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Introduction: "New" theory, "post" North-South representations, praxis

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Thought?

Might image have replaced substance; illusions substituted for ideas; language overwhelmed experience; text obfuscated world; now ignored the past? Might jargon mask authenticity; conversations censor criticism; affirmationism avoid argumentation; rhetoric swamp reality? Epistemology (and its methodologies) misunderstand ontology? Theory dominate practice? Mind overpower matter? Idealism deflate realism? North colonize South?

At a recent academic conference in the South, nine of us grappled for four days with these "old" questions and their presence within the "new" discourse of "post" environmental education research. We struggled for an additional six-month period of email exchange to see and feel these questions in our own research. That slow, rich, and deeper academic exchange between us culminated in a research agenda, partially (re)presented in a collectively constructed Mindmap (Figure 1), for critiquing the post/new whose framing is described in the remainder of this Introduction to the politics of knowledge production. That politic of slowly and judiciously engaging a collective form of criticism culminates in identifying the research problem, and questions, of this Special Issue (SI) about the role and place of allegedly new theory in the global discourse of allegedly post environmental education research. This specially assembled issue of *The Journal of Environmental Education (JEE)* is our best effort to (partially) represent a considerable amount of thought about the challenge presented by "post" and "new" Western thought. In translating our collective thought processes to a SI, we anticipate the reflexivity of the field will be critically advanced through engaging a number of emerging debates (Robottom & Hart, 1993) identified in the following pages of this Introduction, and in three "sample" articles specially written by Isabel Carvalho, Carlos Steil & Francisco Abraão Gonzaga, Louise Sund & Karen Pashby, and Phillip Payne, and an "in process" Conclusion written by Cae Rodrigues. There remains much work to do. This SI is only a start of reengaging overdue debates about the post (Hart, 2005).

New?

The idea(l) of posthuman, or posthuman condition, or posthuman thinking within the Northern movement of "thought" named posthumanism is the most recent addition to the fifty-year long discourse of environmental education (EE). As is new materialism theory.

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The first international handbook of *Research on Environmental Education* was published less than a decade ago (Stevenson, Brody, Dillon, & Wals, 2013). Its 547 pages included 51 chapters covering 9 thematic sections. One hundred and four authors contributed, the vast majority writing from within the global North of environmental education research (EER). The handbook's Subject Index does not list the ideas of posthumanism or new materialism. Humanism is identified only twice while materialism is not mentioned. The term ontology is frequently used in posthuman and new materialism theory; it is indexed four times only. "Things", "objects" and "matter" are not included. Nor are the terms "non", "more-than", "beyond" and "other-than" human. The terms "anthropocentrism", "androcentrism", and "ecocentrism" received 6, 1 and 2 listings respectively. "De-centered" is not mentioned. Ecofeminism had two footnotes; ecopedagogy was indexed once.

It is not unreasonable in academic discourse to expect that new namings like "posthuman" have been analyzed, perhaps critiqued, from within the very special environmental, ecological and nature contexts of established EE purposes, practices, circumstances, and problems, and EER framings, theories, methodologies and findings or recommendations. What, for example, do the prefixes "post" and "new" mean? What do they follow, or come after, or pre-empt? And authored by whom, and where, or when, and for whose interests or what expectations? Can, even, a modest, less hubristic, non-enlightened, non-autonomous human being write his or her, or our, post, or beyond, even non or more-than? What is the matter of, or indeed, with EE? Does EE matter, at all, if we now have newly named a post-Nature? What is the value of post-Nature, or is it dead, ended, and buried? Or new? How do posthumans educate for post-Nature?

In EER, does the addition of prefixes disclose researchable problems that previously have not been identified or examined – conceptually and/or empirically – over the past fifty years? How are the "new" and "post" attentive to, and represent the field's history and narrative? What different, valuable, and useful methodologies arise from adding prefixes? Or is it business as usual via a change in name only? How, and in what ways and contexts, do EER "post" or "new" framings advance imagined EE practices? Does "post" and "new" praxis exist, humanly and/or materially, and more-than-humanly?

The above leading questions have not been posed, as far as we know. Nor have they been probed in EER, even indirectly. Now, suddenly, a tsunami of publications and forums dedicated to theories of new materialism (NM) and/or posthuman (PH) are flooding the social sciences and arts/humanities in the global North. As we write, in EE/EER/ESE and associated early years education forums, there are at least three special issues in process, or just released. There is the very recent publication in EE of international handbooks, book reviews, and badging of conference themes and invited speakers as "new". Invariably, the way in which these latest knowledge productions in the North about PH and NM are framed is (mostly) positive, affirming, idealistic, and not critical. At times, the way PH and NM are referred to in these forums indicate how the respective meanings and histories of each theory, and practices in contexts, and methodologies employed are blurred, mangled, or mashed; the two idea(l)s are used interchangeably or are conflated; and are "intersectionally" suggestive of confusion or uncertainty about their significance, relevance, value, and use in the field. There are very few examples of empirical studies that move beyond clarification of authors' positioning in a text, or provide a simplistic anecdote about, for example, a (human) child interacting with a material, more-than-human rock. In this SI, our (counter)critiques of PH/NM includes two empirical studies of the everyday matter of EE (Carvalho, Steil, & Gonzaga, 2020; Sund & Pashby, 2020) and one historical study of the new/post amnesia in the now of EER (Payne, 2020). Moreover, "other" allegedly new theories in the social sciences and humanities, like speculative realism, critical materialism, have not attracted the same sort of attention. Why, when new reflexivity, even its critical aspiration, is an academic expectation of scholarly work?

Eighty years ago, in *Experience and Education,* John Dewey (1938/1988) demanded an intelligent theory, even philosophy, of experience and added, "otherwise (educational plans and projects) are at the mercy of every intellectual breeze that happens to blow" (p.30). In *On Education,* Zygmunt Bauman (2012) argued that the "closed mind" of modern education had been "liquidified" in the "post" manner where "we are all cast in a perpetually 'revolutionary' condition" and "knowledge is in a state of 'permanent revolution'" (p.23). Clifford Geertz (in Emerson, 1983, p.37), a historical leader of interpretive research in the social sciences concluded, "…the sudden vogue of such a *grand idee*, crowding out almost everything else for a while, is due to…", and referring to Susanne Langer's (1941) *Philosophy in a New Key,* "…the fact that all sensitive and active minds turn at once to exploiting it".

With these new trends in theory, cautions and historical precedents well in mind, and collectively embodied place, this SI elaborates a number of Deweyan-like concerns expressed about the revolution of knowledge production in EER. The revolution of new ideas was discussed by a small group of participants in the "(Post)human idea" theme of the 14th Invitational Seminar in Environmental Education Research held in Stellenbosch, South Africa in March, 2018. Despite the most recent rush to explore the "new" ideas of PH and NM, the basic purpose of this SI is to open up that theoretical breeze for much greater scrutiny, engaged debate, and research critique and pedagogical development. We also seek to expose knowledge generated and theory produced, mainly in the global North, to its broader global implications, in this special instance, to the global South, while remaining acutely aware of what is still non-represented in that global North. In so doing, the Stellenbosch Seminar and this SI also aim to incorporate the global South as decolonist praxis (Sund & Pashby, 2020) in the new and post politics of knowledge production and representation in, at least, academic journals such as the *JEE.*

The contents of this SI are, only, a starting reference point in EE and EER for engaging what is yet to be debated in EER (Robottom & Hart, 1993). We urge readers of this SI to use its contents, history, and engaged processes as a springboard for advancing critical reflexivity *and* practice in EE and EER pedagogy, curriculum, policy, and research development. Over the four days at Stellenbosch (March, 2018), the nine participants from S. Africa, Sweden, Brazil, and Australia engaged the idea of PH and slippage into related theoretical developments like NM. The face-to-face discussions underpinning the initial proposal for a SI emerged, and were then developed iteratively over a six month period into formal proposal, and accepted by the *JEE* in early 2019.

