I think of Gemma, on the train, and Fen with her. I think of how they increase my capacities to be affected. How, thinking with Fen and his mum, I encounter the world as bright and full. I’m with her. I was married to Gemma last summer and in our vows we asked our celebrant to acknowledge this understanding. After recounting how Gemma and I had met to our gathered family and friends, our celebrant read:

So that is how we come to be here today, but I want to say something about those two little starting words “met online”

World wide web.....an amazing bit of human-techno-ecology, but we understand it is meant metaphorically – it’s about knotting, and it’s about a loose open-weave connection which is incredibly strong: fragile filaments making places and spaces, tied at the nodes, able to withstand fierce winds, even sharp tugs. Part of the world when it is built by a spider, and glistening with sparkling drops of dew; part of the world when by the fireside the lace-maker builds her filigree mantle; part of the solid world when the suspension bridge gracefully joins two sides of a gorge; and part of the world when it spans cyberspace and transports us across the globe. Dave, and that tiny bit of evolution, the spider, and Gemma, in that human built environment, connecting and creating with bricks and mortar, making meeting places like homes and dance halls and museums. Consider how romantic that makes the internet, and how fitting a metaphor for what links these two people in a loving strong and sparkling relationship.

My body is not ever my own. It is affective. It affects. Writing – learning how to write differently - increases my capacity to both be affected, and to affect. This is

educational. Academic work is not soloed or siloed. Practicing immanence is  
environing education, and it guides my becoming an academic.

And...and...and...

## References

- Adsit-Morris, C. (2015). *The nomadic wanderings of a bag-lady and her space chums: re-storying environmental education with feral figurations* (Doctoral dissertation, University of British Columbia).
- Adsit-Morris, C. (2017). *Restorying Environmental Education: Figurations, Fictions, and Feral Subjectivities*. Cham: Springer Nature.
- Affifi, R. (2008). "Thesis writing" as a prelude to living environmental education. Unpublished Masters Thesis. University of Toronto. Canada.
- Ahmed, S. (2008). Open Forum Imaginary Prohibitions: Some Preliminary Remarks on the Founding Gestures of The new Materialism'. *European Journal of Women's Studies*, 15(1), 23-39.
- Ahmed, S. (2010). Orientations matter In D. Coole, and S. Frost (Eds.), *New materialisms: ontology, agency and politics*, (pp. 234-257). Durham, NC: Duke University Press.
- Alaimo, S. (2010). *Bodily Natures: Science, Environment, and the Material Self*. Bloomington, IN: Indiana University Press.
- Alaimo, S., Hekman, S., & Hekman, S. J. (2008). *Material feminisms*. Bloomington, IN: Indiana University Press.
- Alston, W. P., & Smythe, T. W. (1994). Swinburne's argument for dualism. *Faith and Philosophy*, 11(1), 127-133.
- Andreotti, V. (2016). (re) imagining education as an un-coercive re-arrangement of desires. *Other Education*, 5(1), 79-88.
- Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs: Journal of women in culture and society*, 28(3), 801-831.
- Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Durham & London: Duke University Press.
- Barad, K. (2012). in Rick Dolphijn & Iris van der Tuin (Eds.) *New Materialism: Interviews & Cartographies*. University of Michigan Library, Ann Arbor: Open Humanities Press.
- Barad, K. (2014). Diffracting diffraction: Cutting together-apart. *Parallax*, 20(3), 168-187.

- Barrett, M. J. (2005). Making (some) sense of feminist poststructuralism in environmental education research and practice. *Canadian Journal of Environmental Education*, 10(1), 79-93.
- Barthes, R. (1975). *The pleasure of the text*. London: Macmillan.
- Baugh, B. (1997). Making the difference: Deleuze's difference and Derrida's différance. *Social Semiotics*, 7(2), 127-146.
- Bazzul, J. (2018). Ethics, Subjectivity, and Sociomaterial Assemblages: Two Important Directions and Methodological Tensions. *Studies in Philosophy and Education*, 37(5), 467-480.
- Bell, A. C., & Russell, C. L. (2000). Beyond human, beyond words: Anthropocentrism, critical pedagogy, and the poststructuralist turn. *Canadian Journal of Education/Revue canadienne de l'éducation*, 25(3), 188-203.
- Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Durham, NC: Duke University Press.
- Benozzo, A., Carey, N., Cozza, M., Elmenhorst, C., Fairchild, N., Koro-Ljungberg, M., & Taylor, C. A. (2018). Disturbing the AcademicConferenceMachine: Post-qualitative re-turnings. *Gender, Work & Organization*. Ahead-of-print: <https://onlinelibrary.wiley.com/doi/abs/10.1111/gwao.12260>
- Bergson, H. (1998). *Creative Evolution*. New York, NY: Dover.
- Bird-David, N. (1999). 'Animism' revisited: Personhood, environment, and relational epistemology. *Current Anthropology*, 40(1): S67-S91.
- Blyth, C., & Meiring, R. (2018). A posthumanist approach to environmental education in South Africa: implications for teachers, teacher development, and teacher training programs. *Teacher Development*, 22(1), 105-122.
- Boal, A. (1979). *Theatre of the Oppressed*. London: Pluto Press.
- Bögeholz, S. (2006). Nature experience and its importance for environmental knowledge, values and action: Recent German empirical contributions. *Environmental Education Research*, 12(1), 65-84.
- Bogner, F. X. (1998). The influence of short-term outdoor ecology education on long-term variables of environmental perspective. *The Journal of Environmental Education*, 29(4), 17-29.
- Bogost, I. (2012). *Alien phenomenology, or, what it's like to be a thing*. Minneapolis, MN: University of Minnesota Press.

- Bohannon, J. (2016). Who's downloading pirated papers? Everyone. *Science*, 352(6285), 508-512.
- Bonnett, M. (2004). *Retrieving nature: Education for a post-humanist age*. Oxford: Blackwell.
- Bonnett, M. (2012). Environmental concern, moral education and our place in nature. *Journal of Moral Education*, 41(3), 285–300.
- Bonnett, M. (2015). The powers that be: Environmental education and the transcendent. *Policy Futures in Education*, 13(1), 42-56.
- Bowden, S. (2015). Human and nonhuman agency in Deleuze. In J. Roffe and H. Stark (Eds.), *Deleuze and the non/human* (pp. 60-80). London: Palgrave Macmillan.
- Braidotti, R. (2000). Teratologies. In I. Buchanan & C. Colebrook (Eds.), *Deleuze and Feminist Theory* (pp. 156–172). Edinburgh: Edinburgh University Press.
- Braidotti, R. (2011). *Nomadic theory: the portable Rosi Braidotti*. New York, NY: Columbia University Press.
- Braidotti, R. (2018). A theoretical framework for the critical posthumanities. *Theory, Culture & Society*, Ahead-of-print: <http://journals.sagepub.com/doi/pdf/10.1177/0263276418771486>
- Braun, B., Whatmore, S. J., & Stengers, I. (2010). *Political matter: Technoscience, democracy, and public life*. Minneapolis, MN: University of Minnesota Press.
- Bridges-Rhoads, S. (2017). Philosophical fieldnotes. *Qualitative Inquiry*, Ahead-of-print: <http://journals.sagepub.com/doi/abs/10.1177/1077800417733498>
- Bryant, L. (2011) Wilderness Ontology [Blog post]. Retrieved from: <https://larvalsubjects.wordpress.com/2011/06/02/wilderness-ontology/>
- Bryant, L. R. (2015). For An Apocalyptic Pedagogy. *Chiasma: A Site For Thought*, 2(2), 6. 46-60.
- Bryant, L., Srnicek, N., & Harman, G. (Eds.). (2011). *The speculative turn: Continental materialism and realism*. Melbourne: re. press.
- Buchanan, I. (2007). *Deleuze and the Internet*. Retrieved from: <http://australianhumanitiesreview.org/2008/12/20/deleuze-and-the-internet/>
- Cachelin, A., Rose, J., Dustin, D., & Shooter, W. (2011). Sustainability in outdoor education: Rethinking root metaphors. *Journal of Sustainability Education*, 2.
- Callicott, J. B. 2000. Contemporary Criticisms of the Received Wilderness Idea. In D. N. Cole, S. F. McCool, W. A. Freimund, and J. O'Loughlin (Eds.), *Wilderness Science in a Time of Change*, Vol 1: Changing Perspectives and Future

