INVOKING POSTHUMANIST VISTAS: A DIFFRACTIVE GAZE ON CURRICULUM PRACTICES AND POTENTIAL

S. M. Maistry

Social Sciences Education
University of KwaZulu-Natal
Durban, South Africa
http://orcid.org/0000-0001-9623-0078

I. Sabelis

- Organization Sciences, Faculty of Social Sciences
 Vrije Universiteit Amsterdam, Netherlands
- Education and Human Rights in Diversity Research Unit (Edu-Hright)
 North-West University
 Potchefstroom, South Africa

http://orcid.org/0000-0003-0109-0127

S. Simmonds

Education and Human Rights in Diversity Research Unit (Edu-HRight)
North-West University
Potchefstroom, South Africa
http://orcid.org/0000-0001-5005-9906

ABSTRACT

Humanist discourse has assumed such an ideological normalcy to the extent that any attempts at its disruption are likely to be met with severe resistance. As such, higher education curriculum design and curriculum content continue to be largely anthropocentric, buoyed by human-centred neoliberal principles that have gradually encroached the academe. To explore ways out of the dilemma, we draw on wild pedagogy theory (Jickling 2015; Mcphie and Clarke 2015; Springgay and Zaliwska 2017; Jickling et al. 2018b) as a means to challenge the straitjacket constraints of neoliberal higher education. Over time, the wild has been banished from classrooms: the call for wild pedagogies might mean that we have reached the limits of the "tamed" - and we have tamed a lot in order to offer a "one size fits all" approach to (higher) education (Jickling et al. 2018a). The tendency for higher education to teach more and more people in less and less time, has implied an understanding of teaching that is characterised by efficiency and processing, at the cost of the process of learning as a relational becoming with the world in the posthuman condition we live in (Braidotti 2019). In this article, vignettes are used to offer an account of our critical posthumanist incursions as university lecturers into curriculum practices. We use a diffractive gaze to present the generative potential of non-anthropocentric approaches as well as the struggles that these present as we strive to de-center our humanistic tendencies towards curriculum knowledge and teaching within the neoliberal space, we find ourselves.

Keywords: critical posthumanism, wild pedagogies, curriculum, diffractive gaze, neoliberal higher education

INTRODUCTION

"... the openness that often marks posthuman writing waits until the postscript to merge" – (Ulmer 2017, 833).

In inviting a take-up of Ulmer's assertion above, we begin with an open contention that canonical Enlightenment Humanism's influence or impact on the field of curriculum studies has not been held to account for the Anthropocene. Humanist-oriented curriculum studies scholarship has not consciously, nor aggressively, considered how human economic endeavour/activity has contributed to the planet's systematic and enduring ecological crisis. The posthuman turn however, confronts this pressing issue directly. The fledgling journey of posthumanist curriculum studies holds much promise, and through this article, we attempt to join this conversation. The need for this is further reiterated by Snaza et al. (2014) in their article, Towards a posthumanist education. They contend that although posthumanist discourse is prevalent in the humanities and social sciences, its presence remains to be felt in curriculum inquiry and education studies. We argue that more curriculum scholars ought to join in the conversation. It is not about using posthumanism to replace or reclaim curriculum inquiry, what is needed are intra-actions2 that take heed of the unconscious way in which we regard universities and the curriculum "as places where humans dwell together to learn what it means to be human" (Snaza et al. 2014, 39). Speculative realists (for example, Quentin Meillassoux) warn of correlationism, namely, that the world exists only insofar as it serves human beings. When translated in educational thought, epistemology (what and whose knowledge is of most worth) gets privileged above social and material reality (Meillassoux 2010), where the image of the human remains the primary agent, and the dominant image from which to think about our being in the world.

A key challenge in advancing posthumanist curriculum studies is the canonical positioning of humanist gatekeepers who steadfastly guard the boundaries of the field. The hegemonic hold on curriculum theory can be traced back to the dominance of white males of western descent – William Kilpatrick (1871–1965), Franklin Bobbitt (1876–1956), Werrett Charters (1875–1952), Holis Caswell (1901–1981), Harold Rugg (1886–1960), Ralph Tyler (1902–1994), and John Goodlad (1920–). Typically, curriculum texts (books) commence with an explanation of the genesis of the term "curriculum", describing its etymology as located in the Latin word

"currere", which literally translates into "to run the racecourse". While there have been variations in the interpretation and application of the term "curriculum", from loosely framed conceptualisations by liberal thinkers like Maxine Greene, and Critical scholars like bell hooks, to work by the "reconceptualist movement" led by contemporary curriculum scholar, William Pinar, arguably the most dominant and pervasive subscription has been to that of the generally accepted Tyler Rationale (Maistry 2021).

Tyler's linear, "product" focussed seminal work, titled Basic Principles of Curriculum and Instruction (1949), continues to "direct" curriculum modelling in both school and postschool sectors (Maistry 2021). Of concern for this article, is that the Tyler Model has been particularly susceptibility to expedient mutation (of curriculum) into a neoliberal, marketserving instrument. Maistry (2021, 135) contends that "the concept of knowledge economy ... the idea of knowledge as (product) package for consumption and utility in the market is certainly, in many ways, a swing back towards Tyler's principles". Neoliberal discourses of teaching and learning as performance, have become normalised, characterised by increased prescription (as it relates to curriculum), ratcheting up of performance assessments, and unprecedented levels of accountability and surveillance of the work of subjects in the world of education. What becomes clear is that neoliberal ideology and Enlightenment Humanism have become compatible bedfellows, to the extent that lecturers and students alike are almost forced to not ever escape from the neoliberal manners of teaching. Key neoliberal tenets like individual freedom of choice, sustains a narcissistic Anthropocentric preoccupation – of the self-utility maximising "man" in an economic world where competition has become axiomatic (Braidotti 2013). How then might posthumanist curriculum studies thwart this anthropocentric disconnect?

CROSSROADS OF THOUGHT AND PRACTICES

"I guess I really grew up wanting to be an explorer" – (Haraway and Goodeve 2000, 5).