In summary, key "special" issues we identified warranting dedicated treatment in a *JEE* SI included:

- Why do some new turns not engage other new turns, or theories, in EER? Even within advocacy for a particular theory, or turn, what are the unacknowledged variations internal to its claims?
- What is new about allegedly new theory? What does the declaration of new assert, deny, or conclude about "old" theory in EER, for example, historical materialism in EE, as well as in its practices, pedagogy and curriculum? Or methodology in research? What does the new say, or infer, about the old of Nature?
- What really, or materially, is "post" in posthuman theory? What does the prefix post assume, assert, deny, or conclude about human(s), humanist(s), humanism(s), and/or the non-human, or other-than-human, or more-than-human, or beyond human, as locally lived or felt, and, then, globally authorized and subjectively (mis or non) represented in EER and EE?
- Is there any humility in the new of EER? Is dehumanization of concern to, for example, posthuman theory, posthumanists, and posthumanism? How, and in what ways, does the posthuman idea(l) in EER and EE/ESE address thoroughly human issues like Indigeneity of knowledge and/or associated (global) educations for environmental justices within and across the planet?
- If new theories/turns gain authority, while others don't, are new dualisms and associated values-hierarchical "thinking" being (re)created or reconstituted in new names?
- Who is controlling and promoting the new authority and legitimacy of certain theory(ies)? How, and from where, and through what means is such power/control exerted, and for what purposes and ends?
- Do the new actually have practices? Do they live in the everyday?
- And, given the geographical-cultural location of the 14th Seminar in South Africa, searching questions were posed about the lingering tendencies of Northern/Western academic colonization, even imperializing assumptions, contained in the "new" by the "post".

Global North ←→ South knowledge exchange in EER: An old problem in need of a new solution

Historically, the Stellenbosch Seminar built on at least three previous international seminars held over the past 9 years in different parts of the global South (Bertioga, Brazil, 2015), and North (Uppsala, Sweden, 2013, and Melbourne, Australia). The 2011 Australian Seminar preceded the release of the aforementioned *Handbook*. These unique, intimate, slow, generative Seminars, attended by 30-40 participants, are planned

to bring together researchers from the North and South. The Seminar series is a democratic form of decolonizing praxis. Participants who attend each Seminar discuss and, typically, debate the expectation of critical theories and practices of EER from within the home or place of the host organizing committee.

This unique Seminar forum for researchers in EE was commenced in 1993 in Denmark (Payne, 2018a). From the outset, every 18-24 months the Seminar alternates between the Northern and Southern hemispheres and deliberately mixes active established, mid, and early career/PhD researchers from different geo-cultural and ethico-political locations of knowledge production relevant to EER. Put simply, there has now been 25 years of global South-North theoretical and methodological exchange around changing problems, issues, and themes (Canaparo, 2009; Connell, 2007). The forum itself is unique. Typically, over the 4-5 days of the seminar, there are numerous two hour slow workshops whose purpose is to generate discussion and debate, rather than deliver fast reports on specific studies or findings.

Most importantly for this *JEE* SI, the bringing together of the rich, deep history of the Seminar series with a comprehensive, critical discussion of "new" theory, such as the PH idea(l) in the globalization of EER, is timely. It continues the recent global commitment of the *JEE* to creating a critical narrative and dialogue about the global production and performativity of knowledge in EER that, also, deeply shapes what happens in EE at local levels, be it *within* the North and/or the South. In the 2016 Special Issue of *JEE*, ten active researchers revisited the very difficult issue identified in the early 1990s about the change of emphasis in EE to education for sustainable development (ESD). Their individual critiques used a wide range of empirical studies to update that difficult policy debate. Not surprisingly, the consensus in that SI was that economic development in "the politics of policy" continues to subordinate, relegate, or marginalize environmental concerns, problems, and issues, at local levels, including studies conducted in Vietnam, parts of Latin America, and others in the South (Payne, 2016a). That SI also pioneered the metamethodological use in EE/EER of "assemblage theory" (DeLanda, 2016) in speculating empirically (Debaise, 2017) about a historical problem still confronting the discourse praxis of EE. Assemblage processes are, again, used in this SI (see also Payne, 2018b).

And, not surprisingly given the *decolonizing praxis* for research expectation outlined above in the two *JEE* SIs, in a recent study published in *Nature Sustainability,* Harini Nagendra, Bai, Brondizio, and Lwasa (2018) examined the structural biases in global knowledge production and representation systems that affirm the purposes/rationale of this SI, while confirming the processes and products of the seminar series. Nagendra and her collaborators offered four recommendations, two of which are deeply embedded in both the development of this *JEE* SI, the 2016 SI, and historical planning of the seminar series: (i) Top cited journals (like *JEE*) need to increase the share of empirical research rooted in under-represented issues or emanating from homegrown conceptual framings in the global South, even if each does not conform with mainstream dominant theoretical framings or methodological interests; and (ii) that capacity building (like the seminars) for young researchers in the global South need to be revamped in ways that do not unduly or ignorantly import training in theories and methods provided by senior scholars from the global North.

To historicize the purposes of the 14th Seminar, and the rationale for this SI, a very short summary of the previous three seminars follows. A narrative is needed to establish context. In different ways, in different geographies and cultures/histories, and with different seminar participants, an underlying constant is the persistent question of: to what extent are the critical purposes of EE consistent, or not, with the critical nature of EER?

The 11th Seminar held in Australia (Queenscliffe) in 2011 focused sharply on knowledge value and integrity, as simultaneously problematized *within* the intergenerational *time* and *over* the globalizing *space* of EER (Payne, 2011). Thus, our concern about the *sudden* interest, if not, *fast* problem of the PH idea(l) grappled with at the 14th and in this SI. Thirty-five participants at Queenscliffe representing ten countries deliberated about the research implications of knowledge generation in positioning the field for 2015 and beyond. Time has quickly come to pass. A primary concern of the 2011 seminar was the postmodern/neoliberal conditions structuring the agencies (or lack of) rapidly changing academic work, relations, intellectual exchange, and their auditable performativities. For example, one two-hour workshop that anticipated Nagendra's concerns deliberated about how research is conceptualized (framed and named) and then legitimized publicly in, for example, international journals or conferences. Another

workshop questioned or challenged the dominant modes of knowledge representation, including the increasing popularity of co-edited and coauthored books and special issues in journals, but extended into concerns about how certain (national) conference themes, or (international) brandings, were either prioritized in planning, or privileged in outputs. In a number of instances, the Figure 1 Mindmap developed at Stellenbosch (see below) picks up or reinterprets critical questions posed and probed at Queenscliffe nine years earlier.

In 2013, Uppsala in Sweden hosted the 12th Seminar. Thirty participants (among them twelve invited PhD candidates) from 13 countries discussed the theme of "transboundary knowledge-making". The Swedish and Danish organizers wished to highlight how a more mobile knowledge condition was presenting challenges to existing norms and paradigms within EE and education for sustainable development (ESD), and broader educational research issues. Louise Sund, a contributor to this SI, was then a PhD candidate at the Swedish Graduate School in Education and Sustainable Development. Louise recalls the Seminar was a valuable opportunity to engage various transboundary propositions in (re)framing key issues in the vexed relationship of sustainable development and learning. She concluded that crossing boundaries to co-create knowledges within established research traditions is a difficult task due to the contested nature of complex perspectives of knowledge that surround EE, ESD and learning. Most importantly for the purposes of this SI, Louise believes the Seminar provided her and other PhD candidates with an international experience and outlook on EE and ESD research and, perhaps most significantly, direct contact with key researchers from around the non-boundaried globe.