Directions, 24-31. Ogden, Utah: U. S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

- Campbell, P. (2008). Escape from the impact factor. *Ethics in Science and Environmental politics*, 8(1), 5-7.
- Carolan, M. S. (2007). Introducing the concept of tactile space: creating lasting social and environmental commitments. *Geoforum*, 38(6), 1264-1275.
- Castree, N. (2003). Environmental issues: Relational ontologies and hybrid politics. *Progress in Human Geography*, 27(2), 203–211.
- Castree, N. (2017). Anthropocene: social science misconstrued. *Nature*, 541(7637), 289-289.
- Castree, N., and Braun, B. (2001). *Social nature theory, practice, and politics*. London: Blackwell.
- Cheng, J. C.-H., & Monroe, M. C. (2012). Connection to nature: Children's affective attitude toward nature. *Environment and Behavior*, 44(1), 31–49.
- Christie, B., & Higgins, P. (2012). The impact of outdoor learning experiences on attitudes to sustainability: A brief review of literature. Field Studies Council Report 06/2012. Edinburgh: Field Studies Council/University of Edinburgh.
- Clark, A. (2006). Coupling, Constitution and the Cognitive Kind: A Reply to Adam and Aizawa (pp. 81-99). In R. Menary (Ed.), *The Extended Mind*. Cambridge, MA: MIT Press.
- Clarke, D. A. G. (2014). The Small Isles – Inner Hebrides by Sea Kayak Summer 2014. Retrieved from: <https://www.youtube.com/watch?v=kDh0pxeGEwc>
- Clarke, D. A. G. (2016). *PhD Progression Paper*. Unpublished Paper. University of Edinburgh.
- Clarke, D. A. G. (2017). Educating beyond the cultural and the natural:(re) framing the limits of the possible in environmental education. In K. Malone, S. Truong, and T. Gray (Eds.), *Reimagining sustainability in precarious times* (pp. 305-319). Singapore: Springer.
- Clarke, D. A. G., & Mcphie, J. (2014). Becoming animate in education: Immanent materiality and outdoor learning for sustainability. *Journal of Adventure Education & Outdoor Learning*, 14(3), 198-216.
- Clarke, D. A. G., & Mcphie, J. (2016). From places to paths: Learning for Sustainability, teacher education and a philosophy of becoming. *Environmental Education Research*, 22(7), 1002-1024.

- Clarke, D. A. G., & Mcphie, J. (2017). Call for Proposals for a Special Issue: New Materialisms and Environmental Education. *Environmental Education Research blog*. Retrieved from: <https://eerjournal.wordpress.com/tag/new-materialism/>
- Clough, P. (2009). The new empiricism: Affect and sociological method. *European Journal of Social Theory*, 12(1), 43-61.
- Clough, P. (2013) My Mother's Scream. In M. Thompson, & I. Biddle (Eds.), *Sound, music, affect: Theorizing sonic experience* (pp.65-71). New York: Bloomsbury.
- Cohen, J. J. (2014). *Prismatic Ecology: Ecotheory Beyond Green*. Minneapolis, MN: University of Minnesota Press.
- Cohen, J. J. (2015). *Stone: An ecology of the inhuman*. Minneapolis, MN: University of Minnesota Press.
- Cohen, J. J., & Duckert, L. (2017). *Veer Ecology: A Companion for Environmental Thinking*. Minneapolis, MN: University of Minnesota Press.
- Cole, D. R., & Mirzaei Rafe, M. (2017). Conceptual ecologies for educational research through Deleuze, Guattari and Whitehead. *International Journal of Qualitative Studies in Education*, 30(9), 849-862.
- Colebrook, C. (2002). *Understanding Deleuze*. Crows Nest, NSW Australia: Allen and Unwin.
- Colebrook, C. (2017). What Is This Thing Called Education?. *Qualitative Inquiry*, 23(9), 649-655.
- Coleman, R. & Ringrose, J. (2013). *Deleuze and research methodologies*. Edinburgh: Edinburgh University Press.
- Collins, D., Brown, H., & Humberstone, B. (2018). Three Women's Co-autoethnography of Lifelong Adventures in Nature. In T. Grey and D. Mitten (Eds.), *The Palgrave International Handbook of Women and Outdoor Learning* (pp. 489-501). London: Palgrave Macmillan.
- Connolly, W. E. (2013). The 'new materialism' and the fragility of things. *Millennium*, 41(3), 399-412.
- Coole, D., & Frost, S. (2010). *New materialisms: Ontology, agency, and politics*. Durham, NC: Duke University Press.
- Cooper, G. (2010). Outdoor learning, environment and sustainability—Seeing the big picture. In M. Zajelšnik (Ed.), *Encountering, experiencing and exploring nature in education* (pp. 130– 134). Ljubljana, Slovenija: Center šolskih in obšolskih dejavnosti.

- Couper, P. R. (2018). The embodied spatialities of being in nature: encountering the nature/culture binary in green/blue space. *cultural geographies*, 25(2), 285-299.
- Cutting, R. (2016). Reflections on outdoor education and English 'Indigenous Organic Fascism' in the 1930s. *Journal of Adventure Education and Outdoor Learning*, 16(2), 105-116.
- Davies, B. (2014). Reading anger in early childhood intra-actions: A diffractive analysis. *Qualitative Inquiry*, 20(6), 734-741.
- Davies, B., & Gannon, S. (2006). *Doing collective biography: Investigating the production of subjectivity*. Maidenhead, UK: McGraw-Hill Education.
- de Freitas, E., & Palmer, A. (2016). How scientific concepts come to matter in early childhood curriculum: rethinking the concept of force. *Cultural Studies of Science Education*, 11(4), 1201-1222.
- de Vega, E. P. (2014). *Thinking the ecological present*. Retrieved from: [http://www.eistudio.net/ACADEMIC/epdvs\\_ThinkingTheEcologicalPresent.pdf](http://www.eistudio.net/ACADEMIC/epdvs_ThinkingTheEcologicalPresent.pdf)
- Deleuze, G. (1990). *The Logic of Sense*, trans. Mark Lester with Charles Stivale. New York: Columbia University Press.
- Deleuze, G. (1992). Postscript on the Societies of Control, *October*, 59, 3-7.
- Deleuze, G. (1994). *Difference and repetition*. New York: Columbia University Press.
- Deleuze, G. (2005). *Pure Immanence: Essays on A Life*, Cambridge, MA: MIT Press.
- Deleuze, G. (2015). *Difference and Repetition*. London: Bloomsbury.
- Deleuze, G., & Guattari, F. (1986). *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis, MN: University of Minnesota Press.
- Deleuze, G., & Guattari, F. (2004). *A Thousand Plateaus: Capitalism and Schizophrenia*. London: Continuum.
- Deleuze, G., & Guattari, F. (1994). *What is philosophy?*. New York: Columbia University Press.
- Deleuze, G., & Parnet, C. (1977) *Dialogues*. Paris : Flammarion.
- Deleuze, G., & Parnet, C. (2002). *Dialogues II*, London: Continuum.
- Deleuze, G., Guattari, F., & Brinkley, R. (1983). What is a minor literature?. *Mississippi Review*, 11(3), 13-33.