In our daily practices as academics, we juggle (not in any prescriptive sense that is) the perceived need for beyond-human thinking (Ivakhiv 2014) with rigid, required, managerial "taming" of students. What we do know is that we are increasingly confronted, also by our own compliance (Kamsteeg 2019) to improvise, find the limits of our capacity, juggle workloads, tick boxes, and the like. The TINA (There is No Alternative) character of neoliberal manners of organizing have affected university teaching and learning (Bauman and Donskis 2013). Accountability, managerialism and "organizing" (the curriculum) produce not only anthropocentric, but rigid and uniformized standards for teaching as if higher education

institutions were businesses for processing products, e.g., teachers. The business undercurrent or *cookie factory* notion (Sabelis 2019) has additionally, or simultaneously, led to ever bigger cohorts of students to be taught and ever tighter systems for managing them. The problem then becomes not only that there is less and less time and space for interactive and other forms of teaching, but that uniform curricula seem to produce "cookie learning": the outcome is geared towards predefined knowledge, void of emotion, and probably less towards adopting critical mindfulness suggested by proponents of posthuman learning and teaching. Increasingly we have come to ask ourselves: Do we teach for students to fit into society? Or do we help them to discover their own becoming in and of the world, to possibly become flexible enough to cope with their futures in the human and more-than-human world? The central assumption underlying our ventures then, is that we need radical alterations/alternatives, not ongoing compliance to a (managerial) status quo.

Such radical alterations, or the search for alternatives, resonates with a critical posthuman stance and what it might mean for imagining posthuman thinkers. This does not imply thinkers who strive for curriculum inquiry as post the human or "after the human" but rather as "in a response to humanism or the logic of humanism" (Malone and Kuby 2022, 99). For Braidotti (2022, 5–6), critical posthumanism is a "critical intervention in some of the most controversial and urgent contemporary debates about the ongoing transformations of the human" by dislocating the centrality of the human and searching for "new definitions and practices of what being human may mean". Critical posthumanism is premised on relational, ethical, situated, embodied, embedded, embrained, and continuously becoming subjectivities that embrace an affirmative politics (Braidotti 2018). This is central to disrupting anthropocentrism and human exceptionalism so that, as with "untaming" or "re-wilding" education and wild pedagogies, the entanglements of the interconnections between self and others (both the human and more-than-human world) could invoke curriculum inquiry that ignites "being in the world" so that "the walls around modern western education [can become] more permeable" (Jickling et al. 2018b, x). Wild pedagogy might be one way of invigorating critical posthuman curriculum.

WILD PEDAGOGIES FOR INVIGORATING CRITICAL POSTHUMAN CURRICULUM

"... learning to become different people will require being in the world – dwelling there" – (Jickling, Blenkinsop, Timmerman, and Sitka-Sage 2018b, x).

Wild pedagogy as a notion has been around for a long time, perhaps even since Socrates taught on the beaches of ancient Greece – even Humboldt will not have educated exclusively from the

classroom/teaching hall (Sabelis 2021, 7). In more recent years, Jickling and colleagues (Jickling et al. 2018a; 2018b) offer an example of how wild pedagogies³ can be applied in teaching environmental education graduate courses at Lakehead University (Canada). The concept has gained traction, through publications, conference gatherings, researcher ventures and a variety of pedagogical encounters (Jickling et al. 2018b, xi). Although it has some relation to environmental education and feminist posthuman developments (Mcphie and Clarke 2015) its intent reaches education more broadly and curriculum inquiry more specifically. At its core, wild pedagogies are critical of the increased control that systems of power have over pedagogy and education and the domestication of curriculum and its role players (teachers, students, technology and things) as constrained by this control (Jickling et al. 2018b, 2). Notably, its provocations ruminate on approaches to curriculum and pedagogy that contest straitjacket constraints of neoliberal, anthropocentric higher education, fuelling what Braidotti (2019, 103) regards as education systems premised on "profit-driven capitalization of advanced knowledge". For Snaza (2013), anthropocentrism is evident in most contemporary curriculum theory when it remains bound to predetermined and predefined goals. This type of telos⁴ driven idea of curriculum overshadows the possibilities of curriculum as experimentation "that does not know where it is headed" and "what the outcome of education will be", by invoking curriculum as constantly in becoming and generative (Snaza 2013, 49). To pre-determine and predefine entails a specific, human (masculine) manner of technical, specifically "logical" stance on education that dismisses animality, or nature altogether, in order for "civilization" to thrive. Apart from being problematic as "the need to be civilized has ruined us" (Snaza et al. 2014, 45), it foregrounds how intrinsic anthropocentrism has triggered the capacity to classify, "... to declare some of us 'inhuman', or less than human" (Snaza et al. 2014, 49). A system with that type of effects via putting "human" centre stage, risks losing not only its links to context, but to past, present and future, via detaching us from the only context we have, the planet. Not a promising idea for curricula that pretend preparing next generations to cope with the problems we and our ancestors leave them with.

With wild pedagogy theory invested in experimentation with educational practice and the importance of being in the world (Clarke and Mcphie 2014; Ivakhiv 2014; Jickling et al. 2018b), it invigorates a wild hope that might trouble dominant education systems. A form of hope that is also critical of territorialisation and colonisation of knowledge and subjectivity, especially when education remains largely controlled and imposed (Jickling et al. 2018a). Wild pedagogies encourage us to think differently about control in light of the Western education landscape that is infiltrated deeply by control through problematics that point to humans as "the sole arbiter of the truth" (Jickling et al. 2018a, 164). For Snaza (2013, 49) bewildering education

can be useful as it yearns for lecturers to think of themselves and their curricula in unstable and unpredictable ways that can de-centre the habitual world with its anthropocentric views on civilisation, dwelling together, living spaces such as cities and even politics. Dominant "cultural ideas about control" prevail as lecturers and the curriculum remain tainted by the need to be its main contributors (Jickling et al. 2018b, 161). This could lead to lecturers and the curriculum being regarded as experts feeding off the education systems obsession with performativity through measurables such as outcomes and standards that determine what and how learning should be (Jickling et al. 2018b, 161 and 164). Through processes of reimagining, lecturers will need to challenge themselves in ways that can invigorate students and curriculum with generative possibilities needed to encounter wild "others" and wild "things" in an education system that relentlessly continues to keep students away from the wild (Jickling et al. 2018b, 166).

Jickling et al. (2018a, 160) suggest that if education and the curriculum is to be untamed and re-wilded it must invoke alternative approaches to being, and thus to doing education. As a pursuit of critical posthuman's affirmative ethics⁵ towards new ways of thinking, these curriculum pathways could enable the creation of new concepts and social imaginaries for the uncertain times of the posthuman condition (Braidotti 2019, 91). This requires what Jickling et al. (2018a, 164) envisage as a new ecology of learning so that the world can be understood as "relational, complex, spontaneous and deeply connected" and so that meaning is fluid and shared as one learns with rather than about the world (Jickling et al. 2018a, 164). As an affirmative ethic, critical posthumanism involves the stark move beyond anthropocentrism as fervently "expanding the notion of Life towards the non-human or zoe" (Braidotti 2013, 50). For a critical posthuman curriculum to materialise, "major re-adjustments in our ways of thinking" and doing the curriculum is required. It requires seeing knowledge and learning as "a complex assemblage of human and non-human, planetary and cosmic, given and manufactured"; becoming wild and challenging the dominance of a de-naturalised and social disconnect (Braidotti 2013, 159).