Four Brazilian researchers were invited to the 11th Seminar in 2011 in Australia for the first time in the series, and participated in the 12th at Uppsala, before hosting the 13th in the coastal resort of Bertioga in Brazil in July, 2015. Their participation marked a crucial moment in the "Latinization" of EER. The theme – *What is critical in critical environmental education?* – was significant for Brazilian researchers. World renowned Brazilian educator Paulo Freire has shaped critical education discourse for over 50 years in local and global ways that are simultaneously political, popular or transformative. Twenty-seven researchers from 5 continents, at different career stages, and in gender balance, participated. Importantly, the Brazilians who attended were independently self-financed, and who had limited institutional and personal access to Northern publications due to their high cost. The Bertioga organizing committee made the difficult decision of conducting the Seminar in English. In this rare configuration, participants examined 5 sub-themes, namely: (1) The constitution of the field; (2) Training policies for the researcher; (3) Theoretical and methodological trends; (4) Esthetics, ethics and politics; (5) Language and speech.

Each sub-group at Bertioga produced an article that was published in 2018 in a Special Issue of *Pesquisa em Educação Ambiental* (2018, vol. 13). Significantly, one article coauthored by six participants was written in a mix of Portuguese, Spanish, and English (Payne et al., 2018). The Seminar identified the historical contingencies, limits and challenges to many of the epistemic assumptions of the term "critical" and also considered its possible theoretical and methodological reinventions in local and global intersections.

A disruptive decision was made at Bertioga to hold the 14th Seminar once again in the South – Stellenbosch, South Africa, thus extending the underrepresentation of the South in a globally critical exchange of EER theory, practice, and praxis. The 8th Seminar was held in 2005 at Rhodes University in South Africa. Volume 22, 2005 of the *Southern Africa Journal of Environmental Education,* edited by Heila Lotz-Sisitka, a participant at Stellenbosch and coauthor of this Introduction, included a number of papers from the 8th seminar, and a reflection on "situated culture, ethics and new learning theory" penned by Paul Hart (2005). Hart noted the seminar's focus on "postcolonial and relational perspectives of inquiry", and the potential of an ontologically embedded relational epistemology. At the seminar, participants chipped away at some assumed relationships between language and experience, and the distinctions between the constructed and real aspects in EER, a theme which is nowadays being described as "new" under the banner of new materialisms or post-human.

Fast forward to the Stellenbosch Seminar where "northern theory" (Connell, 2007) is now increasingly mobile and fluid in the fast rise of virtual and digital interactions about theoretical knowledge productions in educational research. Such theory expands in the proliferation of global texts at an astonishing pace

and, eventually, penetrates via downloading and trickling down into EER. We felt one probable consequence of the faster knowledge productions is its decontextualizing, disembedding, disembodying and displacing of local, slow knowledge found in numerous socio-ecological settings, bio/geographical regions, and associated cultural realities (Canaparo, 2009). The escalating speed with which allegedly "new" and "post" theoretical approaches to knowledge sourced in the global North and selectively gains authority and, probably, suppresses voices, histories, practices, and theories from the global South, as well as marginalized parts of the poor North, raises critical questions about "new" forms of intellectual colonization (Carvalho et al., 2020), even global academic imperialism, as was discussed at length at Stellenbosch. In this intensifying global context of theory mobility and transfer, PH and NM are, now, symbolically popular. Even "other" theoretical turns in contemporary Western thought are marginalized (including the corporeal, speculative empiricisms, critical realisms, instrumental realism, ecophenomenology, ecofeminism, ecological anthropology, geographical timespace), as highlighted by Payne in this issue (2020).

Beyond the seminar series, Northern turns, theories and movements reflect a belated academic interest in mainstream educational thought and research responsive to the impacts of the global Anthropocene/ Capitalocene and its various local, national, regional, and planetary consequences in ecological disruption and destruction (for example, Nixon, 2011). Again, we note that the relatively "new" term "Anthropocene" has not been subjected to critical scrutiny in EER, like PH and NM. Why? Critics outside EER argue that the universalization of the term Anthropocene erases the variable historical, social, political, and economic contributions and consequences of, for example, global heating and climate disruption. "Whose Anthropocene?", asked Emmett and Lekan (2016). Does the term "Capitalocene" dig deeper into the economic-political governmentalities of the environmental crisis? (for example, Moore, 2016). Moreover, in EER, how does PH and NM theory intersect with each or all of the "…ocenes", be they in the North, South, or overall?

Framing critical EER: A "new" research imperative

Following the Stellenbosch Seminar, and the subsequent email exchanges between the nine participants over 6 months to develop Figure 1, the central questions identified by the group were summarized as a conceptual Mindmap. Limitations exist representationally in such a static map. In an attempt to partially capture the relational nature of the concepts raised and questions posed, the map incorporates a SPIRAL, more suitable to the dialogical process in which our face-to-face discussions took place during the Seminar. Every time a participant contributed an idea, it was questioned, possibly deconstructed, dislocated; a dynamic in the group where no issue was central, but always relational, a kind of RHIZOMATIC process of collaborative inquiry that allowed the participants to constantly go back and forth between issues of interest, but never going back to the same (place/idea/question). Figure 1 includes an imaged elaboration of the Mindmap.

- The pre"fix"(ing) problematic importance of "new" to (legitimating) emerging theories, and what is actually new in theory, such as PH and NM; and where its use selectively and reductively brings back elements from, by default, "old" theories.
- How and in what ways newly altered theory "really" or/and "materially" transforms aesthetic-ethical-political contexts of the "old" (new~not new).
- Potential problems in theory and practice that might emerge from uncritically awarding and rewarding authority to any "new" theories that, for example, speak to questions within the politics of ontology or the new epistemological/methodological challenges in EER. Does "new" theory in EER accelerate, or generate the gap with EE practices?
- How does "new" understand gaps and links between the new dynamics of an ontological-epistemological pluralism (in very different timespace circumstances/contexts, and geo-cultural-South/North) and diverse cosmologies (ways of being-in-the-world) and "realities"/"materialisms"/humanisms of those who really feel/live emerging turns. Does "new" exist everywhere, all the time?
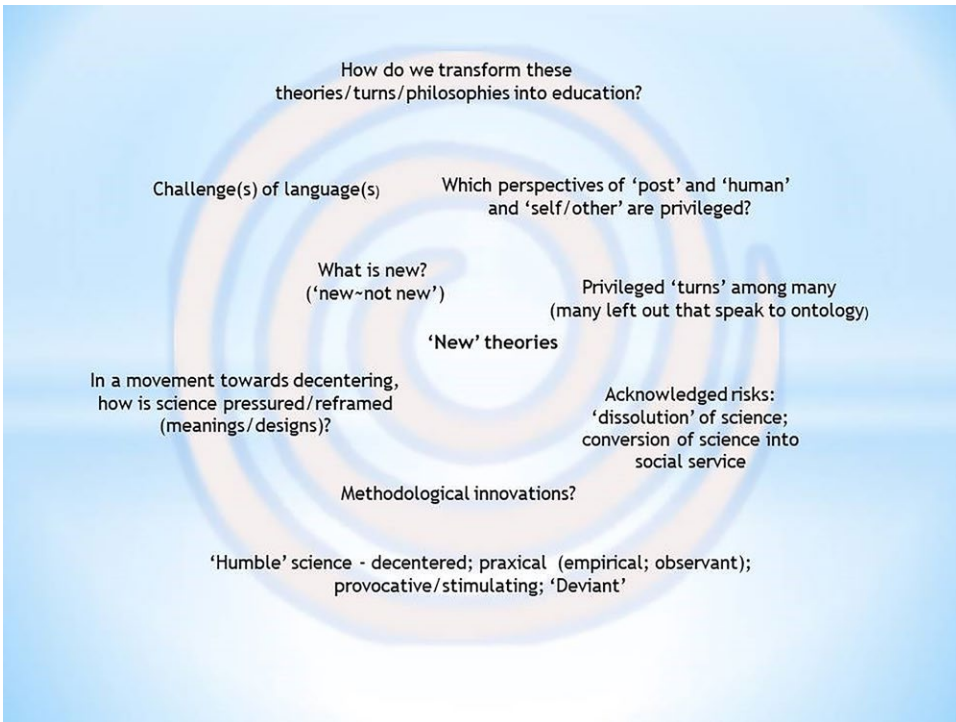
Figure 1. "New" theories Mindmap.
Source: Authors of this manuscript.