- Denzin, N. K. (1989). *Interpretive interactionism*. Newbury Park, CA: Sage.
- Denzin, N. K. (2013). The death of data?. *Cultural Studies? Critical Methodologies*, 13(4), 353-356.
- Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research*. Newbury Park, CA: Sage.
- Dewey, J. (1916/1966). *Democracy and education*. New York: Free Press.
- Doel, M. A. (2000). Spatial science after Dr Seuss and Gilles Deleuze. *Thinking space*, 9, 117.
- Doll Jr, W. E. (2006). Method and its culture: An historical approach. *Complicity: An International Journal of Complexity and Education*, 3(1), 85-89.
- Done, E. J., & Knowler, H. (2011). (Re) writing reflective practice with Deleuze, Guattari and feminist poststructuralism. *Reflective practice*, 12(6), 841-852.
- Dowling, R., Lloyd, K., & Suchet-Pearson, S. (2017). Qualitative methods II: 'More-than-human' methodologies and/in praxis. *Progress in Human Geography*, 41(6), 823-831.
- Duerden, M. D., & Witt, P. A. (2010). The impact of direct and indirect experiences on the development of environmental knowledge, attitudes, and behavior. *Journal of Environmental Psychology*, 30(4), 379-392.
- Duhn, I., Malone, K., and Tesar, M. 2017. Troubling the intersections of urban/nature/childhood in environmental education. *Environmental Education Research*, 23(10), 1357-1368.
- Edwards, R., & Fenwick, T. (2015). Critique and politics: A sociomaterialist intervention. *Educational Philosophy and Theory*, 47(13-14), 1385-1404.
- Erickson, F. (1986). Qualitative methods in research on teaching. In M. C. Wittrock (Ed.), *Handbook of research on teaching*. (pp. 119-161). New York: Macmillan.
- Ewert, A., Place, G., & Sibthorp, J. (2005). Early-life outdoor experiences and an individual's environmental attitudes. *Leisure Sciences*, 27(3), 225-239.
- Farr, C. K., and Snyder, P. A (1996). From Walden Pond to the Great Salt Lake: Ecobiography and Engendered Species Acts in Walden and Refuge. In L. Anderson and E. England(Eds.) *Tending the Garden: Essays on Mormon Literature* (pp. 197-211). Salt Lake City: Signature.
- Fawcett, L. (2009). Feral sociality and (un) natural histories. In M. McKenzie, P. Hart, H. Bai, and B. Jickling (Eds.), *Fields of green: Restorying culture, environment, and education*, (pp.227-236). New York: Hampton Press.

- Fawcett, L. 2000. Ethical imagining: ecofeminist possibilities and environmental learning. *Canadian Journal of Environmental Education*, 5(1), 134–149.
- Fox, N. J., & Alldred, P. (2013). The sexuality-assemblage: desire, affect, anti-humanism. *The Sociological Review*, 61(4), 769-789.
- Fox, N. J., & Alldred, P. (2015). New materialist social inquiry: Designs, methods and the research-assemblage. *International Journal of Social Research Methodology*, 18(4), 399-414.
- Frantz, C. M., & Mayer, F. S. (2014). The importance of connection to nature in assessing environmental education programs. *Studies in Educational Evaluation*, 41, 85–89.
- Frost, S. (2011). The implications of the new materialisms for feminist epistemology. In H. Grasswick (Ed.), *Feminist epistemology and philosophy of science* (pp. 69-83). Dordrecht: Springer.
- Gale K., & Wyatt J. (2013) Assemblage/Ethnography. In: N. Short, L. Turner, and A. Grant (Eds.) *Contemporary British Autoethnography. Studies in Professional Life and Work*. Rotterdam: Sense Publishers.
- Gale, K. (2016). Ordinary? Affects? Swimming with Kathleen Stewart and Others against the Tide Race of Representation and the Heresies of Names. *Departures in Critical Qualitative Research*, 5(4), 48-61.
- Gale, K. (2016). Theorizing as practice: Engaging the posthuman as method of inquiry and pedagogic practice within contemporary higher education. In C. Taylor and C. Hughes (Eds.), *Posthuman research practices in education* (pp. 242-257). London: Palgrave Macmillan.
- Gale, K. (2017). Not All Who Wander Are Lost and All Who Wonder Are Found. *International Review of Qualitative Research*, 10(1), 4-8.
- Gale, K. (2018). *Madness as Methodology: Bringing Concepts to Life in Contemporary Theorising and Inquiry*. London: Routledge.
- Gale, K., & Wyatt, J. (2017). Working at the wonder: Collaborative writing as method of inquiry. *Qualitative Inquiry*, 23(5), 355-364.
- Gale, K., & Wyatt, J. (2018). Riding the waves of collaborative-writing-as-inquiry: Some ontological creative detours. In N. Denzin and D. Giardina (Eds.) *Cultivating Creativity in Methodology and Research* (pp. 193-205). Oxford, UK: Routledge.
- Gallagher, J. (2018) More than half your body is not human. BBC website. Retrieved from: <http://www.bbc.co.uk/news/health-43674270>

- Gannon, S. (2006). The (im) possibilities of writing the self-writing: French poststructural theory and autoethnography. *Cultural Studies ↔ Critical Methodologies*, 6(4), 474-495.
- Gannon, S. (2017). Saving squawk? Animal and human entanglement at the edge of the lagoon. *Environmental Education Research*, 23(1), 91-110.
- Garrard, G. (2010). Problems and prospects in ecocritical pedagogy. *Environmental Education Research*, 16(2), 233-245.
- Gerrard, J., Rudolph, S., & Sriprakash, A. (2017). The politics of post-qualitative inquiry: History and power. *Qualitative inquiry*, 23(5), 384-394.
- Ginn, F., and Demeritt, D. (2010). Nature. In S. L. Holloway, S. P. Rice, G. Valentine, and N. Clifford (Eds.), *Key concepts in geography* (pp.300–311). London: Sage.
- González-Gaudiano, E., & Buenfil-Burgos, R. (2009). The impossible identity of environmental education. In M. McKenzie, P. Hart, H. Bai, and B. Jickling (Eds.), *Fields of green. Restorying culture, environment, and education*, (pp.97-108), New York: Hampton Press.
- Goodwin, T. (2016). Educating for Ecological Literacy. *The American Biology Teacher*, 78(4), 287-291.
- Gough, A., & Whitehouse, H. (2018). New vintages and new bottles: The “Nature” of environmental education from new material feminist and ecofeminist viewpoints. *The Journal of Environmental Education*, 1-14. Ahead-of-print: <https://www.tandfonline.com/doi/abs/10.1080/00958964.2017.1409186>
- Gough, N. (1999). Rethinking the subject:(de) constructing human agency in environmental education research. *Environmental Education Research*, 5(1), 35-48.
- Gough, N. (2004). RhizomANTically becoming-cyborg: Performing posthuman pedagogies. *Educational Philosophy and Theory*, 36(3), 253-265.
- Gough, N. (2011). Environmental education, narrative complexity and postmodern science/fiction. *International Journal of Science Education*, 15(5), 607-625.
- Gough, N. (2011). Escaping the program: A Foreword. In D. R. Cole (Ed.), *Educational life-forms. Deleuzian teaching and learning practice*. Retrieved from: [https://www.researchgate.net/profile/Noel\\_Gough/publication/274375328\\_Escaping\\_the\\_program\\_a\\_foreword/links/559cc1bb08ae0035df249501/Escaping-the-program-a-foreword.pdf](https://www.researchgate.net/profile/Noel_Gough/publication/274375328_Escaping_the_program_a_foreword/links/559cc1bb08ae0035df249501/Escaping-the-program-a-foreword.pdf)

- Gough, N. (2012). W (h)ither gatekeeping?: Academic publishing and peer review in complex networked systems. *ACCESS: Critical Perspectives on Communication, Cultural & Policy Studies*, 31(1), 35.
- Gough, N. (2015). Undoing anthropocentrism in educational inquiry: A Phildickian space odyssey. In N. Snaza and J. Weaver (Eds.) *Posthumanism and educational research*, (pp. 151-166). Oxford, UK: Routledge.
- Gough, N. (2016). Postparadigmatic materialisms: A “new movement of thought” for outdoor environmental education research?. *Journal of Outdoor and Environmental Education*, 19(2), 51-65.
- Gough, N., & Price, L. (2004). Rewording the world: poststructuralism, deconstruction and the ‘real’ in environmental education. *Southern African Journal of Environmental Education*, 21, 23-36.
- Green, M. J. (1997). *Exploring the world of the Druids*. London: Thames and Hudson.
- Gregg, M., & Seigworth, G. J. (2010). *The affect theory reader*. Durham, NC: Duke University Press.
- Grosz, E. (2005). Bergson, Deleuze and the becoming of unbecoming. *Parallax*, 11(2), 4-13.
- Grosz, E. A. (1994). *Volatile bodies: Toward a corporeal feminism*. Bloomington, IN: Indiana University Press.
- Grosz, E. A. (2008). *Chaos, territory, art: Deleuze and the framing of the earth*. New York: Columbia University Press.
- Guttorm, H., Hohti, R., & Paakkari, A. (2015). “Do the next thing”: an interview with Elizabeth Adams St. Pierre on post-qualitative methodology. *Reconceptualizing educational research methodology*, 6(1). 15-22.
- Haferkamp, L. (2008). The Instructed Third: Processing Ecology with Deleuze. In B. Herzogenrath (Ed.) *An [Un] Likely Alliance: Thinking Environment [s] with Deleuze| Guattari*, (pp.52-65). Newcastle upon Tyne: Cambridge Scholars Publishing.
- Haigh, M. (2006). Deep ecology education: Learning from its Vaisnava roots. *Canadian Journal of Environmental Education*, 11(1), 43–56.
- Halsey, M. (2017). *Deleuze and environmental damage: Violence of the text*. London: Routledge.
- Haraway, D. (1985). A manifesto for cyborgs: science, technology, and socialist feminism in the 1980s. *Socialist Review*, 80, 65–108.

- Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist studies*, 14(3), 575-599.
- Haraway, D. (1992). The promises of monsters: A regenerative politics for inappropriate/d others, In L. Grossberg, C. Nelson, P A. Treichler (Eds.) *Cultural Studies*, (pp. 295-337). New York; Routledge.
- Haraway, D. (2015). Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin. *Environmental Humanities*, 6, 159–165.
- Haraway, D. J. (1994). A game of cat's cradle: science studies, feminist theory, cultural studies. *Configurations*, 2(1), 59-71.
- Haraway, D. J. (1997)  
*Modest\_Witness@Second\_Millennium.Femaleman©\_Meets\_Oncomouse<sup>TM</sup>: Feminism and Technoscience*. New York and London: Routledge.
- Harley, A. (2017). The Material Turn, Life and Writing. *a/b: Auto/Biography Studies*, 32(2), 275-277.
- Harman, G. (2015). Object-Oriented Ontology. In M. Hauskeller, C. Carbonell, T. Philbeck (Eds.), *The Palgrave Handbook of Posthumanism in Film and Television* (pp. 401-409). London: Palgrave Macmillan.
- Hart, P. (2005). Transitions in thought and practice: links, divergences and contradictions in post-critical inquiry. *Environmental Education Research*, 11(4), 391-400.
- Harvey, G. (2013). *The handbook of contemporary animism*. Durham, NC: Acumen Publishing.
- Hawkins, R. (2014). Why Deep Ecology Had to Die. *Trumpeter*, 30(2), 206-230.
- Hayden, P. (1997). Gilles Deleuze and naturalism: a convergence with ecological theory and politics. *Environmental Ethics*, 19(2), 185-204.
- Hayward, E. (2008) More lessons from a starfish: Prefixial flesh and trans-speciated selves. *WSQ: Women's Studies Quarterly*. 36(3-4), 64-85 .
- Hekman, S. (2010). *The material of knowledge: Feminist disclosures*. Bloomington, IN: Indiana University Press.
- Hickey-Moody, A. (2015). Manifesto: The Rhizomatics of Practice as Research . In A. Hickey-Moddy and T. Page (Eds.) *Arts, Pedagogy and Cultural Resistance*, (pp.169-192). London and New York: Rowman and Littlefield.
- Hicks, D. (1998). Stories of hope: A response to the 'psychology of despair'. *Environmental Education Research*, 4(2), 165-176.

- Higgins, M., Madden, B., & Korteweg, L. (2015). Witnessing (halted) deconstruction: white teachers' 'perfect stranger' position within urban Indigenous education. *Race Ethnicity and Education*, 18(2), 251-276.
- Higgins, P. (1997). Outdoor education for sustainability: Making connections. *Journal of Adventure Education and Outdoor Leadership*, 13(4), 4–11.
- Highmore, B. (2010). Affect, food, and social aesthetics. In M. Gregg and G. J. Seigworth (Eds.) *The affect theory reader*, (pp.118-137). Durham, NC: Duke University Press.
- Hirsch, J. E. (2007). Does the h index have predictive power?. *Proceedings of the National Academy of Sciences*, 104(49), 19193-19198.
- Honan, E. (2004). (Im) plausibilities: A rhizo-textual analysis of policy texts and teachers' work. *Educational Philosophy and Theory*, 36(3), 267-281.
- Honan, E. (2014). Disrupting the habit of interviewing. *Reconceptualizing Educational Research Methodology*, 5(1).
- Honan, E., & Bright, D. (2016). Writing a thesis differently. *International Journal of Qualitative Studies in Education*, 29(5), 731-743.
- Hroch, P. (2014). Deleuze, Guattari, and Environmental Pedagogy and Politics. In M. Carlin and J. Wallin (Eds.), *Deleuze and Guattari, Politics and Education: For a People-Yet-to-Come* (pp. 49-76). London: Bloomsbury.
- Hudson, R. (2010). *The Christian Writer's Manual of Style*. Grand Rapids, MI: Zondervan.
- Huff, C. (2017). After Auto, after Bio: Posthumanism and Life Writing. *a/b: Auto/Biography Studies*, 32(2), 279-282.
- Ingold, T. (2002). *The perception of the environment: essays on livelihood, dwelling and skill*. London: Routledge.
- Ingold, T. (2007). Materials against materiality. *Archaeological dialogues*, 14(1), 1-16.
- Ingold, T. (2010). Bringing Things to Life: Creative Entanglements in a World of Materials. *Realities*. Retrieved from: [http://eprints.ncrm.ac.uk/1306/1/0510\\_creative\\_entanglements.pdf](http://eprints.ncrm.ac.uk/1306/1/0510_creative_entanglements.pdf)
- Ingold, T. (2010a). Footprints through the weather-world: walking, breathing, knowing. *Journal of the Royal Anthropological Institute*, 16(1), S121–S139.
- Ingold, T. (2010b). *Bringing things back to life: Creative entanglements in a world of materials*. Retrieved from: <http://eprints.ncrm.ac.uk/1306/>

- Ingold, T. (2011). *Being alive: Essays on movement, knowledge and description*. London: Routledge.
- Ingold, T. (2013). *Making: Anthropology, archaeology, art and architecture*. London: Routledge.
- Ingold, T. (2016). *Lines: a brief history*. London: Routledge.
- Iovino, S. (2012). Material ecocriticism: Matter, text, and posthuman ethics. In T. Müller and M. Sauter (Eds.) *Literature, Ecology, Ethics* (pp.51-68), Heidelberg: Winter Verlag.
- Iovino, S., & Oppermann, S. (2014). *Material ecocriticism*. Bloomington, IN: Indiana University Press.
- Irwin, D. (2010). Weaving the threads of education for sustainability and outdoor education. Published PhD Thesis, University of Canterbury, Christchurch, New Zealand.
- Ivakhiv, A. (2010) About. *Immanence* [Blog]. Retrieved from: <http://blog.uvm.edu/aivakhiv/about/>
- Ivakhiv, A. (2014). On Matters of Concern: Ontological Politics, Ecology, and the Anthro(s)cene. Unpublished paper. University of Vermont. Retrieved from: <http://environmentsandsocieties.ucdavis.edu/files/2014/04/On-Matters-of-Concern.pdf>
- Jackson, A. Y. (2013). Data-as-machine: A Deleuzian becoming. In R. Coleman and J. Ringrose (Eds.). *Deleuze and research methodologies* (pp.111-124), Edinburgh: Edinburgh University Press.
- Jackson, A. Y. (2016). An ontology of a backflip. *Cultural Studies ↔ Critical Methodologies*, 16(2), 183-192.
- Jackson, A. Y. (2017). Thinking without method. *Qualitative Inquiry*, 23(9), 666-674.
- Jackson, A. Y. and Mazzei, L. A. (2012). *Thinking with theory in qualitative research: Viewing data across multiple perspectives*, London: Routledge.
- Jackson, Z. I. (2013). Animal: New directions in the theorization of race and posthumanism. *Feminist Studies*. 30(3), 669-685.
- Jickling, B. (2010). Reflecting on the 5th world environmental education congress, Montreal. *Journal of Education for Sustainable Development*, 4(1), 25-36.
- Jickling, B., & Wals, A. E. (2008). Globalization and environmental education: Looking beyond sustainable development. *Journal of Curriculum Studies*, 40(1), 1-21.

