

ARTICLE

# After the posts: thinking with theory in environmental education research

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## Abstract

In this essay, we argue that postqualitative inquiry is not a useful descriptor for environmental education research and that it is time to consider what comes after the posts. We argue that thinking with theory as a process methodology in the onto-epistemological framings of our research is more generative and opens up opportunities for this research being interdisciplinary/transdisciplinary/cross-disciplinary, intersectional, ecofeminist/more-than-humanist, indigenous, participatory, experimental and transgressive.

**Keywords:** poststructuralist research; thinking with theory; environmental education; Anthropocene

## Preamble

We have a great deal of sympathy with the rationale advanced for post-qualitative inquiry (and the research practices associated with it) by scholars such as Elizabeth Adams St. Pierre (see, for example, 2011, 2013b, 2017, 2019, 2021a, 2021b). However, in this essay, we argue that the term ‘postqualitative’ (with or without hyphenation) is not an appropriate descriptor for educational inquiry, because, as St. Pierre (2021a) herself asserts, ‘it cannot be accommodated by nor is it another version of qualitative research methodology. It refuses method and methodology altogether’ (p. 163). We have previously offered the term *postparadigmatic* to describe new forms of inquiry because we understand ‘quantitative’ and ‘qualitative’ as terms that distinguish only between different modes of *data production* (Gough & Gough, 2022; N. Gough, 2016). Indeed, St. Pierre herself has a confusing relationship with data. On the one hand, she (2013a) asserts that she has ‘given up data along with the conventional humanist qualitative inquiry in which it appears’ but she nevertheless acknowledges that data ‘appear . . . come into being, in both conventional and more radical approaches in empirical social science research’ (p. 226). Moreover, as Norman Denzin writes (2013, p. 355), ‘the word data should be outlawed; replaced by William James [sic] term empirical materials’. In addition, perhaps the word ‘paradigm’ should also be retired because it is also under erasure.

Thomas Kuhn’s (1962) well-known use of the term ‘paradigm’ in his historical account of scientific change as contestable. We admit that we were among the environmental educators who advocated and/or debated calls for paradigm shifts in the field during the 1980s and early 1990s (A. Gough, 2012; N. Gough, 1989, 1993b), but we have more recently found reasons to sympathise with Nobel laureate Steven Weinberg (October 8, 1998) who, as John Caputo (2000, p. 152) alleges, ‘criticizes Kuhn’s *The Structure of Scientific Revolutions* for offering no revolution at all but mostly just driving under the influence of an intoxicating word (“paradigms”)’.<sup>1</sup>

Many educational researchers seem to be reacting similarly with using ‘post’, with some even resorting to ‘post-post’. For example, Marcia McKenzie (2005) writes, ‘In this so called, “post-post

period” (Gergen & Gergen, 2000), the poststructural thesis that “the map precedes the territory” has far reaching implications for the ways we approach research in the social sciences.’ (p. 401)<sup>2</sup> Pertinently for this article, Constance Russell (2005, p. 433) questions the relevance of McKenzie’s characterisation of the ‘post-post’ to the material concerns of environmental education researchers.

While McKenzie mentions in passing her concern about anthropocentrism and human oppression of the natural world, she is mostly silent about the role of ‘nature’ in post-post approaches to environmental education research. If one takes feminist poststructuralist ideas about voice and representation seriously, surely the place of ‘nature’ in environmental education research must be interrogated? Is there space for ‘nature’ in multivocal representations of research? How might our own polyvocality include our experiences of our animality? How might we assess the legitimacy of such representations? What are the limits and possibilities of post-post approaches to environmental education research when ‘nature’ is taken into account? (p. 433)

Thus, we raise the question, what might be coming *after* ‘the posts’ for the role of nature in environmental education research?