- In the assumption that a particular perspective of "human", and "self/other" is privileged when one specific theory gains popularity, what are the potential challenges for the dynamics of knowledge and theory production in overcoming "more of the same" in where these perspectives come from, and who they are for.
- The challenges and threats of recolonizing language(s), even in using prefixes like "post", as all other expressions, as only ever being partial to being, when not also understood as a problem or limitation to representation, but as an inescapable condition that needs acknowledgement. The new still appeals to reason and idealism but might simultaneously be an "illusion". What is "new" in the materialism of the "post"?
- How science (social science, human science) might be pressured, and possibly reframed in its meanings and designs in front of a (new ~ not new) movement toward "decentering", as proposed, for example, in PH and NM; and the ways in which this reframing may potentially lead to methodological innovations, or stasis, that can either perpetuate "old" dynamics of power (conservative dynamism) or open space for more decentered and relational assemblages.
- Acknowledging the theory-practice gap remains a major issue in EE and EER, the real possibilities of transforming the "new" in emerging theories/turns/philosophies into "new" bridges/gaps to education. Where sits/fits the old critical theory in EE/EER's commitment to praxis?
- Our deliberate, repetitive overuse of "scare marks" above aims to forewarn the reader about the selective jargon often (over) deployed in "post" textualizations of EER.

In all of the above, possible ways (where; who; how) to promote a humbler science, in which (ethical, honest) decentering of the subject might lead to a more praxical (empirical; observant) and provocative/stimulating approach in the conceptual, methodological and pedagogical framing and apparatus of EER. There might be a deviant orientation for research and practice, where acknowledged risks include overpowering relativism, aesthetic-centrism, (neoliberal) practice absolutism (substituting "old" theory absolutism), (hyper-capitalist) scientific consumerism/technologism, and the growing conversion of science into social service.

The respective authors in our small sample have each modified Figure 1 Mindmap according to the conceptual foci and empirical loci of their critiques.

(Critical) environmental education and the (post)human condition

One of the key discussions at the Invitational Seminar held in Brazil in 2015 concerned the future of the Seminar series. Some were of the view that the Series had lost its critical orientation. Questioners asked why EE should be prefaced by "critical" given the field's alternative purposes when formalized at Tbilisi in 1978 (Palmer, 1998); whether EE is not by nature critical, and what is meant by criticality when invoked in EE discourses; and how we might (re)think EE in view of post-critical critiques and responses.

Another key point raised at the past two Invitational Seminars focused on the influence of realist (re) turns in social theory, in particular, speculative realism and matter-realism (new materialisms) as responses to the perceived limits of linguistic (post)structuralisms and other anthropocentric philosophies. In view of these "post" twists and "new" turns in mainstream education forums, we have also recently witnessed the invocation of the more-than-human-world in many sessions across Divisions and Special Interest Groups of conferences such as the AERA, setting the stage for a more confident proclamation that we are, finally, seeing the mainstreaming of EE in Education Research after being ignored, or evaded, over the past 50 years.

A key question driving the 2018 Stellenbosch Seminar, therefore, was how the field now responds to the belated and possible mainstreaming of EE in general education discourse. In view of the (re)turn to matter and materialism, another question that begged answering was whether there is place for any kind of humanism (or humanness) in EE (or its mainstream discourses); and what that place should, or could be. Fleeting reference was made to "post-post-qualitative research" at a recent AERA forum attended by a few Stellenbosch participants where Elizabeth St. Pierre's was observed to declare that when she reads the word "social justice" in an article, she stops reading. Pause for thought?

Might St. Pierre's denouncement of social justice be because it is an inadequate signifier or, perhaps, the proposition of the mainstreaming of EE is a *non sequitur* given that St. Pierre (Lather & St. Pierre, 2013) does not reference any of the EE literature but, suddenly, makes mention of the posthuman intrigue in the more-than-human beyond what she labels the "old new" material reconstruction of the "old" they had (epistemologically) deconstructed and textually discarded? Patty Lather and St. Pierre (2013), and others in that SI on "post-qualitative research", now and after the post attempt to reclaim ontology and questions of *being* from the grip of postmodern epistemology (and its qualitative methodologies) might, on one hand, be a progressive move for educational research stuck in the anthropocentric past. In EER, it is most likely a "one step forward, two backwards" scenario, given the ecological *and* social justice histories and commitments of the "old" discourse of EE, including its many empirical studies and action research methodologies used since the 1980s. Nonetheless, the ahistorical repositioning of the "new new" of post-qualitative inquiry, such as the promoted by Lather and St. Pierre (2013), fails to acknowledge some of the most mundane questions now posed about "post anthropocentrism" in mainstream Education discourse, systems and structures that already have been examined in EE and EER. For example, how does EE feature in an interdisciplinary manner in formal education systems? how is it integrated in curriculum and policy in various contexts, and what experiential/embodied ontological-epistemological forms do its pedagogies take?

Indeed, how the mainstreaming of post-qualitative inquiry in educational research, via a detour to EE/EER and the decolonizing praxis of the Seminar series, addresses the growing ecological and social inequalities and injustices in the world in full view of the posthuman condition should ideally be discussed by the highly influential St. Pierre and Lather in Northern educational research; afresh and associated with it, a potential need for even more criticality in EER, as exposed in our Mindmap – but criticality of a different praxical kind than that envisaged from within the echo chamber of their still epistemologically driven posthuman notion of propositional post qualitative research. To be sure, St. Pierre might rethink, again, how the ontologies of ecological and social injustice and, for example, the "speciesism" connotation of the "more-than-human" slogan are mutually constitutive, as is well established in old ecofeminist praxis (Payne, 2020) and not take refuge in the still rarefied theoretical flights in the privileged "post"

North about research. Only one "outsider" text critical of the Deleuzian-Baradian indebted post qualitative educational research "re"turn" (to "the mind") of the "new new", written by Jennifer Greene (2013), was included in the Lather and St. Pierre (2013) SI. Greene gamely asked of the "character" of post-qualitative research, "is it still research?" and, if so, "where are we going?" and "what role(s) in society does post-qualitative research fulfil?". Seven years later we partially respond to them in this SI.