- Johansson, L. (2016). Post-qualitative line of flight and the confabulative conversation: a methodological ethnography. *International Journal of Qualitative Studies in Education*, 29(4), 445-466.
- Johns-Putra, A. (2013). Environmental care ethics: Notes toward a new materialist critique. *symploke*, 21(1), 125-135.
- Jones, G. (2011). *The Universe of Things*. Seattle: Aqueduct Press.
- Jordan, K., & Kristjánsson, K. (2017). Sustainability, virtue ethics, and the virtue of harmony with nature. *Environmental Education Research*, 23(9), 1205-1229.
- Kals, E., Schumacher, D., & Montada, L. (1999). Emotional affinity toward nature as a motivational basis to protect nature. *Environment and Behavior*, 31(2), 178–202.
- Khan, G. (2009). Agency, nature and emergent properties: An interview with Jane Bennett. *Contemporary Political Theory*, 8(1), 90-105.
- Kidd, D. (2015). *Becoming Mobius: The complex matter of education*. Bancyfelin, UK: Crown House Publishing.
- Kingsnorth, P. (2017). *Confessions of a recovering environmentalist*. London: Faber & Faber.
- Knapp, C. E. (1999). *In accord with nature: Helping students form an environmental ethic using outdoor experience and reflection*. Charleston, WV: ERIC/CRESS, Appalachia Educational Laboratory.
- Knappenberger, B. (2014). *The Internet's Own Boy* [Motion Picture]. Unjustus Films.
- Koro-Ljungberg, M. (2015). *Reconceptualizing qualitative research: Methodologies without methodology*. London: Sage Publications.
- Koro-Ljungberg, M., & Ulmer, J. B. (2016). This is not a collaborative writing. In N. Denzin and M. Giardina (Eds.) *Qualitative inquiry through a critical lens*, (pp.99-116). Oxford, UK: Routledge.
- Koro-Ljungberg, M., Carlson, D., Tesar, M., & Anderson, K. (2015). Methodology brut: Philosophy, ecstatic thinking, and some other (unfinished) things. *Qualitative Inquiry*, 21(7), 612-619.
- Kruger, F. (2016). Posthumanism and educational research for sustainable futures. *Journal of Education*, (65), 77-94.
- Lake, J. (2015). Autoethnography and reflective practice: reconstructing the doctoral thesis experience. *Reflective Practice*, 16(5), 677-687.

- Lather, P. (1993). Fertile obsession: Validity after poststructuralism. *The sociological quarterly*, 34(4), 673-693.
- Lather, P. (2016). Top Ten+ List: (Re) Thinking Ontology in (Post) Qualitative Research. *Cultural Studies? Critical Methodologies*, 16(2), 125-131.
- Lather, P., & St. Pierre, E. A. (2013). Post-qualitative research. *International journal of qualitative studies in education*, 26(6), 629-633.
- Latimer, J., & Miele, M. (2013). Naturecultures? Science, affect and the non-human. *Theory, Culture & Society*, 30(7-8), 5-31.
- Latour, B. (2004). Why has critique run out of steam? From matters of fact to matters of concern. *Critical inquiry*, 30(2), 225-248.
- Latour, B., & Woolgar, S. (1979). *Laboratory life: The social construction of scientific facts*. Beverly Hills: Sage Publications.
- Law, J. (2004). *After method: Mess in social science research*. London: Routledge.
- Le Guin, U. (2015). Cover endorsement. *The mushroom at the end of the world: On the possibility of life in capitalist ruins*, by Anna Tsing, Princeton, NJ: Princeton University Press.
- Lebedev, O. (2017). 'Quod Erat Faciendum': The Theorematic and the Problematic in Deleuze. *Annual National Deleuze Conference*, Enschede, 17/05/2017 to 18/05/2017.
- Leopold, M. F., Begeman, L., van Bleijswijk, J. D., IJsseldijk, L. L., Witte, H. J., & Gröne, A. (2015). Exposing the grey seal as a major predator of harbour porpoises. *Proceedings of the Royal Society B*, 282( 20142429), 1-7.
- Lewis, C. S. (2016). *The Magician's Nephew*. Hong Kong: Enrich Sport.
- Liefländer, A. K., Fröhlich, G., Bogner, F. X., & Schultz, P. W. (2013). Promoting connectedness with nature through environmental education. *Environmental Education Research*, 19(3), 370-384.
- Lin, B. (2016). In Facebook group, 'Deleuze and Guattari'. Retrieved: 9 March, 2016.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Lispector, C. (1973). *Agua Viva*. Heirs of Clarice Lispector and Agencia Literaria Carmen Balcells, Barcelona.
- Lorimer, J. (2012). Multinatural geographies for the Anthropocene. *Progress in Human Geography*, 36(5), 593-612

- Lorraine, T. (2011). *Deleuze and Guattari's immanent ethics: Theory, subjectivity, and duration*. Albany, NY: State University of New York Press.
- Lugg, A. (2007). Developing sustainability-literate citizens through outdoor learning: Possibilities for outdoor education in higher education. *Journal of Adventure Education & Outdoor Learning*, 7(2), 97-112.
- Lundy, J. (2014). The stroll: Reflections on Deleuzian ethics. *Rhizomes: Cultural Studies in Emerging Knowledge*, 26. Retrieved from: <http://www.rhizomes.net/issue26/lundy.html>
- Lynch, J., & Mannion, G. (2016). Enacting a place-responsive research methodology: walking interviews with educators. *Journal of Adventure Education and Outdoor Learning*, 16(4), 330-345.
- Lysgaard, J. G., & Fjeldsted, K. L. (2015). Exploring education between discourse and matter: exceeding existing limits of the sustainability discourse. In *World Environmental Education Conference*. Retrieved from: <http://www.forskningsdatabasen.dk/en/catalog/2290109352>
- MacDonald, S. M. (2018). Composing an Autoethnographic Cartography of Blue: Becoming a Pharologist in and of the Academy. *Cultural Studies ↔ Critical Methodologies*, 18(2), 149-162.
- Macfarlane, R. (2009). *Mountains of the Mind: A History of a Fascination*. London: Granta.
- MacLure, M. (2013). Researching without representation? Language and materiality in post-qualitative methodology. *International journal of qualitative studies in education*, 26(6), 658-667.
- MacLure, M. (2015). *The 'new materialisms': a thorn in the flesh of critical qualitative inquiry?* In G. Cannella, M. Perez, and P. Pasque (Eds.), *Critical qualitative inquiry: foundations and futures*, (pp.93-112). Walnut Creek, CA: Left Coast Press.
- MacLure, M. (2017). Qualitative methodology and the new materialisms, In N. Denzin and M. Giardina (Eds.), *Qualitative inquiry in neoliberal times*, (pp. 48-58). London: Routledge.
- Malone, K. (2016). Theorizing a child–dog encounter in the slums of La Paz using post-humanistic approaches in order to disrupt universalisms in current 'child in nature' debates. *Children's Geographies*, 14(4), 390-407.
- Malone, K. (2017). Ecological posthumanist theorising: Grappling with child-dog-bodies. In K. Malone, S. Truong, and T. Gray (Eds.), *Reimagining sustainability in precarious times* (pp. 161-172). Singapore: Springer.