### Starting with Poststructuralism

Since the 1980s we have, individually and collectively, engaged with various research methodologies (positivist, interpretive and critical) and theoretical positions in performing environmental education research, but the dominant influence on our work since the early 1990s has been poststructuralism, which perhaps explains why we are in such sympathy with St. Pierre’s (2021b) argument,

A postqualitative study cannot and does not begin with any social science methodology, including qualitative methodology, but, rather, with the onto-epistemological arrangement and concepts of poststructuralism and its descriptions of key philosophical concepts such as ontology, epistemology, human being, rationality, truth, discourse, language, freedom, and so on. (p. 163)

Indeed, St. Pierre (2021a) argues that you must start with poststructuralism:

I do suggest to my students a couple of things a postqualitative inquirer might do. First of all, you must study poststructuralism—that’s required—and I guarantee that poststructural scholars will send you to many other theorists who will help you think. Remember that no one can read for you, and people who read a lot can always tell when others don’t. If you read hard, you’ll likely find concepts that can help re-orient your thinking so you can think differently about whatever you want to think about. (p. 6)

Curiously, poststructuralist orientations were slow to become established in the literature of environmental education research. Paul Hart and Kathleen Nolan (1999, p. 37) refer to the (then) relatively recent emergence of postmodern perspectives in their analysis of environmental education research, where critical, feminist, and postmodern scholars point to contradictions involved in knowledge versus values construction as a key distinguishing feature of critical research within environmental education but they did not find many examples of postmodern research. A decade later, Robert Stevenson and Neus (Snowy) Evans (2011), in their analysis of distinctive characteristics of environmental education research in Australia in the 1990s identified only 3 of the 32 *AJEE* articles that they analyse within their ‘paradigms frame’ as adopting a poststructuralist standpoint, although this was the decade during which Annette Gough (1994, 1997, 1999a, 1999b) pioneered feminist poststructuralist environmental education research and Noel Gough (1993a, 1999) published environmental education research inflected by poststructuralism in international forums, some of which was referenced by Hart and Nolan (1999). As Annette Gough (2012, p. 19) wrote of the emergence of environmental education research in the *International Handbook of Research on Environmental*

*Education*, in the 1990s: ‘Reflecting changes in educational research in general and changes in society, other developments in environmental education research which were at the opposite extreme to the search for a single method or approach are those which are categorized as postmodern or poststructuralist research studies’ (p. 19). In the decade since this was written, a thousand flowers have bloomed and there are many examples of environmental education research that intersects with new materialisms, new empiricisms, posthumanisms, and multiple conceptual diffractive lenses.

Moving beyond both postqualitative and postparadigmatic inquiry, we are attracted to Lisa Mazzei’s (2021, p. 198) argument for thinking with theory as a process methodology: this ‘type of inquiry happens in the middle of things, in the threshold, as theoretical concepts and data constitute one another in an analytic practice of thinking with theory’ (p. 198) because this is consistent with the thinking~talking<sup>3</sup> approach we adopt in this essay. As we noted in an excerpt from our collective biography (Gough & Gough, 2017, p.1113),

over many years, we have often been drawn to similar objects of educational inquiry and, as a cohabiting couple, have found thinking~talking together to be generative, although what we value in sharing our thinking~talking is not so much what brings us together but what sends us out-ontowards questioning understandings and representations of reality and humanity.

By thinking with theory as a process methodology and mobilising ‘becoming-more-than-human’ in ways that de-emphasise points of individual subjectification, we intend this excerpt from our collective biography to produce a multiplicity of bifurcating, divergent and rhizomatic lines of flight which move us to imagine new possibilities for thought and action in environmental educational research. In the following sections, we explore our journeys into, around and beyond environmental education research writings through engagement with our own texts and those of other theorists, following lines of flight, with the goal of furthering what St. Pierre (2021b, p. 163, her italics) calls ‘a philosophy of immanence . . . concerned not with what *is* but what is *not yet, to come*.’

### Why Not ‘Postqualitative’ Inquiry?

Before moving on from ‘postqualitative inquiry’, it is important to understand how the concept came about. According to St. Pierre (2019), ‘I “invented” postqualitative inquiry in 2010 as I wrote a chapter for the fourth edition of the SAGE Handbook of Qualitative Inquiry.’ (p. 3) The idea that postqualitative inquiry needed to be invented must be seen in the light of the situation of educational research in the United States in the early 21st century where qualitative research was ‘under a deliberate, naive, and crude attack’ because in 2002 the National Research Council (NRC) established ‘experimental research and, preferably, randomized controlled trials as the gold standard for high-quality research’ (St. Pierre, 2011, p. 611). St. Pierre offers two different explanations for her invention, a decade apart.