Amongst others at Stellenbosch, these particular background worries about post and new research, its status or decline, and any ethico-political impulse in an ecological and social justice praxical orientation ushers in the equally ominous sense that "humanity might be surplus to requirements" (Hinkson, 2018). This "new" or "non" sense in texts is perplexing, at least, and horrifying, at worst if the contradictions of St. Pierre and Lather are read as the tip only of a melting iceberg.

Thus, in the lead up to the Stellenbosch seminar, with the above background squarely set up, three gathering questions and four pre-reading articles representing different views, positions, cultures, and values about the PH ideal were circulated so as to prepare participants for discussing the post and new over the four days. Each article is summarized, and critique is incorporated.

Ulmer on posthumanism as research methodology: Inquiry in the Anthropocene

Lesley Le Grange, a co-organizer of the Seminar and co-leader of the "posthuman ideal" theme, selected Jasmine Ulmer's (2017) article and posed **Question 1** of "Does the interpellation of the posthuman into education (research) discourses suggest that environmental education (research) is becoming mainstreamed?".

Ulmer's article was published in the same Northern journal Lather & St. Pierre's article was published four years earlier, they being cited approvingly by Ulmer. Immediately, there is the telling use of "as" in Ulmer's title (*Posthumanism as research methodology: inquiry in the Anthropocene*), and separation of research and inquiry by a colon (:). Ulmer's declared aim is "conceptual" and "suggestive", although the article concludes with an Appendix that serves as a "potential example" which might be "adopted" in a methodological project. The article's structure and sequence are also telling, if potential exists for an empirical study given the description of education and water in Flint, Michigan. The use of "as" indicates praxis, where, if working within modern critical theory, theory and its concepts are *already* practice. These (seeming) contradictions are confirmed when the potential project appears separately in the Appendix. In other words, Ulmer "suggests" the potential project is an "applied" one and, in doing so, positions the reader in a text that non-praxically bifurcates, or dualizes, thinking and doing.

Ulmer does acknowledge a relationship of posthumanism and the Anthropocene, and is aware of the other "…cenes" in discourse. There are 85 publications listed in the references; one only is from an EE journal. Ulmer cites the "usual suspects" recruited from within "post" type theory – Braidotti, Haraway, Colebrook, Alaimo, and Barad, Deleuze & Guattari, Harding, and Latour.

Ulmer confesses her initial discomfort and unease with the idea of posthuman. She acknowledges how qualitative methodologies have advanced, or promoted and, perhaps, transformed human centered studies of race, ethnicity, gender, sexuality, class, culture, spirituality, ability, language, and other aspects of "identity". But, "given the state of the planet, human centered approaches to research *may* not be enough" (Ulmer, 2017, p.833, our *emphasis*). "Justice" may extend to the more-than-human "material, ecological, geographical, geological, geopolitical, and geophilosophical" that are inextricably linked to the "local ecologies" in which we "live, eat, drink, breathe, commute, hear, see, smell, touch, sense, and experience life". At this point, Ulmer's lack of historical understanding of the field of EE, and its practices, theories, and methodologies, is even more telling.

And, perhaps, or therefore, her initial discomfort with the term "posthumanism" and its "why?" in research and "when?". Ulmer's rhetorical "how?" *moves* away from empirical models of science (causality, reliability, validity) and *moves toward* material ways of thinking and being. Yet again Ulmer's lack of historical understanding of the debates engaged in EER thirty years ago is well on display. Ulmer's "posthuman research" highlights several key approaches to knowledge production. These include: situated and partial; material, embodied, and transcorporeal; intercorporeal, relational, and transversal; processual, and affirmative. Part of Ulmer's *move* is to the "non-representational practices" as an attribute of

"thinking" post-qualitative inquiry about, for example: animating lifeworlds; thinking without and with; differently – as future "imaginaries". Again, even a cursory glance at the 50 year-long history of EE, and EER, will see numerous conceptual, empirical, and methodological examples in the literature of what Ulmer ahistorically claims is "posthuman as research".

On this example alone, EE may well be (becoming) mainstreamed in educational research and post-qualitative inquiry, but that "affirming" claim can only be made in ignorance of the discourses of EE and EER. The preceding summary and critique is limited to Ulmer's text only. An extended critique is not offered here. Aspects of that will be readily apparent in the following articles making up this SI.

James on de-centering and Payne on post-critical materialism

Le Grange selected Payne's (2016b, from the *JEE* SI) article as a pre-reading. Payne, co-leader of the "posthuman ideal" seminar workshop, selected the James (2017) article. Together, they formulated **Question 2** for the four days of face-to-face discussion, namely: How might we imagine/practice critical environmental education (and EER) with key/priority ideas derived from post-human materialisms/realisms/natures "texts"?

The use of the "*imagine/practice*" mash was intentional and mischievous. In one respect, that mashing of different terms goes to the very heart of "theory" (like posthuman) being a "mind matter" (as indicated in Ulmer's article) only from the individualized neck up, treated as an imaginary in EER, while practice embraces the embodied doing in the ecological everyday in EE from the *in situ*, but transcorporeal, collectivist necks down (as suggested only by Ulmer). Or, the use of the slash (/) suggests that there is a meeting of theory and practice, or the reverse, where theory is practised in EE and practice is theorized in EER. The question of *praxis* is, therefore, flagged strongly in question 2, noting the chronic problem in EER of a theory-practice, rhetoric-reality, and textualism-lifeworld gaps. We anticipated some discussion at Stellenbosch would revolve around the enduring problem of the gap and, in particular to what extent, "post" and "new" theory in EER might deepen, or partially reconcile, that gap, as critical theorists and realists in EE/EER anticipated in emphasizing contextually adequate and appropriate *praxis* within the historical-material contexts of various ecological and social justices undergoing agency/ies-driven transformations.

Paul James' (2017) "alternative paradigms" for "decentring the human without becoming posthuman" was a chapter published in a co-edited volume about, again, "imagining" sustainability education. James' paradigmatically reconstructive framework of "circles of life" across the incrementally "decentring" but layered "domains" of economics, ecology, politics, and culture, is a very different approach to inquiry than Ulmer's more open ended listing of concepts, qualities, and characteristics of posthuman research. In this SI, Sund and Pashby (2020) lend some empirical weight to James' "circles" and "decentring" in a study of classroom practices. In a different way, James' idea *and* praxis of "decentring" in research is a significant conceptual departure from posthuman theory applied "as" post-qualitative inquiry. Not only is James critical of the term "sustainability" (see the 2016 *JEE* SI), as has been well documented in the discourse of EE, he targets a number of posthuman (and new materialisms) theorists Ulmer draws upon, including Braidotti, Hayles, Bennett, Wolfe, and Snaza. Like Ulmer, James references one only article from EE journals. James' critique cannot really be read outside his earlier extended account of social theory and sociology, informed by anthropology, where such theory aimed to reclaim the historical materialist critical theory and praxis partially indebted to Frankfurt School, post Marxist, structural and agential analysis (James, 2006).

Like many other critics with a longtime scholarly commitment to what is now referred to as the "ontological turn", where "we are part of nature", James' (2017, p.40) critique of posthuman theory hones in on the numerous epistemological contradictions and rhetorical disclaimers he identified, namely:

- The term "posthuman" gives the impression it advocates a time after the human. The category of being flows down the plughole of history. He argues this vortex is a serious game that denies, or defies, the ontological variability of what it is to be a human being.

- Posthumanism is conceptually confusing in that much of the approach taken by posthuman theorists is contradictory and incoherent. James cites a leading theoretician who, on one hand, claims posthumanism isn't posthuman at all, but two distinct "conditions", one before humanism, the other after where neither is implicated in the other, thus creating a spiral of conceptual confusions. Indeed, James notes that the targets of posthumanism have already been critiqued in various humanisms already well established in theory. He calls for posthumanists to furnish a critique of humanisms that advocate the hubris they oppose.