- Manning, E. (2016). Ten propositions for research-creation. In N. Colin and S. Sachenmair (Eds.), *Collaboration in Performance Practice* (pp. 133-141). London: Palgrave Macmillan.
- Mannion, G., Fenwick, A., & Lynch, J. (2013). Place-responsive pedagogy: Learning from teachers' experiences of excursions in nature. *Environmental Education Research, 19*(6), 792-809.
- Marres, N. (2016). *Material participation: technology, the environment and everyday publics*. London: Springer.
- Masny, D. (2013). Rhizoanalytic pathways in qualitative research. *Qualitative Inquiry, 19*(5), 339-348.
- Massumi, B. (1986) Translators Forward. In G. Deleuze and F. Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis, MN: University of Minnesota Press.
- Massumi, B. (1995). The autonomy of affect. *Cultural critique, 31*(2), 83-109.
- Massumi, B. (2010). What concepts do: Preface to the Chinese translation of a thousand plateaus. *Deleuze Studies, 4*(1), 1-15.
- Massumi, B. (2015). *Politics of affect*. London: John Wiley & Sons.
- Mazzei, L. (2013). A voice without organs: interviewing in posthumanist research, *International Journal of Qualitative Studies in Education, 26*(6), 732 -740.
- Mazzei, L. A. (2013). Materialist mappings of knowing in being: Researchers constituted in the production of knowledge. *Gender and Education, 25*(6), 776-785.
- Mazzei, L. A. (2014). Beyond an easy sense: A diffractive analysis. *Qualitative inquiry, 20*(6), 742-746.
- Mazzei, L. A., & Jackson, A. Y. (2017). Voice in the agentic assemblage. *Educational Philosophy and Theory, 49*(11), 1090-1098.
- McBride, B. B., Brewer, C. A., Berkowitz, A. R., & Borrie, W. T. (2013). Environmental literacy, ecological literacy, ecoliteracy: What do we mean and how did we get here? *Ecosphere, 4*(5), 1-20.
- McEvelley, T. (2012). *The shape of ancient thought: Comparative studies in Greek and Indian philosophies*. New York: Skyhorse Publishing.
- McKenzie, M. (2005). The 'post-post period' and environmental education research. *Environmental Education Research, 11*(4), 401-412.

- McKenzie, M., & Bieler, A. (2016). *Critical education and sociomaterial practice: Narration, place, and the social*. New York: Peter Lang.
- Mcphie, J. (2017). Embodied walls and extended skins: exploring mental health through tattoos and graffiti. In S. Awad and B. Wagoner (Eds.), *Street Art of Resistance* (pp. 223-250). London: Palgrave Macmillan.
- Mcphie, J. & Clarke, D.A.G. (in press). Nature Matters: Diffracting a Keystone Concept of Environmental Education Research – Just for Kicks. *Environmental Education Research*.
- Mcphie, J., & Clarke, D. A. G. (2015). A walk in the park: considering practice for outdoor environmental education through an immanent take on the material turn. *The Journal of Environmental Education*, 46(4), 230-250.
- Meyer, J., & Land, R. (2006). *Overcoming barriers to student understanding: Threshold concepts and troublesome knowledge*. London: Routledge.
- Milkoreit, M. (2016). The promise of climate fiction. In P. Wapner and H. Elver *Reimagining Climate Change* (pp.171-191). London: Routledge.
- Mingé, J. M., & Zimmerman, A. L. (2013). *Concrete and dust: Mapping the sexual terrains of Los Angeles*. New York: Routledge.
- Mirzoeff, N. (2014). Visualizing the Anthropocene. *Public Culture*, 26(2), 213-232.
- Mittelstaedt, R., Sanker, L., & VanderVeer, B. (1999). Impact of a week-long experiential education program on environmental attitude and awareness. *Journal of Experiential Education*, 22(3), 138–148.
- Mol, A. (2002). *The body multiple: Ontology in medical practice*. Durham, NC: Duke University Press.
- Moore, J. (2014). *The Capitalocene, Part I: On the nature & origins of our ecological crisis*. Retrieved from: [http://www.jasonwmoore.com/uploads/%20The %20Capitalocene Part I June 2014.pdf](http://www.jasonwmoore.com/uploads/%20The%20Capitalocene%20Part%20I%20June%202014.pdf)
- Morton, T. (2007). *Ecology without nature: Rethinking environmental aesthetics*. Cambridge, MA: Harvard University Press.
- Morton, T. (2010). *The ecological thought*. Cambridge, MA: Harvard University Press.
- Morton, T. (2011). Here comes everything: The promise of object-oriented ontology. *Qui Parle: Critical Humanities and Social Sciences*, 19(2), 163-190.
- Moustakas, C. (1990). *Heuristic research: Design, methodology, and applications*. Newbury Park, CA: Sage Publications.

- Mullenbach, L. E., Andrejewski, R. G., & Mowen, A. J. (2018). Connecting children to nature through residential outdoor environmental education. *Environmental Education Research*, 1-10. Ahead-of-print. Retrieved from: <https://www.tandfonline.com/doi/abs/10.1080/13504622.2018.1458215>
- Naess, A. (1973). The Shallow and the deep, long-range ecology movement. *Inquiry: An Interdisciplinary Journal of Philosophy*, 16(1-4), 95-199.
- Nardizzi, V. (2017). Environ. In J. Cohen, and L. Duckert (Eds.) *Veer Ecology*, (pp.183-195). Minneapolis, IN: University of Minnesota Press.
- Nicol, R. (2003). Outdoor education: Research topic or universal value? Part three. *Journal of Adventure Education & Outdoor Learning*, 3(1), 11-27.
- Nicol, R. (2013). Returning to the richness of experience: is autoethnography a useful approach for outdoor educators in promoting pro-environmental behaviour?. *Journal of Adventure Education & Outdoor Learning*, 13(1), 3-17.
- Noys, B. (2010). *Persistence of the negative: A critique of contemporary continental theory: A critique of contemporary continental theory*. Edinburgh: Edinburgh University Press.
- Noys, B. (2014). *Malign velocities: Accelerationism and capitalism*. Winchester, UK: Zero Books.
- Nxumalo, F. (2016). Touching place in childhood studies: Situated encounters with a community garden. In V. Pacini-Ketchabaw and K. Skott-Myhre (Eds.), *Youth work, early education, and psychology* (pp. 131-158). New York: Palgrave Macmillan.
- Oppermann, S. (2013). Material Ecocriticism and the Creativity of Storied Matter. *FRAME*, 26(2), p.55-69.
- Orr, D. W. (1992). *Ecological literacy: Education and the transition to a postmodern world*. New York: Suny Press.
- Palombi, F. (2009). Neither inside, nor outside. Considerations on the structure of the subject and of language in Jacques Lacan. *Etica & Politica / Ethics & Politics*, 11(1), 351-360.
- Payne, P. G. (2005). Lifeworld and textualism: Reassembling the researcher/ed and 'others'. *Environmental Education Research*, 11(4), 413-431.
- Payne, P. G. (2016). What next? Post-critical materialisms in environmental education. *The Journal of Environmental Education*, 47(2), 169-178.

- Payne, P.G. (2014). Vagabonding slowly: ecopedagogy, metaphors, figurations, and nomadic ethics. *Canadian Journal of Environmental Education*, 19, 47-69.
- Pedersen, H. (2010). Is 'the posthuman' educable? On the convergence of educational philosophy, animal studies, and posthumanist theory. *Discourse: Studies in the Cultural Politics of Education*, 31(2), 237-250.
- Pedersen, H., & Pini, B. (2017). Educational epistemologies and methods in a more-than-human world. *Educational Philosophy and Theory*, 49(11), 1051-1054.
- Pelias, R. J. (2002). For father and son: An ethnodrama with no catharsis. In A. Bochner and C. Ellis (Eds.), *Ethnographically speaking: Autoethnography, literature, and aesthetics* (pp. 35-43). Walnut Creek, CA: Rowman and Littlefield.
- Perreten, P (2003/2014). Eco-Autobiography: Portrait of Place|Self Portrait. *a/b: Auto/Biography Studies*, 18(1), 1–22.
- Peters, M. A. (2004). Geophilosophy, education and the pedagogy of the concept. *Educational Philosophy and Theory*, 36(3), 217-226.
- Pettman, D. (2011). *Human error: Species-being and media machines*. Minneapolis, MI: University of Minnesota Press.
- Phillips, D., & Sullivan, H. I. (2012). Material ecocriticism: Dirt, waste, bodies, food, and other matter. *ISLE: Interdisciplinary Studies in Literature and Environment*, 19(3), 445-447.
- Pimm, S. L., Jenkins, C., Abell, R., Brooks, T., Gittleman, J., Jopa, L., et al. (2014). The Biodiversity of species and their rates of extinction, distribution, and protection. *Science*, 344(6187).
- Piotrowski, M. (2017). 'Authentic' folds: environmental audiences, activists and subjectification in hypocrisy micropolitics. *Continuum*, 31(6), 844-856.
- Plumwood, V. (2000). Deep ecology, deep pockets, and deep problems: A Feminist ecosocialist analysis. In E. Katz, A. Light, & D. Rothenberh (Eds.), *Beneath the surface: Critical essays in the philosophy of deep ecology* (pp. 59–84). Cambridge, MA: MIT Press.
- Plumwood, V. (2002). *Feminism and the Mastery of Nature*. London: Routledge.
- Pryor, M. (2017). Eco-Autobiography: Writing Self through Place. *a/b: Auto/Biography Studies*, 32(2), 391-393.
- Rautio, P. (2013). Children who carry stones in their pockets: On Autotelic material practices in everyday life. *Children's Geographies*, 11(4), 394–408.