My critique is not that qualitative research is unscientific; rather my critique is that, to a great extent, it has been so disciplined, so normalized, so centered—especially because of recent assaults by SBR [scientifically based research]—that it has become conventional, reductionist, hegemonic, and sometimes oppressive and has lost its radical possibilities “to produce different knowledge and produce knowledge differently” (St. Pierre, 1997, p. 175). (St. Pierre, 2011, p. 613)

I, and others, used poststructuralism to deconstruct concepts and categories of what I’ve called *conventional humanist qualitative methodology*, concepts like the *interview, data, data analysis, validity, and field*. We called this deconstructive work “working the ruins” (Lather, 1997, 2002; St. Pierre & Pillow, 2000), and, at some point, the structure of qualitative methodology was truly ruined, for me, at least, and I decided to leave it behind and inquire differently from the beginning. (St. Pierre, 2021b, p. 163)

St. Pierre's (2021b) statement raises concerns for us. Her reference to 'conventional humanist qualitative methodology' seems to be confusing (or conflating) methods with methodology, and they are not necessarily the same thing, as Sandra Harding (1987) reminds us.<sup>4</sup>

A research *method* is a technique (or way of proceeding in) gathering evidence. One could reasonably argue that all evidence-gathering techniques fall into one of the following three categories: listening to (or interrogating informants), observing behavior, or examining historical traces and records. In this sense, there are only three methods of social inquiry . . . That social scientists tend to think about methodological issues primarily in terms of methods of inquiry . . . is a problem. That is, it is primarily when they are talking about concrete techniques of evidence gathering that they raise methodological issues. (Harding, 1987, p. 2)

Harding also explains methodology from her feminist perspective.

A *methodology* is a theory and analysis of how research does or should proceed; it includes accounts of how "the general structure of theory finds its application in particular scientific disciplines" . . . Feminist researchers have argued that traditional theories have been applied in ways that make it difficult to understand women's participation in social life, or to understand men's activities as gendered (vs. representing "the human") . . . And they also raise epistemological issues. (Harding, 1987, p. 3)

St. Pierre's desire 'to produce different knowledge and produce knowledge differently' (2011, p. 613) also raises epistemological issues about who can be a knower or agent of knowledge. Again, Harding (1987) provides a clear explanation: 'An *epistemology* is a theory of knowledge. It answers questions about who can be a knower [agent of knowledge] . . . ; what tests beliefs must pass in order to be legitimate as knowledge . . . ; what kinds of things can be known, and so forth.' (p. 3) St. Pierre's desire for postqualitative studies to begin 'with the onto-epistemological arrangement and concepts of poststructuralism and its descriptions of key philosophical concepts such as ontology, epistemology, human being, rationality, truth, discourse, language, freedom, and so on' (2021b, p. 163) has much in common with the parameters of feminist research described by Harding with its focus on who can be knower, a concern with the theory and analysis of how research does or should proceed, and the poststructuralist and/or feminist research we have been doing. Hart and Hart (2022) seem to be of a similar mind when they write of the need for different way of thinking:

Scholars such as Braidotti, Haraway, Colebrook, and Alaimo insist that existing knowledge frameworks are incomplete and that research paradigms must change. They voice concerns shared by many educational researchers that different ways of thinking about research design are crucial as issues of ethics and politics that cut across education, social justice, and environment. (p. 4)

While we do not disagree with the scholars named and their concerns, Gough and Whitehouse (2020) wrote about the amnesia that several of these authors seem to have about the origins of some of their theories. Greta Gaard (2017) makes a similar argument.

Feminist engagement with theories of posthumanism (e.g. Barad 2003) and the emergence of 'new materialist feminists' (e.g. Hird 2004) do not address the relationship between feminism and ecofeminism: many new materialists do not acknowledge ecofeminist scholarship, despite its foundational contributions to new materialist feminisms and the continuing intersections of these two theoretical perspectives. (p. 118)

Others, such as Carol Taylor (2021), have also reflected on postqualitative inquiry and tried to re-name it. In this instance, she

poses a method/ology of errancy—a flipping methodology—that locates postqualitative research as an ethico-onto-epistemological political project of opening theory-practice spaces for differential matterings. Postqualitative flipping is not an individual undertaking, it is an ecology of practices, a resonance across bodies, a navigating of movement for a politics of change, in which even barely perceptible shifts possibilize new modes of thinking and unthinking, doing and undoing. (p. 235)

Different ways of thinking with theory do not require the invocation of labels such as postqualitative inquiry; many researchers have been engaging with ‘onto-epistemological arrangement and concepts of poststructuralism’ for some considerable time, though not necessarily in environmental education, without invoking such a label.