- The posthumanist critique of dualism is thin and misdirected due to its core revulsion of Cartesian dualistic thinking that essentializes the modern and the humanist as a series of oppositions. Such essentialism, he argues, is conceptually and empirically wrong, noting there are strands of modernism and humanism that fetishize dualism, but other strands are very different. Blanket statements in posthuman theory that totalize and universalize their critique are guilty of what they argue against.

- Some posthumanists anthropomorphize the very world that they treat as beyond the human. For example, James ironically notes Rosi Braidotti's claim that matter is "intelligent and self-organizing", and Katherine Hayles's vaguely Cartesian proposition that people become posthuman because they think they are posthuman, while suggesting the mind is a sideshow to the body. Of the double irony exampled by James, he concludes such incoherence and contradiction are not good theory.

- Having dammed dualism, posthumanists themselves use unacknowledged dualisms. Their texts use the same distinctions of, for example, mind and body (the latter treated as a virtuality), human and animal, human and posthuman.

- The politics of posthumanism is ungrounded. Posthumanists' political projections are presented as a spiral of conflicting and even contradictions that loosely fit together as a claim on bringing about a new post-dualist world, that we are already posthuman, and that humanism remains the problem because it remains dominant. James argues that all this theorizing occurs without providing an alternative grounding of the human condition, including its embeddedness in and dependence upon nature. It remains an empty aspirational in post human denial of that which constructively, and progressively, precedes it, notwithstanding how any "thought" can be negatively hijacked by other voracious forces and factors, such as, for the purposes in this SI, the abstraction of social relations (rather than humanism).

James proceeds to a long explanation of his alternative "circles of social life and beyond". It partially draws inspiration from the classical Greek *oikos,* or household that heuristically serves to decenter the human while grounding the interrelated domains of economics, politics, ecology, and culture within the social complexity of the natural. For decentered theory building, James also recommends the reassemblage of the environment of things and processes within the interconnectedness of social and natural life.

James' decentering of the human/ism stands in stark contrast to what he concludes is bad, incoherent, contradictory, rhetorical/discursive posthuman theory. The inclusion of James' article in the seminar's pre-reading material was designed to (a) demonstrate there are alternatives to the mainstreaming of new theory, and (b) disrupt any given assumptions about the assumed status of posthuman theory and any uncritical adoption of it in EER.

Phillip Payne's (2016b) "what next for post-critical materialisms in EE?" included a number of recommendations for future inquiry in EER based on reassembling the conceptual-empirical findings of seven international experts currently studying "the politics of policy in ESD". Payne's reassembling methodology aimed to provide an overdue, but collectively shared understanding of the local value and global efficacy of the United Nations Decade of Education for Sustainable Development (2005–2014) (DESD), reiterating the longstanding historical tension between EE and ESD. The shared empirically supported practical qualifications of conceptually-driven and theoretically-inspired DESD policy not only aimed to bridge the gap but also provide a sound "material" basis for reimagining and restorying various anticipations and expectations of the DESD's successor policies, such as UNESCO'S Global Citizenship Education (GCED) and the Global Goals for Sustainable Development (GGSD).

Payne's synthesis of the studies assembled in the 2016 *JEE* SI included eight "what nexts for EER?" that individually and collectively revealed a range of silences and absences still challenging the

empirical-conceptual basis and status of EER. The *questions* pressing for a post-critical materialist response in EER included:

- The centrality of agency in relation to the varied historical-structural contexts and circumstances in which agency is enabled and/or disabled;
- The role of (human/bodied) esthetics and environmental/ecological esthetics in the framing of future research problems, methodological innovation, and alternative representations when seen within the overlays of environmental ethics and ecopolitics.
- The, therefore, needed deeper understanding of the underlying ontology – epistemology tension as informing the axiological considerations in inquiries and relevant methodological deliberation and innovation.
- The postmodern materializations of technologies, digitalization of knowledge transfer, and numerous forms of consumption constantly reshaping all everyday practices, irrespective of the wide range of variations in contexts, cultures, and settings of agency enabled and/or disabled.
- The problem, or challenge, of "ecological modernization" (mis)understood as a variable global trajectory that also shapes how the framings of EER and problem setting in research might more deeply be examined.
- The precarious status of Nature which lies at the core of the ontological-epistemological tension, and axiological-methodological dilemma confronting the framing and politics of inquiry in EER. Put simply, if Nature is dead then the justification for EE and EER probably diminishes.
- The role and place in EE and EER of "new" theory, as is now partially examined in this SI assemblage.

Le Grange on (post)humanist sensibilities, Indigenous cosmovision and education

Le Grange (2018) "The notion of Ubuntu and the (post)humanist condition" was the fourth reading informing **Question 3** – Are there points of resonance and dissonance between indigenous philosophies and post-human materialisms/realisms?

Le Grange highlights the growing interest in Indigenous knowledge and overall cosmovision in more recent years, including two consecutive Decades of the World's Indigenous People declared by the General Assembly of the United Nations (1995–2004 and 2005–2014). With reference to the expanding literature produced by Indigenous scholars (and those who work alongside them), Le Grange indicates how this "new" conceptualization of Indigenous (with a capital I) might suggest a wider (political) reference to peoples who share common experiences of colonialism around the world (see also, Ma Rhea, 2018). The change (shift; turn) is highly relevant, as it symbolizes a resistance to all forms of colonization and imperial ideologies, including "[…] colonial relations of production, which continually characterise and shape academic practices" (Le Grange, 2018, p. 41).

Within this historical context, Le Grange examines how Indigenous education might be thought, or imagined, in the "contemporary condition" of the (post)human predicament where the unit of reference for "human" is (re)imagined as embedded, embodied, extended and enacted in the (inter)connectedness of the cosmos. As an opposition to the European constructed idea(l) of humans as "rational autonomous beings" that, as such, can aim for (and supposedly reach) physical, mental, discursive and spiritual perfection, symbolized in the unfading image of da Vinci's Vitruvian Man, Le Grange draws inspiration in the concept of *Ubuntu/Botho*. This term expresses the predominantly relational essence of sub-Saharan African traditional morality, where to enter more deeply into community and living in harmony with others is to become "more fully human". Both the "Vitruvian ideal of Man" (Braidotti, 2013) and *Ubuntu*, more than mere linguistic concepts, drive strong normative connotations as embodied (moral) ways in which relations are constantly (re)defined. Whilst the Vitruvian (European) human, as a model of physicality and virtuality, becomes a reference for categories of superiority and, thus, inferiority (as of other common oppositions, such as right/wrong, truth/illusion, real/myth, etc.), including in education (where multiple pathways, including those that exist prior to human thought, are reduced to limited, standardized

ways of knowing, being, becoming), *Ubuntu* expresses the ideal of community and connectedness not as efficacy, but as an essence of being (human) which is, according to Le Grange (2018), supported by the broader concept of *Ukama*, found in the Shona language, expressing the meaning of relatedness to the entire cosmos – as the concrete form of *Ukama* (relatedness), *Ubuntu* (humanness) expresses the relationality within the universe through the microcosm of human (inter)relationality within society.