The wild curriculum pathway remains an "unknown radical ecology" with no predetermined, neoliberal ends or colonised knowledges, rather experimentation and improvisational learning as "a radical reworking of the relationships that we have with/in the world; it is a revised way of being within the world" (Jickling et al. 2018a, 163) including the use of (all) our senses, and being explicit about the role of emotion⁶, expressiveness, and excitement. This form of spontaneous encounter urges lecturers to de-center their humanistic tendencies towards curriculum knowledge and teaching in untamed and non-anthropocentric directions that can prize open alternative ideas, imaginings and possibilities (Jickling et al.

2018a, 165). Aspiring to change education, wild pedagogies are not prescriptive but attentive to "being differently" (Jickling et al. 2018a, 168) in "wild" ways that tolerate uncertainty and the inability to predict what the outcomes of our learning encounters could herald. Being differently is a hope for lecturers and their curricula to be more open and engaging so that they are continuously becoming while striving to be ever more "loving, caring, compassionate ... [and] competent healers, restorers, builders, and midwives to a decent, durable and beautiful future" (Jickling et al. 2018a, 168). The ultimate desire and hope is that lecturers are to be "allies of, for, with and in the more-than-human world" in ways that re-wild curriculum as affirmative and generative of possibilities (Jickling et al. 2018a, 169). For Macphie and Clarke (2014, 205) overcoming "pointillist" theory (e.g., dotted, fragmented, non-connected but for the impression of connection) is also needed for alternative pedagogies (such as wild pedagogies) that strive to move beyond essentialist notions.

A DIFFRACTIVE GAZE - IN SEARCH OF SPECTRAL DIVERGENCE

"The philosophical perspectives on knowing (epistemology), be(com)ing (ontology), and doing (axiology) in posthumanist scholarship urge us to pursue lines of inquiry that explore the practical/theoretical possibilities of posthumanist thinking for research and teaching" – (Zapata, Kuby, and Thiel 2018, 478).

The above insight speaks cogently to the ethos we attempted as we invoked theoretical inspiration, both as it relates to our practice as higher education teachers and in our methodological approach. With regard to our research methodology in particular, we appropriate from posthuman thinking/theorisation, "diffraction" as analytical construct. In deterritorialising (Deleuze and Guattari 1987) diffraction as a physics concept that explains the behaviour of waves, Barad (2007) reterritorializes it in the field of posthumanism, drawing attention to how wave (behaviour) alters and changes as it collides with obstacles, producing new patterns. As a heuristic for research methodology, diffraction pays attention to differences with the view to contemplating its effects or what it produces. Diffraction as methodological/analytical concept has its roots in the seminal work of Haraway (1992) and has been extended and nuanced through the work of Barad (2007), who argues that central to the idea of diffraction is the notion of intra-active entanglements. A key point of departure in understanding the posthumanist diffractive metaphor is a critique of reflection, reflexivity and representation, that is central to the field of Critical Theory. While reflection and reflexivity remain trapped in reproducing a sameness or replication, diffraction seeks out differences that create new patterns and resists the inclination to objectify subjects, that representation (un)wittingly falls foul to. Representation presumes a distant, disconnected researcher as opposed to an intrinsically and complexly connected, entangled and responsible actant in an assemblage. In her explication of the notion of re-turning as temporal and integral to diffraction, Barad (2014, 168) describes this as an organic, multiplicity of actions that unearth and uncover – akin to the way earthworms might aerate soil – breathing oxygen and life that creates anew – a process of "iterative (re)configuring, of differentiating and entangling". We invoke Barad's notion of the spectral (gaze) in her description of the behaviour of particles – wraithlike and incorporeal – a gaze derived from an understanding that "particles are given to fits, to paroxysms, to spasmodic bouts of e-motion or activity" (Barad 2010, 245). Such a gaze invites the notion of indeterminancy and disruption, and embraces dispositions of dis/orientation, dis/continuity and dis/jointedness – analyses amenable to "(h)auntological (r)elations of (i)nheritance", such as the spector of colonisation in which the present is constantly haunted by the past (Barad 2010, 241–242).

A diffractive methodology is thus a distinct departure from traditional humanist orientations with regards to sorting or systematically coding and, category and theme development. Diffraction, in contrast supports "practices of getting underneath thought" (Barad and Gandorfer 2021, 17). "(A) diffractive methodology ... attends to how cuts (which cut together-apart) matter in their differentiating-entangling rather than taking certain cuts for granted and then trying to determine relations among (presumably) separate things ... (therefore) all phenomena – all the entanglements – are open to analysis and questioning. Nothing gets to have some privileged existence" (Barad and Gandorfer 2021, 51). While a diffractive methodology rejects the notion of "audit trail", there is an obligation to introduce trustworthiness and robustness as it relates to the research process. To this end, following Murris and Bozalek (2019b), we engaged a process of diffractive reading of Jikling's notion of "wild pedagogies" (Jickling et al. 2018b) with the view to considering what this inspiration (originally written for teachers and researchers working in the environmental education field of early childhood development), might mean for our practice as teachers in higher education. Intra-action is central to Murris and Bozalek's (2019b, 873) conceptions of diffractive reading as a form of affirmative response-ability when "text/oeuvres/approaches are respectfully read through each other in a relational way, looking for creative and unexpected provocations", as opposed to unlocking objective differences based on binary logic and comparison. As an ethically informed response-able reading, diffractive reading is "a close, detailed, care-full, respectful reading of one text through another to create new insights" (Murris and Bozalek 2019b, 879).

We then proceeded to individually construct vignettes that capture our experience of experimenting with pedagogy – pedagogy that is free-spirited. We narrate our struggles and

experimentations with non-anthropocentric approaches to our own curriculum practices within the neoliberal space we find ourselves in.