- Rautio, P. (2014). Mingling and imitating in producing spaces for knowing and being: Insights from a Finnish study of child–matter intra-action. *Childhood*, 21(4), 461-474.
- Richards, M. (2015). Turning back to the story of my life: an autoethnographic exploration of a researcher’s identity during the PhD process. *Reflective Practice*, 16(6), 821-835.
- Richardson, L. (2001). Getting personal: Writing-stories. *International Journal of Qualitative Studies in Education*, 14(1), 33-38.
- Ringrose, J., & Coleman, R. (2013). Looking and desiring machines: A feminist Deleuzian mapping of bodies and affects. In R. Coleman and J. Ringrose (Eds.). *Deleuze and research methodologies* (pp.125-144), Edinburgh: Edinburgh University Press.
- Roberts, T. (2012). From ‘new materialism’ to ‘machinic assemblage’: agency and affect in IKEA. *Environment and Planning A*, 44(10), 2512-2529.
- Rölli, M. (2016). *Gilles Deleuze’s Transcendental Empiricism: From Tradition to Difference*. Edinburgh: Edinburgh University Press.
- Rooney, T. (2018). Weather worlding: learning with the elements in early childhood. *Environmental Education Research*, 24(1), 1-12.
- Rose, D. B. (2004). *Reports from a Wild Country: Ethics for Decolonisation*. Sydney: University of New South Wales Publications.
- Rose, N. (1999). *Powers of Freedom: Reframing political thought*. New York: Cambridge University Press.
- Ross, H., & Mannion, G. (2012). Curriculum making as the enactment of dwelling in places. *Studies in Philosophy and Education*, 31(3), 303-313.
- Rousell, D. (2018). Mapping the Data Event: A Posthumanist Approach to Art| Education| Research in a Regional University. In L. Knight and A. Lasczik (Eds.), *Arts-Research-Education* (pp. 203-220). London: Springer.
- Russell, C. L. (2005). ‘Whoever does not write is written’: the role of ‘nature’ in post-post approaches to environmental education research. *Environmental Education Research*, 11(4), 433-443.
- Sauvé, L. (2005). Currents in Environmental Education: Mapping a Complex and Evolving Pedagogical Field. *Canadian Journal of Environmental Education*, 10(1), 11-37.
- Schama S. 1995. *Landscape and Memory*. London: Harper Collins Publishers.

- Scott, W. (2009). Environmental education research: 30 years on from Tbilisi. *Environmental Education Research*, 15(2), 155-164.
- Scott, W. (2017). Babble or something worse? [Blog post]. Retrieved from: <http://blogs.bath.ac.uk/edswahs/2017/04/19/babble-or-something-worse/>
- Sellers, M. A. (2009). *Re(con)ceiving children in curriculum: Mapping (a) milieu(s) of becoming*. (Doctor of Philosophy), The University of Queensland.
- Semetsky, I. (2009). Deleuze as a philosopher of education: Affective knowledge/effective learning. *The European Legacy*, 14(4), 443-456.
- Semetsky, I. and Masny, D. (2011). The 'Untimely' Deleuze: some implications for educational policy. *Policy Futures in Education*, 9(4), 447-453.
- Shaviro, S. (2014). *The Universe of Things: On Speculative Realism*. Minneapolis and London: University of Minnesota Press.
- Singh, N. M. (2018). Introduction: Affective Ecologies and Conservation. *Conservation and Society*, 16(1), 1-7.
- Sloterdijk, P. (2013). *You must change your life*. Cambridge, UK: Polity Press.
- Smith, D. (2003). Deleuze and Derrida, immanence and transcendence: Two directions in recent French thought. In P. Patton & J. Protevi (Eds.), *The Proceedings of the Twenty-First World Congress of Philosophy* (pp. 123-130). Continuum. Retrieved from: <https://philpapers.org/rec/SMIDAD-4>
- Smith, D. (2012). *Essays on Deleuze*. Edinburgh: Edinburgh University Press.
- Snaza, N., Sonu, D., Truman, S. E., & Zaliwska, Z. (2016). *Pedagogical matters: New materialisms and curriculum studies*. New York: Peter Lang.
- Somerville, M., & Williams, C. (2015). Sustainability education in early childhood: An Updated review of research in the field. *Contemporary Issues in Early Childhood*, 16(2), 102-117.
- Sonu, D., & Snaza, N. (2015). The fragility of ecological pedagogy: Elementary social studies standards and possibilities of new materialism. *Journal of Curriculum and Pedagogy*, 12(3), 258-277.
- Speedy, J. (2005). Writing as inquiry: Some ideas, practices, opportunities and constraints. *Counselling and Psychotherapy Research*, 5(1), 63-64.
- Speedy, J. (2013). Collaborative writing and ethical know-how: Movements within the space around scholarship, the academy and the social research imaginary. *International Review of Qualitative Research*, 5(4), 349-356.

- Speedy, J., & Wyatt, J. (2014). *Creative practitioner inquiry in the helping professions*. Rotterdam: Sense Publishing.
- Springgay, S. (2014). Approximate-Rigorous Abstractions. In N. Snaza and J. Weaver (Eds.), *Posthumanism and educational research*, (pp. 76-89). Oxford, UK: Routledge.
- Spuybroek, L. (2011). *Sympathy of things: Ruskin and the ecology of design*. Rotterdam: V2 publishing.
- St. Pierre, E. A. (2004). Deleuzian concepts for education: The subject undone. *Educational philosophy and theory*, 36(3), 283-296.
- St. Pierre, E. A. (2011) Post qualitative research: the critique and the coming after. In N. Denzin and Y. Lincoln (Eds.), *The SAGE handbook of qualitative research*. (pp 611-624). Thousand Oaks, CA: Sage Publications.
- St. Pierre, E. (2013). Ethics in entanglement. *Knowledge Cultures*, 1(5), 141-141.
- St. Pierre, E. (2014). A brief and personal history of post qualitative research: Toward “post inquiry”. *Journal of Curriculum Theorizing*, 30(2).
- St. Pierre, E. A. (1997). Method- ology in the fold and the irruption of transgressive data. *International Journal of Qualitative Studies in Education*, 10(2), 175–189.
- St. Pierre, E. A. (2001). Coming to Theory: Finding Foucault and Deleuze, in K. Weiler, (Ed.) *Feminist Engagements. Reading, Resisting, and Revisioning Male Theorists in Education and Cultural Studies* (New York, NY: Routledge), pp. 141–161.
- St. Pierre, E. A. (2013). The appearance of data. *Cultural Studies ↔ Critical Methodologies*, 13(4), 223-227.
- St. Pierre, E. A., & Jackson, A. Y. (2014). Qualitative data analysis after coding. *Qualitative Inquiry*. 30(6), 715-719.
- St. Pierre, E. A., Jackson, A. Y., & Mazzei, L. A. (2016). New empiricisms and new materialisms: Conditions for new inquiry. *Cultural Studies ↔ Critical Methodologies*. 16(2), 99-110.
- Stables, A. (2007). Is nature immaterial? The possibilities for environmental education without an environment. *Canadian Journal of Environmental Education*, 12(1), 55-67.
- Stables, A., & Scott, W. (2001). Post-humanist liberal pragmatism? Environmental education out of modernity. *Journal of Philosophy of Education*, 35(2), 269-279.