Le Grange aims to find possible alignments between *Ubuntu* and "(post)human sensibilities". He discards any association with Nussbaum's "reactive" PH (where the framing of subjectivity as universalistic individualism and fixed identities and steady locations contradicts *Ubuntu*'s notions of communalism and being as a state of becoming and ceaseless and open unfolding); sees some points of convergence with the strand of PH that derives from science and technology studies (particular geo-cultural/historical contexts considered, "panhumanity" as a similar expression of interconnectedness to what is seen in *Ubuntu*), as well as points of divergence (the centrality of the individual in Rose's Foucauldian brand of neo-Kantian normativity, and Verbeek's notion of moralizing technology, as it possibly contradicts the notion of the ethico-normative distinctiveness of the human present in *Ubuntu*); and identifies a more clear alignment with Braidotti's "critical (post)humanism" (the recognition of the ethico-normative distinctiveness of the human, not as a privileged ontological "place" occupied by humans, but as a moral-ethical responsibility with/in [all] life; and the recognition of life as interconnectedness).

Aiming transference of what he identifies as convergences between *Ubuntu* and (post)human thought to/through education, Le Grange highlights the "cultivation" of sensibilities attuned with the "[…] interconnectedness of humans and the more-than-human-world" (2018, p. 52), embracing technologies where it enhances life. With this, Le Grange suggests (a) a radical rethinking of current dominant approaches to education/curriculum, where experimentation ("with the real") that is open to outcomes that cannot be predetermined substitutes subject disciplines, predetermined outcomes and standardized tests; and (b) a reimagined subject and subjectivity, where the selfish "I" of the Western "individual" gives way to the humble, embedded, embodied, extended and enacted "I" that becomes a person solely when living-with/learning-with other persons and moving environments. In this education is the potential to promoting "active lives" which "[…] will take actions in the interest of social justice, in the interest of conserving the earth's resources, and that will resist technologies that do not enhance life – and embrace those that do" (Le Grange, 2018, p.53).

In Le Grange's effort to highlight possible convergences between the "new" theory of what he refers to as Braidotti's "critical (post)humanism" and the "traditional" ("old"?) sub-Saharan concept of *Ubuntu*, it becomes clear how the new-not new (Figure 1) orientations of what is described as "(post)human sensibilities" evoke and carry on idea(l)s that were not only expressed in previous/earlier "critical" theories, but also lived as normative connotations and embodied ways-of-knowing-and-doing in traditional/Indigenous cosmologies. The central questions raised after the pre-reading phase by this SI (Mindmap framework in Figure 1) could, but are not, asked. Highly relevant points of confrontation are avoided in this silence, such as the use of "post" as a surrogate for a "new" that often underrepresents the "old", including the traditional ways of Indigenous peoples, such as *Ubuntu*; and how the unavoidable post-pre and new-old dualisms, where the post and the new carry the imaginary of that which is better and more advanced (Carvalho et al., 2020), reinforce the dynamics of colonialism which the movement of/for an Indigenous education aims to resist. A challenging opportunity is set in reviewing the publication in its conceptual/epistemological, methodological, and ecopedagogical aims and designs in contrast to the proposed SI framework.

Historicizing reflexivity: A partial history of the present

The specific *JEE* SI purpose of critically appraising the allegedly "new" in and of EER has a much longer historical purpose. Starting in 1993, the Invitational Seminar treated EER as a critical diagnosis, dialectic, and prognosis of the field, be it from a "critical theory" *preconception* (Payne, 2020) intersecting with the critical reflexivity *positioning* of its authors, as described in the 2013 *Handbook* by Paul Hart (2013). As outlined above, the three most recent seminars prior to the 14th at Stellenbosch, and before that in the

8th Rhodes seminar, have attempted to raise the bar in terms reexamining the *praxis* presumed of the critical.

Like the 2016 JEE SI, this "newest" SI examines the critical implications and consequences of any new risks to EER and EE associated with global mobility and transfer of particular authoritative turns and twists in theory of EER, and the "newness" of phenomena that can signal Deweyan-like "breeze blowing" instead of substance and depth, if not historically and critically engaged. In so doing, a related rationale of this SI is the "narrative continuity" of the field and, now, its (global) politics of knowledge production, representation, inclusion, and exclusion, as generated through combining the International Seminar Series and *JEE* SIs.

The recent proliferation of theoretical turns in the North has emerged, primarily, from a move away from the dominance of hermeneutics, the linguistic turn and cultural studies of the humanities. Educational research housed in the social sciences seems to be caught somewhere between its "applied science" (KAB – knowledge, attitudes, behaviours) past and "new" human(ities) aspiration, with EER oscillating between ontological, epistemological, axiological, and methodological commitments. The numerous shifts occurring in thought, particularly in the global North, demand ongoing academic vigilance and critical scrutiny by EE researchers and practitioners about officially received mobile and downloaded knowledge and its potential legacies in the future.

Interestingly, most participants at the Stellenbosch Seminar, most from the global South, were, indeed, critical of merely receiving the new (post)human idea(l). In general, group members detected the importation of a new orthodoxy in (Northern) academic intellectual resources that, most recently, has prioritized PH and NM. A few participants identified some positives in the "new", others were curious and suspended judgement, while the others were critical, either reflexively, or from a robust theoretical perspective of praxis, such as critical realism. There was a loose consensus that new theories were not so new in their constitution since, for one example only of the array of critical/realist materialist pedagogies, indigenous cultures carry deep and long histories of integrative and relational nature-culture (onto-epistemic) foundations for being and becoming (Le Grange, 2018). The SI papers from Sund and Pashby (2020), and Carvalho et al. (2020) both provide conceptual-empirical examples of "decolonialist praxis" research that have escaped attention in new theory in EER.

Challenging new agendas

Our SI challenges the local-global engagement in theory/turns and associated knowledge productions. Following the Stellenbosch Seminar, the praxical challenge evolved from our face-to-face engagement over a six-month period of email exchanges and culminated in the Mindmap in Figure 1. In that six months the framing, purposes and rationale of the SI evolved with a sense that there is need for both wider and more deeply reflexive forms of engagement in the ways in which theory turns are made and/or adopted. Given the initial focus on the PH idea, and then the "on site" diverse backgrounds of participants' critique of the loose manner in which the PH idea(l) is being introduced as "new", this SI views received theory as a particular marker of the current intellectual mood in the North that, probably, demands a more widely constituted conceptualization, and care in EER in its framing and constitution. In addition, some of the participants' current research efforts were consistent with, or expansive of, or critical of PH, or NM, or related turns in theory.

The six-month period of refining this SI framing, therefore, allowed for some reflection upon participants' current research activities – where possible and relevant – to "ground" conceptual/theoretical and empirical understandings of received and/or global theory in EER as it relates to claims of newness or postness. We felt this SI should include examples of empirical studies that "materially" went well beyond the textualism of "post" and "new" theory in EER. We felt it was important, following Dewey, that we incorporate researchers' experience of EER practices. Through this recursive theory-practice-theory process, the participants were challenged to constantly look back at the Mindmap (Figure 1), contrasting their current research activities with the SIs proposed structure for potential questioning and critique, in accordance with the Stellenbosch face-to-face.