We attempted to think with and *through* each other as we considered each other's accounts, engaging in intense conversations – conversations that attempted to build up and produce meanings anew. Given that we are differently positioned (Bozalek et al. 2016) as it relates to our heritage, gender, geographical location and multiple other factors that make us different, diffracting meaning through each other (intra-acting) presented as exciting and powerful, in the generation of thinking that might not have emerged in narrow humanist approaches to data analysis and representation. We concur with Barad's (2007, 86–87) posthumanist critique, namely that representationalism is an unproductive fixation on words, things and ideas to "accurately reflect or mirror the things to which they refer". In so doing representationalism "hold(s) the world at a distance" to reflect on the world from outside its materiality.

Diffraction, on the other hand, invigorates alternative and non-representationalist lines of flight, where we are part of the material (re)configurations of the world in all its entanglements. Murris and Bozalek (2019b, 882) refer to this as "the cultivation of collective knowing, desiring, being and making-with" text/oeuvres/approaches in ways that interpolate their wonder. For this to transpire, a response-able methodology requires "not a once off reading, but an ongoing and ever-changing entanglement of experimentation with the ideas of re/reading and re/turning to one's own and others" text/oeuvres/approaches (Murris and Bozalek 2019b, 882). We consider the notion of spectral divergence as one that produces multiple, rhizomatic lines of flight (Deleuze and Guattari 1987), embracing dissonance that comes with attention to difference – towards a dynamic and fluid state of (in)becoming. A diffractive, spectral gaze incites response-able intra-actions of attentiveness (to differences that produce, cf. Murris and Bozalek, 2019b) and responsibility⁷. This implies a radical openness and respect where we do not see ourselves and our curriculum practices as outside ourselves nor in a position of superiority. Haraway (2016, 58) describes this as "sympoiesis" or "making-with" arguing that "nothing makes itself; nothing is really autopoietic or self-organizing". She explains that we are actively doing and making together as a "worlding-with, in company" through "complex, dynamic, responsive, situated, historical" entanglements (Haraway 2016, 58) such as those presented by the neoliberal higher education spaces where we teach. From this perspective, we are "not responding as a distanced other, but as part of the lively relationalities of becomingwith" our curriculum practices in neoliberal spaces (Murris and Bozalek 2019b, 881). Becoming-with our curriculum practices includes being transformed by them as an ongoing and ever-changing entanglement of experimentation that recognizes the non-contemporaneity of the present so that the intra-action between us and our university spaces generates an openness and indeterminacy of thinking differently about what/how our curriculum practices could become. As we obviously could not attend each other's classes (a venture we might enter into in the near future) we shared our experiences, the few we have, with "alternative" teaching – those rare instances where we deliberately escape the classroom (rules) we live with and in. By sharing, discussing, and commenting we gained a feeling for our modes of teaching – commenting each other as we went along – and therewith gaining an exchange that went deeper than just commenting: we appropriated goals and each other's experiences by producing extended accounts (three voices). Inspired by examples from Bozalek (2017) and Shefer and Bozalek (2022) we developed our understanding of diffractive reading in order to underline what a wild pedagogy example might trigger.

Through our adapted notion of diffractive reading then, we were able "to read data into each other to see what diffractive patterns emerge" (Zapata et al. 2018, 482). Therefore, we propose a "wild walk" into our teaching practices with the intention to provide insight into what meaning and inspiration these could bring for deeper, wider, less "fast-food" and more future prone teaching and learning.

VIGNETTES: "WILD WALK" INTO OUR TEACHING PRACTICES

"Each encounter has a story to tell about our embodied material intra-relation with/of the world" – (Mcphie and Clarke 2015, 235).

Our diffractive gaze has involved the ongoing re/reading and re/telling of our own and each other's curriculum practices (written as vignettes) in multidimensional ways. By invoking continuous re/turning to our own and each other's curriculum practices, we have attempted a provocative intra-action with our own and each other's struggles — to think within these struggles. We attempt to move from a Socratic dialectical to diffractive analysis that unravels and reveals difference. Through our intra-actions, we were able to "wonder at the becoming of the world" (Mcphie and Clarke 2015, 231) and our curriculum practices and potentials with/of it, to open up alternative pathways for thinking about ways that we can experiment with "a myriad of different possibilities and re/configurations of what is and might yet become possible" in our aspirations towards non-anthropocentric teaching in neoliberal higher education spaces (Murris and Bozalek 2019b, 881). In different text fonts and styles, as a diffractive, response-able reading (Murris and Bozalek 2019b) we present here our embodied, material intra-actions with readings *through* each other.

Author 1: White woman born and raised in South Africa

... Today is different. As students enter my class, they are dressed in yellow, blue and green. The colour of their teams. Today our class is based on the game; The Amazing Race! The walls of our commonly recognised lecture hall become permeable as students go outside in search of solving clues in collaboration with their peers and the outside "world". Without even realizing it, I notice my feet tapping to the beat of the music playing and a smile forms on my face as I see how students engage with their teammates while being outside on the university grounds.

"I can see how you feed off the energy of the students and how you become energised and moved by the sound of the music. Physical gestures and body language, facial expression et cetera are powerful, non-verbal ways in which we connect and entangle!"

"energy – becoming energised ... what beautiful feature if managed in teaching. how music invigorates the sense of having, or being a body. What has happened to our bodies when in classrooms?"

The team spirit is high. Some teams start to strategize, others continue to dress their teammates with additional attire like colourful headbands but overall there is a sense of excitement.

"Expectation and curiosity are powerful 'principles' from which to plan for teaching and learning – you have clearly created this atmosphere in this lecture."

"could expectation and curiosity be conditions for future learning and coping? 'colourful' strikes me as quite contrasting to other modes of learning."

... The sounds of cheering and clapping filled the outside air as team after team reached the pitstop and the game was over.

"entanglement at work here I think. the game is not only about who wins or the sequence of completion, clearly your students take joy in celebrating the achievements of their counterparts – there is so much about learning as a social process that is happening here."

Students showed fatigue in their tired bodies and brains.

"Good and attentive teaching is about paying attention to the fact that our encounters with the world are always embodied – that the body is not objectified as simply a vessel to be filled, but mind and body work in concert – a departure from Cartesian mind-body dualism. In universities in SA where food security is a real challenge, this kind of sensitivity to biological sustenance is important"

"teaching as a bodily experience – that probably serves memory – the 'sticking' of experience in bodies – to me that seems a temporal condition, shaping futures present."

The presence of achievement that they had finished the race was evident in the "high-fives" and congratulations dealt out between team players. They sat down in their teams and regained their

breath.

