Book Review

Murris, K. 2022. *Karen Barad as Educator: Agential Realism and Education*. Singapore: Springer Nature Singapore Ptd Ltd.

What do the tracing of stories about plastic bricks, the moon, an aquarium, Zuko, a pregnant stingray, Facebook, a stick, ghosts, and many other kin, have in common? And, how might '[a]rticulating those stories … help "stretch" our response-ability as educators to include *all* humans and other-than-humans as part of our earthly survival and more just futures' (Murris, 2022: 18). And, '[w]hat on earth (and beyond) could quantum physics teach educators?' (Murris, 2022: 6). These are just some of the questions that Karin Murris opens up in 'Karen Barad as Educator: Agential Realism and Education' (2022). Murris provides a glimpse into the life and work of the Theoretical Physicist and Professor of Feminist Studies, Philosophy, and History of Consciousness at the University of California, Santa Cruz (USA), Karen Barad, and how/what their agential realism contributes to contemporary education (research) philosophy, theory and/or practice. Barad's use of 'they', 'their', and 'them', instead of 'she' and 'her' is a grammatical choice that draws attention to the use of gender-neutral language and is a deliberate move away from the use of singular pronouns (Murris, 2022: 8). Murris (2022: 8) says she makes the familiar 'I' unfamiliar by using 'iii' (also in plural).

Agential realism is a philosophy aligned with the ontological turn in philosophy. Du Preez, *et al.* (2022: 5) state: "The ontological re/turn, as a response to the posthuman condition, brought with it a vast assemblage of thought experiments in the form of new realism/s, new vitalism/s, new feminist materialism/s, matter realism/s, speculative realism/s, object-oriented ontologies, and non-representational theories. The emergence of these theories is also the result of the overreach of social constructivism (the social construction of reality) evident in both critical theory and poststructuralism". First used in a 1995-chapter, Barad further expands on agential realism in their magnus opus, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (2007). Some of the concepts dealt with include intra-action, quantum entanglement, erasure, phenomenon, indeterminacy, diffraction, agential cut, agential separability, spacetimemattering, and onto-epistemic-ethical. As Murris (2022: ix) explains, this book is aimed for those (lecturers, teachers, artists, therapists, parents and grandparents, funders of education research, organisers of educational events, as well as detached youth workers) interested in alternatives to the dominant neoliberal national curricula, educational policies, and humanist teaching, research, and conference agendas; and who share a general interest in the '"what" and the "how" of educational encounters'.

Murris (2022: 2) explains: 'Agential realism is a philosophy *practised*, not a philosophy *applied* to practice. It is an *entangling* theory–practice affair'. Agential realism

questions Cartesian dualisms and troubles the discursive privilege that has been afforded to philosophy by also bringing into question the material dimension. This move is a philosophical response to the dominance of representationalist philosophies that privilege the discursive by bringing matter/material into the picture too. The focus on the material-discursive also challenges hegemonic, colonising anthropocentric ways of knowing and being. What further distinguishes agential realism from other relational conceptual frameworks, is that it is also intra-active.

Intra-action is a neologism first used by Donna Haraway in 1992 and intra-actively developed by Barad. As a key component to agential realism, *intra-action*, *contra inter-*action, does not assume the prior existence of determinately bounded and propertied entities that come into existence with one another. Rather, it troubles traditional notions of causality which assume an independent and determinate object, and the relations between such objects, in which one affects or changes the other. Intra-action further assumes that distinct agencies do not precede, but rather emerge through intra-action, and '*signifies the mutual constitution of entangled agencies*' (italics in original text; Barad, 2007). To talk of individual identity is therefore problematic because it assumes some pre-determining set of characteristics that mark that individual identity, as opposed to an open becoming through intra-action. 'Existence' , for Barad,

> is [therefore] not an individual affair. Individuals do not preexist their interactions; rather, individuals emerge through and as part of their entangled intra-relating. Which is not to say that emergence happens once and for all, as an event or as a process that takes place according to some external measure of space and of time, but rather that time and space, like matter and meaning, come into existence, are iteratively reconfigured through each intra-action, thereby making it impossible to differentiate in any absolute sense between creation and renewal, beginning and returning, continuity and discontinuity, here and there, past and future. (2007: xi)

Murris (2022: 27) makes it more concrete when writing: 'Sense-making, theorising, imagining, knowing, reading, writing, remembering, walking, critiquing, dressing, exercising, lesson planning, learning, mothering, and birthing—they are all *intra-active material-discursive practices* with/in the world' .

Murris employs a *diffractive* methodology. Diffraction is used by Barad (2007: 71) to describe their methodological approach of ' reading insights through one another in attending to and responding to the details and specificities of relations of difference and how they matter' . Diffraction is a counterpoint to reflection. Although both are optical phenomena, reflection is about mirroring and sameness, whereas 'diffraction is marked by patterns of difference' (Barad, 2007: 71). Like Barad - for whom 'writing style is not just an aesthetic choice, a literary device, a form of play, or merely a way of being creative' (Murris, 2022: 8) - Murris (2022: 73) deliberately chose to only explain the diffractive methodology in the final chapter to further

disrupt   'styles of writing and teaching that proceed unilinearly with a hierarchical structure because it positions the author as the expert: *explaining*-theories-by-*giving*-definitions-of-concepts-   and-then-*applying*-them-to-empirical-data-or-by-*giving*-examples' .   Murris (2022: 25) states that   'the book's structure is more like a game of hopscotch. You can hop in this chapter from one knot to the next, backwards, forwards, and sideways' . This leaves a rather large openness to the end; an emptiness, a void, as Barad and Murris would say. It invites the reader, in typical posthuman style, to further experiment with ideas, to trace complex relata-in-phenomena, to intra-act in material-discursive ways with/in the world that we are bending and shaping and that bends and shapes us in our relational becoming. On the contrary, it also leaves many traces revealed in the book, somewhat untouched and unturned, which could be confusing for a first-time reader of agential realism and posthumanism. Toward the end, one might want to return and further wander/wonder about

> how the world *is* in its iterative becoming, including our own actions as pedagogues, what are the implications for teaching and learning? As current curricula are steeped in practices of reflection and reflexivity, how does diffraction reconfigure curriculum development in all phases of education? How do posthumanist educators move away from the notion of the teacher as the   "expert" ? How does it work in education when knowledge production is understood as performative and an iterative world-making practice? How can we re-imagine the role of the educator? (Murris, 2022: 72)

In less than 100 pages, Murris introduces the reader to a maze of (rather challenging) concepts (which she at no time claims to cover completely), often relying excessively on footnotes (that   'helps us *walk around* in concepts'), which is at times more confusing than clarifying. That being said, Murris (2022: 27) eloquently traces the effects of agential realism on/in research and teaching practice without reducing Barad's entangled ideas to ' a how-to-*apply*-agential realism guide' .

Finally, this book is an ideal entry point for reading groups who are interested in slowing down to intra-act (Du Preez & Du Toit, 2022) with/along agential realism, posthumanism (and the posthuman condition), and (new) feminist materialism/s. It asks for re-reading and moving in and between pages so that ideas can aerate and ripen. Reading groups and scholars engaging with this book might particularly be interested in further experimenting and theorising Murris' plea for de/colonisation by adopting the diffractive methodology in teaching, learning, assessment, and education research. Of further interest might be tracing Murris and Barad's stance/s on the ontological status of the human when asking what it means to decentre the human in agential realist research. This is particularly important if we agree that an agential realist analysis is anti-anthropocentric, but anthropo-situated (as Murris argues).

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