### After the Posts: Plugging Theory into Empirical Materials

Michel Foucault, in conversation with Gilles Deleuze, discussed how a theory is exactly like a box of tools.

It has nothing to do with the signifier. It must be useful. It must function. And not for itself. If no one uses it, beginning with the theoretician . . . , then the theory is worthless or the moment is inappropriate. We don’t revise a theory, but construct new ones; we have no choice but to make others. It is strange that it was Proust, an author thought to be a pure intellectual, who said it so clearly: treat my book as a pair of glasses directed to the outside; if they don’t suit you, find another pair (Foucault, 1977, p. 208)

This approach has been particularly generative for Noel who, when presented with an object of inquiry, has, as his default disposition, to deploy concepts from Gilles Deleuze and Félix Guattari’s ‘box of tools’ that (from his standpoint) generate lines of flight in the assemblages of researchers, empirical materials, methods and milieux that constitute the intellectual and imaginative terrains of environmental education research (see, for example, N. Gough, 2006, 2009; N. Gough & Adsit-Morris, 2020b). Deleuze and Guattari (1987) conceive of assemblage as a collection of machinic concepts that can be plugged into other machines or concepts and made to work:

As an assemblage, a book has only itself, in connection with other assemblages and in relation to other bodies without organs. We will never ask what a book means, as signified or signifier; we will not look for anything to understand in it. We will ask what it functions with, in connection with what other things it does or does not transmit intensities, in which other multiplicities its own are inserted and metamorphosed, and with what bodies without organs it makes its own converge. A book exists only through the outside and on the outside. A book itself is a little machine . . . We have been criticized for overquoting literary authors. But when one writes, the only question is which other machine the literary machine can be plugged into, must be plugged into in order to work (p. 4)

This approach converges with St. Pierre (2013a): ‘My advice to my students who read Deleuze and find his work exhilarating is to read everything you can by and about Deleuze and plug his machine into yours. Then tell us what happened.’ (2013a, p. 226)

The concept of “plugging in” is clearly appropriate to understanding research as a machinic assemblage but, as Alecia Jackson and Lisa Mazzei (2013, p. 262) observe, “plugging in” is also a process.

In our thinking with theory, we were confronted with multiple texts—or literary machines: interview data, tomes of theory, conventional qualitative research methods books that we were working against, things we had previously written, traces of data, reviewer comments, and so on *ad infinitum*. That is, we had a sense of the ceaseless variations possible in having

coauthored texts that relied on a plugging in of ideas, fragments, theory, selves, sensations. And so we moved to engage “plugging in” as a process rather than a concept, something we could put to work, for as Rosi Braidotti (2002, p. 1) urges in this time of change, “the challenge lies in thinking about processes, rather than concepts” (p. 1). (p. 262)

When writing her way through her breast cancer experience, Annette wrote of her corporeally and historically embodied experiences through the voice of a feminist poststructuralist researcher and environmental educator. She presented some vignettes of her experiences using the metaphors of ore bodies and mine sites as an embodied display that located her self in the practice of theorisation (A. Gough, 2004, 2005). More recently, Alastair Stewart (2011) employed Deleuze and Guattari’s (1987) philosophy of ‘becoming-animal’ to explore ways that the life and circumstances of the speckled warbler might inform natural history focused Australian environmental education research, and Jukes (2021), also drawing on Deleuze, provoked possibilities for practice that engage with the more-than-human world.

Thinking with theory and taking up the challenge to think in terms of processes not concepts is consistent with thinking about reframing environmental education research.

### After the Posts: Critical Reframings

In this section, we return to discussing how ‘The Anthropocene provides a background for critically reframing ... education as material, embodied, transcorporeal, and processual/nonrepresentational.’ (Hart & Hart, 2022, p. 4). Although we agree that the Anthropocene necessarily provides ‘a background’ for deliberations about environmental education research, it should not be understood as a forgone conclusion but rather as an object of critical reframing. While it is apparent that a new relationship is needed between humans and nature, and that is a concern for environmental educators, it is important to remember that the term itself is contested, with others offering alternatives including Capitalocene, Econocene, Plantationocene and Chthulucene (A. Gough, 2021; Gough & Adsit-Morris, 2020a).