"It makes me wonder how students who might be differently challenged by physical agility, mobility etc. might experience this learning experience"

"apart from the bodily, this also seems a shared, a *collective* experience ... how does that linger in collective memory – how can we provide collective over individual experience?"

... while, as a class group, we went through each of the three stations to talk about what they had learnt. Students shared deep descriptions of how each station presented different vantage points from which to understand and make meaning of the content that they were learning. They expressed how the mental challenges were more familiar than the physical ones because they were "mentally fit" and more familiar with traditional, lecture-based learning than learning through play while doing learning and entangled with their environment outside the lecture room. I experienced the group discussion as rich and refreshing as it brought with it unconventional perspectives to the content being taught.

"This is powerful as it opens up considerations of how one might provoke the unconventional and an alternative energy as students displayed how they were learning. They enjoyed the prizes that were dealt out and the refreshments that were provided."

"no learning without eating and drinking – sharing and celebrating – 'nature' always explicitly present."

{} The power of contemplating and commenting on *Author 1's* experimental experience through a process of "reading through", highlights how others feel with, and share the story in an almost "being-there" mode.

Author 2: White woman, Dutch, firm research relations with South Africa.

2020: In an experiment in Amsterdam, triggered (and enabled) by the Covid-19 pandemic that disrupted live teaching in the university's lecture halls, two colleagues and I

[teaching is not a one human band ... it is a collective act ... it happens within each of us as teachers but also with our peers]

decided that learning only on screen would not be beneficial for our students, nor for the desired impact of our teaching. One day, coincidentally ...

[one cannot know in advance the possibilities that our encounters can potentiate] ...

meeting (with distance) on a goat farm (part petting zoo, part playground, and organic farm)

we gained the idea that "being outside" could be a solution for the desire to have at least some meetings with students, also in order to better socialize them into the subject matter of their study.

"I like the idea of socializing students into the subject matter – it resonates with my thinking that one never comes to new learning as a completely neutral body – that one's lived experience influences the way one might come to make meaning of new subject knowledge AND importantly, that each learner/student comes to a learning experience from unique own socialisations and that socialising into new subject matter must give due cognisance to own social, cultural, political lived experience."

So part of our introductory course that year was organized on the premises of The Goat Farm (Geitenboerderij) in the nearby Amsterdam Woods: outside, forests, grassy slopes and meadows all around, the airport nearby –

"this reminds me of how technological innovation like flying as well as the massive consumption of fossil fuel has become so normalised in the Anthropocene so much more so that the all-important natural world and its man-made equivalents (like this zoo) get relegated. so much of this kind of human innovation comes at a cost yet, we often do not give due attention in our planning for teaching to what is made to look normal yet is inherently invasive and has altered the ecological environment in substantive ways over time."

and many 'voices' of big and small people and other animals, the rustling of the trees and sometimes the trickle of a little rain.

"[key to disrupting the human-exceptionalist narratives that consume education and learning ... the curriculum remains unwild and tainted]."

Really wild compared to classroom settings.

"I'm thinking about schools where this kind of excursion into nature might just not be logistically possible and the possibility of using technology to bring this 'wild' into the class or closer to students"

"[also requires thinking different about space, namely 'the classroom']."

The course entails specific attention to ethnographic methods. It turned out to be a special experience and a success. Not only as a solution for circumventing the downsides of the pandemic. Apart from the laughter and the joy of physical encounter, we soon discovered that this form of teaching forces students to navigate "comfort zones", to use all their senses, all so important for studying organizational cultures more in general. Needless to say, we kept this form of teaching also after the pandemic. We had (re)discovered the benefits of intensive, sensory and "struggling" modes of teaching and learning – as a case of serendipity, we maintain

and continue teaching "in the wild".

[this is experimentation in practice ... taking risks without knowing what the outcome will be. The unknown, learning as unpredictable and spontaneous]

... as it turns out to trigger and motivate students through embodied learning.

"The use of multiple senses for me is powerful – I think that a deliberative attempt to draw attention to our entanglements is necessary especially for those students who might be oblivious to the entanglements."

Of course, there always is some unease and critical wonderment at first,

[because educational change can be painful by unlocking vulnerabilities one has of what you thought was ...]

but the multi-sensory experience usually is what students remember. Some even report that in their working life after the course, not a lot can happen to shock them – they have gained skills for improvisation and deep-thinking.

"Like improvisational jazz, this teaching experimentation and improvisation leads students outside of the learning parameters of textbooks, lectures and university lecture halls. Spatial learning where the human and more than human meet Are students and lecturers ever overwhelmed by this 'setting'? Can they 'take it all in' as they are 'confronted' by so many senses?"

"Is this also not a 'message' for us as humans ... why do we need something like Covid to 'untame' us and make us (long for the) wild in how we teach? Why are we complacent? Why do we hold the world at a distance when we are of the world?"

{} Author 2's vignette takes us "outside". The stress on "taming" lingers on and addresses both escape and confinement in teaching.

Author 3: A South African and descendent of colonised India

I attempt to work with my students to disrupt/trouble/transgress the dualisms at play in "traditional" teaching (animal/human, mind/body) in an attempt to disrupt the alibis for legitimising unequal capitalist relations of exploitation

[and in so doing, question the taken-for-granted and anthropocentric ways of teaching].

Through a Critical, dialogic pedagogy I provoke the question as to how we might reconsider hierarchical binaries as so common in economics and business studies.

"Recognizing this, I think – from the other side of the globe, this seems a first step to break away from neoliberal (not traditional!) teaching. I almost sense despair in these lines – 'breaking away'

and 'troubling' – it denotes to me both struggling and striving."

"Economic and business studies plays a type of devil's advocate because it is one prime example of the evils of capitalism but can also be a contentious space to prize open the potentiality invested in capitalist relations. It's this space of contention that could create exciting and unconventional learning. Breaking binaries and stereotypes."

In the last two decades, almost all of my students have been indigenous African first-generation university students, mainly with a Zulu cultural heritage, given the province in which my institution is located. Since the re-emergence of decolonial debates

"[decolonisation of knowledge but also of the self as a teacher who can make space for other people and things]."

brought on by the Rhodes Must Fall Movement⁸ in SA in 2015, I was drawn to the power that such a (decoloniality) discourse had for my economics pedagogy classes as I realised there were gaps

"[could this also include the mind/body dualism premised on rationality at the expense of an understanding of knowing and being as relational and deeply connect and not just epistemological?]"

in students' knowledge as to the genesis of colonisation, racism and its complex connection to (modern) slavery and capitalism. In recent years, I have used powerful video footage and songs

"[an entanglement of the human and more-than human as technology is used in teaching-learning]"

as I attempt to have my students consider the following key question: What is the purpose of education?