- Stanley, P. (2015). Writing the PhD Journey (s) An Autoethnography of Zine-Writing, Angst, Embodiment, and Backpacker Travels. *Journal of Contemporary Ethnography*, 44(2), 143-168.
- Stark, H. (2017). Deleuze, subjectivity and nonhuman becomings in the Anthropocene. *Dialogues in Human Geography*, 7(2), 151-155.
- Steffen, W., Crutzen, P., & McNeill, J. (2007). The Anthropocene: Are humans now overwhelming the great forces of nature? *Ambio*, 36(8), 614–621.
- Sterling, S. R. (2005). Whole systems thinking as a basis for paradigm change in education: Explorations in the context of sustainability. Unpublished PhD Thesis. University of Bath.
- Stewart, A. (2011). Becoming-speckled warbler: Re/creating Australian natural history pedagogy. *Australian Journal of Environmental Education*, 27(1), 68-80.
- Stewart, A. (2015). Rhizocurrere: a Deleuzo-Guattarian approach to curriculum autobiography. *International Journal of Qualitative Studies in Education*, 28(10), 1169-1185.
- Stewart, K. (2007). *Ordinary affects*. Durham, NC: Duke University Press.
- Stone, M. K., & Barlow, Z. (2005). *Ecological literacy: Educating our children for a sustainable world*. San Francisco, CA: Sierra Club Books.
- Strom, K. J. (2018). That’s Not Very Deleuzian”: Thoughts on interrupting the exclusionary nature of “High Theory. *Educational Philosophy and Theory*, 50(1), 104-113.
- Taguchi, H. L. (2007). Deconstructing and transgressing the theory—Practice dichotomy in early childhood education. *Educational Philosophy and Theory*, 39(3), 275-290.
- Taguchi, H. L. (2016). “The Concept as Method”: Tracing- and-mapping the Problem of the Neuro(n) in the Field of Education. *Cultural Studies ↔ Critical Methodologies*, 16(2), 213 –223.
- Taguchi, H. L. & St. Pierre, E. (2017). Using Concept as Method in Educational and Social Science Inquiry. *Qualitative Inquiry*, 23(9), 643-648.
- Tarrant, M. A., & Green, G. T. (1999). Outdoor recreation and the predictive validity of environmental attitudes. *Leisure Sciences*, 21(1), 17–30.
- Taylor , C., & Hughes, C. (2016). *Posthuman research practices in education*. London: Palgrave Macmillan.

- Taylor, C. A. (2016). Close encounters of a critical kind: A diffractive musing in/between new material feminism and object-oriented ontology. *Cultural Studies ↔ Critical Methodologies*, 16(2), 201-212.
- Taylor, C. A., & Gannon, S. (2018). Doing time and motion diffractively: Academic life everywhere and all the time. *International Journal of Qualitative Studies in Education*, 1-22. Ahead-of-Print. Retrieved from: <https://www.tandfonline.com/doi/abs/10.1080/09518398.2017.1422286>
- Taylor, C. A., & Ivinson, G. (2013). Material feminisms: New directions for education. *Gender and Education*, 25(6), 665-670.
- Thanem, T., & Wallenberg, L. (2015). What can bodies do? Reading Spinoza for an affective ethics of organizational life. *Organization*, 22(2), 235-250.
- Tsing, A. L. (2015). *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton, NJ: Princeton University Press.
- Tuck, E. (2010). Breaking up with Deleuze: Desire and valuing the irreconcilable. *International Journal of Qualitative Studies in Education*, 23(5), 635-650.
- Tuck, E., & McKenzie, M. (2014). *Place in research: Theory, methodology, and methods*. London: Routledge.
- Tuck, E., McKenzie, M., & McCoy, K. (2014). Land education: Indigenous, post-colonial, and decolonizing perspectives on place and environmental education research. *Environmental Education Research*, 20(1), 1-23.
- Ulmer, J. B. (2016). Writing slow ontology. *Qualitative Inquiry*, Ahead-of-print. Retrieved from: <http://journals.sagepub.com/doi/abs/10.1177/1077800416643994>
- Van der Tuin, I. (2014). Diffraction as a methodology for feminist onto-epistemology: On encountering Chantal Chawaf and posthuman interpellation. *Parallax*, 20(3), 231-244.
- Van der Tuin, I., & Dolphijn, R. (2010). The transversality of new materialism. *Women: a cultural review*, 21(2), 153-171.
- Van der Tuin, I., & Dolphijn, R. (2012). *New materialism: Interviews & cartographies*. Chicago, IL: Open Humanities Press.
- Van Poeck, K., & Lysgaard, J. A. (2016). The roots and routes of environmental and sustainability education policy research. *Environmental Education Research*, 22(3), 305-318.

- Van Poeck, K., Goeminne, G., & Vandenaabeele, J. (2016). Revisiting the democratic paradox of environmental and sustainability education: sustainability issues as matters of concern. *Environmental Education Research*, 22(6), 806-826.
- Vaughan, A. (2015). How viral cat videos are warming the planet. *The Guardian*. Retrieved from: <https://www.theguardian.com/environment/2015/sep/25/server-data-centre-emissions-air-travel-web-google-facebook-greenhouse-gas>
- Vos, A. (2006). *The philosophy of John Duns Scotus*. Edinburgh: Edinburgh University Press.
- Waite, S., & Pleasants, K. (2012). Cultural perspectives on experiential learning in outdoor spaces. *Journal of Adventure Education and Outdoor Learning*, 12(3), 161-165.
- Wallace-Wells, D. (2017). The uninhabitable earth. *New York Magazine*, Retrieved from: <http://nymag.com/daily/intelligencer/2017/07/climate-change-earth-too-hot-for-humans.html>
- Wasser, A. (2017). How Do We Recognise Problems?. *Deleuze Studies*, 11(1), 48-67.
- Weinert, F. (2004). *The scientist as philosopher: philosophical consequences of great scientific discoveries*. Berlin: Springer.
- Wells, N. M., & Lekies, K. S. (2006). Nature and the life course: Pathways from childhood nature experiences to adult environmentalism. *Children, Youth and Environments*, 16(1), 1–24.
- Whatmore, S. (2006). Materialist returns: practising cultural geography in and for a more-than-human world. *Cultural geographies*, 13(4), 600-609.
- Whitehouse, H. (2018). Questions of ecopedagogy in tropical oceanScapes in the age of coral ecocide: An autoethnographic description. *The Journal of Environmental Education*, 49(2), 142-151.
- Widder, N. (2009). *John Duns Scotus*. In G. Jones and J. Roffe (Eds.) *Deleuze's Philosophical Lineage*, (pp.27-43). Edinburgh: Edinburgh University Press.
- Wilson, C. (2016). Hume and vital materialism. *British Journal for the History of Philosophy*, 24(5), 1002-1021.
- Wyatt, J. (2019, forthcoming). *Therapy, stand-up and the gesture of writing: Towards creative-relational inquiry*. Abingdon, UK: Routledge. Retrieved from: <https://www.researchgate.net/project/Therapy-stand-up-and-the-gesture-of-writing-Towards-creative-relational-inquiry>
- Wyatt, J., & Adams, T. E. (2012). Introduction: On (writing) fathers. *Qualitative Inquiry*, 18(2), 119-120.

- Wyatt, J., & Gale, K. (2013). Getting out of selves. In S. Jones, T. Adams, C. Ellis (Eds.), *Handbook of autoethnography*, (pp.300-312). Abingdon: Routledge.
- Wyatt, J., & Gale, K. (2014). Introduction to the special issue on collaborative writing as method of inquiry. *Cultural Studies ↔ Critical Methodologies*, 14(4), 295–297.
- Wyatt, J., & Gale, K. (2018). Writing to it: Creative engagements with writing practice in and with the not yet known in today's academy. *International Journal of Qualitative Studies in Education*, 31(2), 119-129.
- Wyatt, J., & Speedy, J. (2014). *Collaborative writing as inquiry*. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Wylie, J. (2007). *Landscape*. London, UK: Routledge.
- Zelenski, J. M., Dopko, R. L., & Capaldi, C. A. (2015). Cooperation is in our nature: Nature exposure may promote cooperative and environmentally sustainable behavior. *Journal of Environmental Psychology*, 42, 24-31
- Zink, R., & Burrows, L. (2008). 'Is what you see what you get?' The production of knowledge in-between the indoors and the outdoors in outdoor education. *Physical Education and Sport Pedagogy*, 13(3), 251-265.