Just as we resist the use of postqualitative for educational inquiries, we also follow Elspeth Probyn (2016) in preferring more-than-human to posthuman in our onto-epistemological framings. As Probyn explains,

I prefer the term “more-than-human” to “posthuman” or “nonhuman”. It is ... “ontologically and materially relational, and opens up new epistemologies as it narrows the diverse and shifting relations between and among humans, and the many different aspects of that are so much more-than-human”. (p. 110)

This leads us to a much debated discussion of nature in relationship to human culture and human society. For example, Bruno Latour (1993) offers a concept of natures-cultures as an interactive human/nature system: ‘The very notion of culture is an artifact created by bracketing Nature off. Cultures — different or universal — do not exist any more than Nature does. There are only natures-cultures, and these offer the only possible basis for comparison.’ (p. 104) Latour is not alone in making these arguments. Carolyn Merchant (2016), for example, argues that ‘Nature becomes postnature in ways that so thoroughly blur any human/nature differences as to make a single interactive, mutually influential, and mutually interdependent posthuman-nature. ... a new relationship between humanity and nature based on the idea of autonomous nature.’ (p. 161) Such understandings to be part of the onto-epistemological reframings of our research work.

Education in an Anthropocene context necessitates a different pedagogy that provides opportunities for learning to live in and engage with the world and which acknowledges that we live in a more-than-human world (Cole, 2022; Paulsen et al., 2022). It also requires learners to critique the Anthropocene as a concept, and its associated themes, in order to counter the humanist



perspective that fails to consider how the nonhuman and material worlds co-shape our mutual worlds. In particular, educational research in the Anthropocene will need to be interdisciplinary/transdisciplinary/cross-disciplinary, intersectional, ecofeminist/more-than-humanist, indigenous, and participatory. To these requirements Rosi Braidotti (2013) urges us to add experimental and even transgressive, and she encourages thinking with theory: ‘As Deleuze and Guattari teach us, thinking is about the invention of new concepts and new productive ethical relations’ (2013, p. 104).

Re-thinking and re-configuring our ideas and concepts using the discourses and cultural resources of popular media and non-western knowledges could be productive as could a return to fiction, as the new theoretical writings on matter regularly include elements of storytelling, fabulation or other genres of invention (Skiveren, 2020). Such approaches are consistent with ‘plugging in’ as part of thinking with theory.

## Conclusion

We have argued that, for us, postqualitative is not a useful descriptor for educational inquiry and that St. Pierre confuses method and methodology, as differentiated by Harding (1987). In addition, her call for beginning with onto-epistemological framings has been heeded in environmental education research for some time, and does not warrant invoking postqualitative as a descriptor. We have also argued that it is time to move beyond the posts and seek other ways of undertaking environmental education research work, including Jackson and Mazzei’s (2013) thinking with theory and their championing of ‘plugging in’, following Deleuze and Guattari (1987).

The time in which we find ourselves, sometimes called the Anthropocene, necessitates that we develop a different relationship between humans and nature. In response, environmental education pedagogy and research need to adopt different approaches — ones that are interdisciplinary/transdisciplinary/cross-disciplinary, intersectional, ecofeminist/more-than-humanist, indigenous, participatory, experimental, and transgressive. We need more thinking with theory as part of the onto-epistemological framings of our research.

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## Notes

1. Caputo acknowledges (pers. comm. 2 June 2021) that he was paraphrasing his interpretation of Weinberg’s review of Kuhn’s book and recognizes the ‘driving under the influence’ phrase as one he occasionally uses, so the content of his critique is to be found in Weinberg’s review but the phraseology is his.
2. McKenzie implies that Gergen and Gergen are a source of ‘post-post’, but the term cannot be found in their chapter.
3. We use a tilde symbol (~) between words to show them involving each other in a nonlinear continuum; like chicken~egg, we see no hierarchical or structural order in their arrangement, they always already co-exist. We adapt the tilde from its use in mathematics to represent equivalence relations and similarity.
4. We both prefer to think of data *production* rather than data *gathering*, but gathering is what Harding uses.

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