"More than anywhere else in the world (as far as I can know the world) de/coloniality is a theme in South Africa – the Rhodes-must-fall-movement started there, but South Africa became a marker for big part of the world. Fighting racism, addressing coloniality?"

The song titled *Strange Fruit* by Billie Holiday (1939)⁹, is an evocative piece, passionately sung by the artist in which she brings to life the gruesome horrors of slavery in the United States

"[to use this author and example of the US leaves me perplexed as to the colonial roots that we grow in our students ... can/must/should/could we de-center the human through teachings of our own roots or material realities]"

with footage of lynched Black men hanging from trees:

"Southern trees bear strange fruit,

Blood on the leaves and blood at the root,
Black bodies swinging in the southern breeze,
Strange fruit hanging from the poplar trees.
Pastoral scene of the gallant south,
The bulging eyes and the twisted mouth,
Scent of magnolias, sweet and fresh,
Then the sudden smell of burning flesh.
Here is fruit for the crows to pluck,
For the rain to gather, for the wind to suck,
For the sun to rot, for the trees to drop,
Here is a strange and bitter crop."

"I wonder what students think. How many times must / can / do they want to read this until the full image transpires? Can they cope? Can they let the message in?"

"[Are students receptive to experience learning as more fluid and immersed in ways of knowing and being beyond the anthropocentric ways that have dominated their learning?]"

Another compelling resource is a YouTube video titled *Testing Without Treatment in Tuskegee:* A Medical Turning Point¹⁰ which reveals how African American men (between 1932 and 1962) were injected with the deadly venereal disease, syphilis and the generational physiological damage that subsequent generations of their offspring continue to endure.

"What can be learned from racism? Traditionally, these learnings/lessons are in the image of the human as different. How might we take a traditionally human conception/image and use it to think in non-anthropocentric ways towards what and how (and for whom) education is for?"

While students learn about global crises (environmental, economic, social and financial) brought on by neoliberal globalization,

"[and the curriculums purpose to arrive at predetermined goals that involve the human as the arbiter of what knowledge is and how learning should take place]"

... they struggle with the notion of decentering the human, especially in contexts where historical legacy (like apartheid) considered people of colour as sub-human. Capitalism, racism and the current environmental crisis are manifestations of what Ghosh (2021) describes as colonialisms omnicidal legacy. The mass extermination of indigenous peoples, their cultures and languages over several centuries and the devastating effects of slave labour and extractive capitalism are overt depictions of European colonial conquest in the name of progress.

"How does decentering the human function with these images? What is it that we celebrate as human if we are touched by these cruel examples? As we speak, as we write, a Big War is going on in Europe – images of trees with hanging fruit, and of ships with rotting grain meant for 'Africa' appear in our newspapers. What is the next step, if not a threatening one, for young

people and their future?"

{} Teaching is – and should be – emotional in order to imprint students and nurture their view on and in the world. *Author 3's* vignette illustrates how "outside" can be done "inside" and does not loose effectiveness – it is outside the system (Jickling et.al. 2018b), it plays beyond the expected as we hope students will be able to cope. Barad (2003, 803) reminds us that diffraction recognisies the "indefinite nature of boundaries" – that boundaries are not static but relational and permeable.

CURRICULUM AND PEDAGOGY AS WILD, SEARCHING AND STRIVING ...

"What we are calling for will be creative, courageous, and radical – because this is what our times require ..." – (Jickling et al. 2018b, 60).

Arguably the most striking revelation/realisation that this experimenting with posthuman ways of thinking and how it relates to curriculum and pedagogy reveals is the profundity of our entanglement with humanistic precepts, and the complexity of the challenge of such incursions – excursions with excitingly pregnant expectations, of potential new conceiving.

Our meta-attempt at reading diffractively, invoked by literature on the very notion of "a diffractive" reading, was a powerful first step in learning to read with and through each other, moving from a concrete physics exemplar of waves encountering barriers and producing new patterns of difference, to attempting to give effect to this line of thinking, as we considered key theorisations of this somewhat elusive phenomenon. The discomfort that accompanies the abstractness of paying attention to difference(s), making differences that matter in the world and accounting for how these differences matter in the world and for whom they matter (Barad 2007, 89-90), demands a meta-cognitive pondering and a heightened awareness of how easy it is to inadvertently slip into humanist notions of what it means to read with, together and through one another. As humanist "trained" subjects, it is not unusual that novice posthuman aspirants might experience a sense of cognitive dissonance as they embrace the frailties, self-doubt, inconsistencies that are inherent "elements" of a border space – a space of transgression in which (own) ideological orientation becomes a point of contestation. In our subsequent intraactive reading of key texts on "wild pedagogies" we attempted to pay attention to differences with a view to thinking anew the implications and possibilities for engaging such principles in the somewhat rigid higher education contexts we currently inhabit. Although we are geographically differently located and teach at universities with different histories, a common feature that carries across our institutions is the issue of neoliberal stealth, and its manifestation in almost every sphere of the work of the university.

As such, we are inherently embedded in neoliberal entanglements both within our institutions and in the neoliberal, global higher education space. Our varied positionalities and our entanglement feed a diffractive reading that we sought to attempt. Like Lenz Taguchi (2013), we attempt a heightened awareness of how we might unwittingly default to humanist notions of representation, an issue that we declare, remains a constant struggle in our novice excursions into posthumanist scholarship. We are particularly aware of neoliberalism's conditioning and homogenising effect on curriculum and pedagogy (complacence), its accountability (to the market), surveillance mechanisms and, overall, its distinct departure from the Humboltian notion of *Bildung*.