As a result, three manuscripts were formulated as carefully constructed samples of how the Mindmap, understood now as a researchable problem and questioning, can foment "engaged debate" in EER (Robottom & Hart, 1993) with: a) the conceptualization of emerging theories as "new" as a repeated mechanism for the continuous legitimation of selected theories without necessarily acknowledging the global histories and politics of knowledge production; b) the uncritical fashion in which authority can be awarded to theories privileged in discourse and performatively rewarded for researchers, and how this dynamic of discourse, text and researcher effects the uneven balance, perhaps colonization of the global knowledge production of theory and practice; c) the direct effect of the politics of knowledge production on potential gaps between theory and practices, especially considering the ontological dynamisms and plural cosmologies in the array of (very) different geo-cultural/historical settings, raising questions about where theory (or particular perspectives on "human", "self/other", "nature", "environment", "life/living", and so on) comes from, and who they are "for"; d) the partiality of language as a condition of representation, and the authority of (selected) language(s) as a performative exercising of privilege, power, and control; e) the potential of a Freirean-like (organic) movement toward decentering, considering its limitations (conservative dynamism) and possibilities (decentered/relational assemblages) for a more "humble" science that can lead to conceptual, methodological and pedagogical changes in (environmental) education (research) praxis.

Mindful of the lengthy slow research process of this SI, including four pre-readings circulated before the Stellenbosch Seminar, leading into the face-to-face, and now the three manuscripts sampled here, the unique metamethodological assemblage of the SI *itself* (Payne, 2016a, 2018b) included repeat drafts from each author, informed by peer review from other participant authors of the SI. This co-constructive, iterative process to collective "representation" (as a SI text only) enabled authors to learn from each other in continuous dialogue, across cultural differences and idiosyncrasies, but within the seeking of convergences highlighted conceptually and empirically (and methodologically) as cross-references within the SI. The SI assemblage metamethodology, the third demonstrated in the *JEE*, is a significant departure from the methodological individualism of conventional SIs and edited volumes, even if certain driving themes are focused upon.

The weight and spread (or nature and scope) of the SI metamethodological assemblage provides for much greater credibility and integrity of the collective narrative published as a conceptual (Mindmap framework) and empirically informed (various studies in the sample) "text" in EER whose *criticism* and *praxis* aims to be generative of much more research work that needs to be undertaken.

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References

Bauman, Z. (2012). *On education*. Cambridge: Polity Press.
Braidotti, R. (2013). *The Posthuman*. Malden, MA: The Polity Press.
Canaparo, C. (2009). *Geo-epistemology: Latin America and the location of knowledge*. Oxford, UK: Peter Lang.
Carvalho, I. C. M., Steil, C. A., & Gonzaga, F. A. (2020). Learning from a more-than-human perspective. Plants as teachers. *The Journal of Environmental Education*, *51*(2), 144–155.
Connell, R. (2007). *Southern theory: The global dynamics of knowledge in social science*. Cambridge, UK: Polity Press.
Debaise, D. (2017). *Speculative empiricism: Revisiting Whitehead*. Edinburgh: Edinburgh University Press.
DeLanda, M. (2016). *Assemblage theory*. Edinburgh: Edinburgh University Press.
Dewey, J., (1938/1988). Experience and education. In J. Boydston (Ed), *John Dewey the later works, 1925–1953: Volume 1. 1938–1939* (pp. 1–62). Carbondale: Southern Illinois University Press.
Emerson, R. (1983). *Contemporary field research: A collection of readings*. Long Grove, IL: Waveland Press.
Emmett, R., & Lekan, T. (Eds.). (2016). Whose Anthropocene? Revisiting Dipesh Chakrabarty's "four theses. In *Transformations in environment and society* (Vol. *2)*. Bonn, Germany: Federal Ministry of Education and Research.

Greene, J. (2013). On rhizomes, lines of flight, mangles, and other assemblages. *International Journal of Qualitative Studies in Education*, *26*(6), 749–758.

Hart, P. (2005). Recontextualizing learning: Reflections on the social and relational nature of research in environmental education. *Southern African Journal of Environmental Education*, *22*, 11–20.

Hart, P., (2013). Preconceptions and positionings: Can we see ourselves within our own terrain? In R. S. M. Brody, J. Dillon, & A. Wals (Eds.), *International handbook of research on environmental education* (pp. 507–510). New York, NY: Routledge

Hinkson, M. (2018). Humanity: Surplus to requirements; settler colonialism and displacement – work, economy and technological futures. *Arena Journal*, *51/52*, 1–232.

James, P. (2006). *Globalism, nationalism, tribalism: Bringing theory back in*. London: Sage.

James, P. (2017). Alternative paradigms for sustainability: Decentring the human without being posthuman. In K. Malone, S. Truong & T. Gray (Eds.), *Reimagining sustainability in precarious times* (pp. 29–44). Singapore: Springer.

Langer, S. (1941). *Philosophy in a new key: A study in the symbolism of reason, rite, and art*. New York, NY: Pelican.

Lather, P. S., & Pierre, E. (2013). Introduction: Post-qualitative research. *International Journal of Qualitative Studies in Education*, *26*(6), 629–633.

Le Grange, L. (2018). The notion of Ubuntu and the (Post)Humanist condition. In J. Petrovic, & R. Mitchell (Ed.), *Indigenous philosophies of education around the world* (pp. 40–60). New York, NY: Routledge.

Ma Rhea, Z. (2018). Towards an Indigenist, Gaian pedagogy of food: Deimperializing foodScapes in the classroom. *The Journal of Environmental Education*, *49*(2), 103–116. doi:10.1080/00958964.2017.1417220

Moore, J. (Ed.) (2016). *Anthropocene or capitalocene? Nature, history, and the crisis of capitalocene*. Oakland, CA: PM Press.

Nagendra, H., Bai, X., Brondizio, E., & Lwasa, S. (2018). The urban south and the predicament of global sustainability. *Nature Sustainability*, *1*(7), 341–349.

Nixon, R. (2011). *Slow violence and the environmentalization of the poor*. Cambridge, MA: Harvard University Press.

Palmer, J. (1998). *Environmental education in the 21st century: Theory, practice, progress and promise*. London: Routledge.

Payne, P. (2011). *Positioning environmental education research for 2015 and beyond; [Mismatch] knowledge value and integrity, intergenerational and globalization issues: 11th Invitational seminar on research development in environmental and health education*. Melbourne: Monash University/Monash Sustainability Institute.

Payne, P. (2016a). The politics of policy making in education for sustainable development. *The Journal of Environmental Education*, *47*(2), 69–178.

Payne, P. (2016b). What next? Post-critical materialisms in environmental education. *The Journal of Environmental Education*, *47*(2), 169–178.

Payne, P. (2018a). Locations, translocal and transnational environmental education research in the Anthropocene. *Pesquisa em Educação Ambiental*, *13*, 10–22.

Payne, P. (2018b). The framing of ecopedagogy as/in scapes: Methodology of the issue. *The Journal of Environmental Education*, *49*(2), 71–87. doi:10.1080/00958964.2017.1417227

Payne, P. (2020). "Amnesia of the moment" in environmental education. *The Journal of Environmental Education*, *51*(2), 113–143.

Payne, P., Rodrigues, C., Carvalho, I. C. M., Santos, L. M. F., Aguayo, C., & Iared, V. G. (2018). Affectivity in environmental education research. *Pesquisa em Educação Ambiental*, *13*, 93–114.

Robottom, I., & Hart, P. (1993). *Research in environmental education: Engaging the debate*. Geelong: Deakin University Press.

Stevenson, R., Brody, M., Dillon, J., & Wals, A. (Eds.). (2013). *International handbook on research on environmental education*. New York, NY: AERA, Routledge Publishers.

Sund, L., & Pashby, K. (2020). Delinking global issues in Northern Europe classrooms. *The Journal of Environmental Education*, *51*(2), 156–170. doi:10.1080/00958964.2020.1726264

Ulmer, J. B. (2017). Posthumanism as research methodology: Inquiry in the Anthropocene. *International Journal of Qualitative Studies in Education*, *30*(9), 832–848. doi:10.1080/09518398.2017.1336806