We draw on Taylor's (2017, 433) inspiration that "Bildung speaks to a wider sensibility regarding the transformative potential of education ... (it) was an educational response to a political question (about the individual in civil society)". Taylor (2017, 433) urges a reconsideration of the nature of *Bildung* that might be needed in the current posthuman era – a posthuman Bildung of "being, becoming and belonging (of all) ... a matter of spirituality and materiality ... (of) education as an ethico-onto-epistemological quest for (better ways of) knowing-in-becoming". In attempting a diffractive, spectral gaze of each other's vignettes on our pedagogical experiments, we are aware that our pedagogical endeavours are at best a contemplative posthuman striving of a "knowing-in-becoming" as envisaged by Taylor above. A spectral divergence invites panoramic lines of wild flight. Through diffractive conversations and responses, to the respective vignettes we were particularly concerned with illuminating the emotional provocations that emerged in these educative practices - of affect, mood and solicitude. What was discernible in the movement through the vignettes, was the potential for wild pedagogies to invoke a spectrum of emotions – euphoria from participation in a fun game, to sheer excitement from having a learning experience outside of a brick and mortar building in a "natural" setting, to a melancholic, deeply disturbing encounter with a heinous past, through video footage. In each of these pedagogic encounters, reading diffractively through and with each other, stimulated conversations of how the subject content of a course, can be the source of "wildness" - of selecting and using subject content to instigate thought and action to transgress the humanist canon. A key issue that emerged was that a deliberative conscientizing pedagogy as it relates to for example, the notion of material entanglement with the more-thanhuman and, human others not yet enjoying the state of full human, becomes necessary – an instigative conscientization that has to be unrelenting, so as to substantively disrupt humanist normalisation as it relates to content and pedagogy. Pedagogic encounters (across all disciplines), that embrace a spectral gaze are more likely to assist students to develop critical dispositions towards humanist harvesting of souls of fellow humans, flora and fauna, rivers, land and the oceans – opening up vistas for alternative ways of being in the world. While we are optimistic about the posthuman project, we remain sober as to the strength of the neoliberal tidal wave that threatens to obliterate it. We hope to remain alert to opportunistic cracks that present (in curriculum and pedagogy) – to expeditiously and "expediently" prise them open as they present.

IN PARTING

"... the openness that often marks posthuman writing waits until the postscript to emerge" – (Ulmer 2017, 833)

Revisiting Ulmer (2017, 833), we recognise that posthuman writing is never "complete". As such, we regard our provocations as ongoing, unfinished in a sense with happiness to say so. While we do not wish to present conclusions as prescriptive and determinant, we hope that the "postscript" has emerged as vistas worth exploring – as radical alterations/alternatives to curriculum knowledge and teaching. This becomes ever more urgent in the tamed and controlled constraints of neoliberal higher education where anthropocentrism is normalised, where the anthropogenic nature of changes in our world are neglected (Hofmeister 2009) and where emotion is dismissed as non-rational (and thus to be banned from education). We acknowledge that our pedagogical struggles are ongoing but regard these as hopeful. In searching and striving for transformative, future-oriented, and sustainable ways of teaching and education, a critical posthuman curriculum offers a wild line of flight as continuously inbecoming so that a discomfort to our inadvertently humanistic tendences can be awakened. Decentering our humanistic tendencies are wild and experimental in ways that trigger curiosity, kindle motivation, and prepare young people for an uncertain future.

NOTES

- 1. Central to Western modernity and the colonial ideology of European expansion, a hegemonic image of Man has played a role in defining the human not as a species, but largely as "a marker of European culture and society and for the scientific and technological activities it privileges" (Braidotti 2022, 18). As such, when humanism assumes a "superior universal consciousness [it] posits the power of reason" and "functions as a centralized databank that edits out and de-selects the existence, activities, practices as well as the alternative subjugated memories of the multiple sexualized and racialized minorities" (Braidotti 2022, 19).
- 2. First coined by Barad (2007, 33), the neologism intra-action "signifies the mutual constitution of entangled agencies" (italics in original text). Different from inter-action, intra-action is underpinned by agential realism and assumes that distinct agencies do not precede, but rather emerge through intra-action (Barad 2007).
- 3. Jickling 2015 uses "pedagogy", whereas in 2018 (2018b: xi) there is a plea for the plural. We

- contend the importance of the plural, as there cannot be one pedagogy (style, method, mode) for where we are heading. However, as a notion we may use the singular. In this article we thus use both terms.
- 4. *Telos* (stemming from Aristotle) is premised on rational thought which views, in our case curriculum, as a means to an end with predetermined goals and objectives.
- 5. Braidotti (2019, 129) avers that "affirmative ethics is based on the praxis of constructing positivity, thus propelling new social conditions and relations into being".
- 6. Central to learning seems to be emotion, in terms of joy, anger, eagerness, et cetera. Following Ahmed (Schmitz and Ahmed 2014) we prefer emotion over affect.
- 7. We are grateful for the concepts of response-ability (Murris and Bozalek 2019b, drawing on the work of Barad) as it enables us to rethink the combination of ableness, or capacity to respond via response-ability, coupled with responsibility, being responsible. To us, the combination of those concepts highlights what is needed in and for a relational ontology, which we assume to build a proposition for "wild pedagogies".
- 8. See the following text for an elaboration of the Rhodes Must Fall Movement and other student protests in South Africa: Becker, Heike. 2019. "South African student protests, 1968 to 2016: Dissent, disruption, decolonization". https://isreview.org/issue/111/south-african-student-protests-1968-2016. Date of access: 22 Jun. 2023
- 9. https://www.youtube.com/watch?v=bckob0AyKCA.
- 10. https://www.youtube.com/watch?v=ipMGtYXsqjI.

REFERENCES

- Bauman, Zygmunt and Leonidas Donskis. 2013. *Moral blindness: The loss of sensitivity in liquid modernity*. Cambridge: Polity Press.
- Barad, Karen. 2003. "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter." *Gender and Science* 28(3): 801–831.
- Barad, Karen. 2007. Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning. Durham, NC: Duke University Press.
- Barad, Karen. 2010. "Quantum Entanglements and Hauntological Relations of Inheritance: Dis/continuities, Spacetime Enfoldings, and Justice-to-Come." *Derrida Today* 3(2): 240–268.
- Barad, K. 2014. "Diffracting Diffraction: Cutting Together-Apart." Parallax 20(3): 168-187.
- Barad, Karen, and Daniela Gandorfer. 2021. "Political desirings: Yearnings for mattering (,) differently." *Theory & Event* 24(1): 14–66.
- Bozalek, Vivienne, Abdullah Bayat, Veronica Mitchell, Siddique Motala, and Daniele Gachago. 2016. "Diffracting socially just pedagogies through stained glass." *South African Journal of Higher Education* 30(3): 201–218.
- Bozalek, Vivienne. 2017. "Slow Scholarship in Writing Retreats: A Diffractive Methodology for Response-able Pedagogies." *South African Journal of Higher Education* 31(2): 40–57.
- Braidotti, Rosi. 2013. The posthuman. Cambridge: Polity Press.
- Braidotti, Rosi. 2018. "Posthuman Critical Theory." In *Posthuman Glossary*, ed. Rosi Braidotti and Maria Hlavajova, 339–342. London: Bloomsbury Academic.
- Braidotti, Rosi. 2019. Posthuman Knowledge. Cambridge: Polity Press.
- Braidotti, Rosi. 2022. Posthuman Feminism. Cambridge: Polity Press.
- Clarke, David A. and Jamie Mcphie. 2014. "Becoming animate in education: Immanent materiality and outdoor learning for sustainability." *Journal of Adventure Education & Outdoor Learning* 14(3): 198–216.
- Deleuze, Gilles and Felix Guattari. 1987. A Thousand Plateaus. Minneapolis: University of Minnesota

Press.

- Ghosh, Amitav. 2021. *The nutmeg's curse: Parables for a planet in crisis*. The University of Chicago Press
- Haraway, Donna J. 1992. "The promise of monsters: A regenerative politics for inappropriate/d others." In *Cultural studies*, ed. Lawrence Grossberg, Cary Nelson and Paula Treichler, 295–337. New York, NY: Routledge.
- Haraway, Donna J. and Thyrza N. Goodeve. 2000. *How like a leaf: An interview with Thyrza Nichols Goodeve*. Psychology Press; Routledge.
- Haraway, Donna J. 2016. Staying with the trouble: Making kin in the Chthulucene. London: Duke University Press.
- Hofmeister, Sabine. 2009. "Natures running wild: A social-ecological perspective on wilderness." *Nature and Culture* 4(3): 293–315.
- Ivakhiv, Adrian. 2014. "On Matters of Concern: Ontological politics, ecology, and the anthropo(s)cene." UC Davis Environments and Societies Paper. University of California at Davis.
- Jickling, Bob. 2015. "Self-willed learning: Experiments in wild pedagogy." *Cultural Studies of Science Education* 10(1): 149–161.
- Jickling, Bob, Sean Blenkinsop, Marcus Morse, and Aage Jensen. 2018a. "Wild pedagogies: Six initial touchstones for early childhood environmental educators." *Australian Journal of Environmental Education* 34(2): 159–171.
- Jickling, Bob, Sean Blenkinsop, Nora Timmerman, and Michael De Danann Sitka-Sage. 2018b. *Wild pedagogies: Touchstones for re-negotiating education and the environment in the Anthropocene*. Cham, Switzerland: Palgrave.
- Kamsteeg, Frans. 2019. "Academic Homecoming. Stories from the Field." In *Academia in Crisis*, ed. Leonidas Donskis, Ida Sabelis, Frans Kamsteeg, Harry Wels, 36–52. Leiden: Brill.
- Lenz Taguchi, Hillevi. 2013. "Images of thinking in feminist materialisms: ontological divergences and the production of researcher subjectivities." *International Journal of Qualitative Studies in Education* 26(6): 706–716, DOI: 10.1080/09518398.2013.788759.
- Maistry, Suriamurthee. 2021. "Curriculum theorising in Africa as social justice project: Insights from decolonial theory." In *Curriculum Theory, Curriculum Theorising, and the Theoriser*, ed. Kehdinga George Fomunyam and Simon Khoza, 133–147. Boston: Brill.
- Malone, Karen and Candace R. Kuby. 2022. "Posthumanism." In *A Glossary for Doing Postqualitative, New Materialist and Critical Posthumanist Research across Disciplines*, ed. Karin Murris, 98–99. London: Routledge. https://doi.org/10.4324/9781003041153-29.
- Mcphie, Jamie and David A. Clarke. 2015. "A walk in the park: Considering practice for outdoor environmental education through an immanent take on the material turn." *The Journal of Environmental Education* 46(4): 230–250.
- Meillassoux, Quentin. 2010. After finitude: An essay on the necessity of contingency. New York: Continuum.
- Murris, Karin and Vivienne Bozalek. 2019a "Diffracting diffractive readings of texts as methodology: Some propositions." *Educational Philosophy and Theory* 51(14): 1504–1517, DOI: 10.1080/00131857.2019.1570843.
- Murris, Karin and Vivienne Bozalek. 2019b. "Diffraction and response-able reading of texts: The relational ontologies of Barad and Deleuze." *International Journal of Qualitative Studies in Education* 32(7): 872–886. DOI: 10.1080/09518398.2019.1609122.
- Sabelis, Ida. 2021. "Wir sind keine Cookie Factory Lehren und Lernen in Neoliberalen Zeiten. Alice Salomon Hochschule Berlin." file:///C:/Users/21815992/Downloads/Sabelis_2021.pdf. (Translation for the purpose of this article authorised by the author).
- Sabelis, Ida. 2019. "Timescapes in Academic Life. Cubicles of Time Control." In *Academia in Crisis*, ed. Leonidas Donskis, Ida Sabelis, Frans Kamsteeg, Harry Wels, 129–149. The Netherlands: Brill.

- Schmitz, Sigrid and Sara Ahmed. 2014. "Affect/emotion: Orientation matters. A conversation between Sigrid Schmitz and Sara Ahmed." *FZG–Freiburger Zeitschrift für eschlechterStudien* 20(2): 13–14.
- Shefer, Tamara and Vivienne Bozalek. 2022 "Wild swimming methodologies for decolonial feminist justice-to-come scholarship." *Feminist review* 130(1): 26–43.
- Springgay, Stephanie and Zofia Zaliwska. 2017. "Learning to be affected: Matters of pedagogy in the artists' soup kitchen." *Educational Philosophy and Theory* 49(3): 273–283.
- Snaza, Natan. 2013. "Bewildering education." Journal of Curriculum and Pedagogy 10: 38–54.
- Snaza, Natan, Peter Appelbaum, Siân Bayne, Dennis Carlson, Marla Morris, Nikki Rotas, Jennifer Sanlin, Jason Wallin, and John A. Weaver. 2014. "Towards a posthumanist education." *Journal of Curriculum Theorizing* 30(2): 39–55.
- Taylor, Carol A. 2017. "Is a posthumanist Bildung possible? Reclaiming the promise of Bildung for contemporary higher education." *Higher Education* 74: 419–435.
- Ulmer, Jasmine B. 2017. "Posthumanism as research methodology: Inquiry in the Anthropocene." *International Journal of Qualitative Studies in Education* 30(9): 832–848.
- Zapata, Angie, Candase R. Kuby, and Jaye Johnson Thiel. 2018. "Encounters with writing: Becomingwith posthumanist ethics." *Journal of Literacy Research* 50: 478–501.