

Edu-crafting a cacophonous ecology: posthumanist research practices for education

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Chapter 1

Edu-crafting a Cacophonous Ecology: Posthumanist Research Practices for Education

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Introduction: Posthumanism and educational research

Doing posthumanist research in education is a challenge. At the present time, education operates within a largely performative context, in which regimes of accountability, desires for a quick and easy relay from theory to practice, and the requirement that ‘evidence’ – the most valorized form of which often comes in the shape of large-scale Randomized Controlled Trials – ought to inform pedagogic interventions, constitute the dominant ways of thinking and modes of inquiry.

Posthumanist research practices in education engage a radical critique of some of the fundamental assumptions underpinning these dominant ways of doing educational research.

Posthumanism proposes different starting points for educational research and new ways of grasping educational experience than that afforded by humanism.

Posthumanism calls into question the essentializing binary between human and nonhuman on which humanism relies; it throws anthropocentrism into doubt along with the categories and identities it underpins. These different starting points are located in a different set of epistemological presumptions about the forms of knowing that produce valuable knowledge about educational experiences, and in different ontological presumptions about the modes of being through which humans and

nonhumans inhabit the world. More than that, posthumanist research practices offer a new ethics of engagement for education by including the nonhuman in questions about *who matters and what counts* in questioning the constitutive role played by humanist dominant paradigms, methodologies and methods in working as actualizers of normative procedures. Feminisms and post-structuralism have also, of course, long been interested in the politics of knowledge-production but a posthumanist approach includes the ‘others’ that feminism, post-structuralism and postmodernism routinely excluded: nonhumans, other-than-humans and more than humans. Posthumanism, therefore, offers a ‘theoretical rapprochement with material realism’ (Coole and Frost, 2010, p.6) to find new ways to engage with the immanent vitality of matter.

This chapter discusses various arrivals at the posthuman ‘now’; it maps how posthumanism undoes humanist assumptions about research methodology and methods; and it signals some of the ways in which posthumanism is currently reshaping how educational research gets done. While the chapter’s ambit is both broad and theoretical in dealing with the recasting of ontology, epistemology and ethics under the impress of posthumanism, its purpose, in illuminating how posthuman thinking can be put to work in research practices, is practical. Putting posthuman theory to work is both exciting and daunting. Posthumanism invites us (humans) to undo the current ways of doing – and then *imagine, invent and do the doing differently*. Readers will find many examples throughout this book of the innovative forms of doing invoked, indeed necessitated, by posthumanist thinking. This first chapter provides an initial sketch of the ground by situating posthumanism as both a reaction to humanism (Wolfe, 2010) and an activation of new practices in educational research (Snaza and Weaver, 2015). It can, therefore, be read as a) a basic mapping of key shifts from humanist to posthumanist modes of knowing, being and

doing; and/or b) an introduction to the main contours of posthuman thought; and/or c) an introduction to the theories and concepts dealt with in the chapters that follow.

Shiftings: Humanist centerings <> Posthumanist profusion

Posthumanism is a mobile terms and the field of posthumanist thought in education is characterized by heterogeneity, multiplicity and profusion. Posthumanism is perhaps best considered as a constellation of different theories, approaches, concepts, practices. It includes (in no particular order): animal studies; ‘new’ material feminism; affect theory; process philosophy; assemblage theory; queer theory; speculative realism; thing theory; actor network theory; the nonhuman; the new empiricism; posthuman disability studies; object-oriented ontology, alien phenomenology, ecological relationality, decolonial and indigenous theories, plus others I don’t know about. Posthumanism in its various incarnations is resolutely interdisciplinary, post-disciplinary, transdisciplinary and anti-disciplinary which vastly expands the range and variety of conceptual resources available to educational research. In its current state as an unsettled and unsettling terrain – as an emergent field in flux that is continually concretising, dispersing, flowing and mutating in unforeseen ways – posthumanism opens ways of researching that seek to undo tired binaries such as theory/practice, body/mind, body/brain, self/other, emotion/reason, human/nature, human/animal, producing instead multiple and heterogeneous knowledge pathways that are radically generative for educational research. In doing so it intersects with the anti-foundational insights of feminism and post-structuralism concerning the multiplicity of identity, the mobility of meaning, and the contestability of knowledge, supplementing those earlier insights by including nonhumans, things and materialities.

The chapter charts various shiftings which seek to understand the complicated process of how we got from ‘there’ (humanism) to ‘here’ (posthumanism). The first shifting circumnavigates the im/possible task of describing how we arrived at the posthuman now. The subsequent shiftings focus on subjectivity, relationality, and ethics, and enfold these with discussions of ontology and epistemology.

Shifting <> Im/possible genealogies

The drawing of any single or straight line from humanism to posthumanism is tempting but probably illusory. One possible narrative begins with Foucault’s (1970) pronouncement in *The Order of Things* – ‘man is an invention of recent date. And one perhaps nearing its end’ – moves through Derrida and deconstructionism, traverses post-structuralism and postmodernism, continues via the many facets of feminism, towards Deleuzian rhizomatics, interspecies’ interfaces (Haraway) and Massumi’s virtual-real, to arrive (perhaps) at the swirl of Stewart’s affects, Meillassoux’s *post* human world without us, or Downey’s neuroanthropology, or somewhere else instead, as long as that somewhere is ‘recognisably’ posthuman. That is, somewhere where the ‘old’ certitudes regarding identity and subjectivity, binaries and boundaries, language and representation, methodology and methods, have been utterly displaced. The problem, though, in tracing this narrative line is that it has no one starting place and certainly no end in sight. We are already in the middle of the posthuman condition, its forces already entangled in the humanist fibre of our lives and thinking. Being intermezzo like this troubles the concepts of ‘ends’ and ‘beginnings’ and undermines the notion of lineage.

On the other hand, we could, as Snaza (2015, p.19) admirably attempts to do, conceptualise a genealogy of ‘the human’ through its relation to various ‘constitutive outsides: the animal, the machine, the savage, the slave, nature, the thing.’ These conceptualisations arise from and are (still) tied to particular historically educative processes and located in particular educational institutional practices. Thus, we move from humanism’s putative ‘origins’ in Plato’s ‘carnophallogocentric’ (Derrida’s phrase) humanism which constitutes the meat-eating, male, rational political citizen and subject as different from and innately superior to woman, the emotional, and animal, to its incarnation in the Medieval Trivium and Quadrivium, a liberal arts education which was a basis for the production of the educated ‘man’, through Renaissance Humanism with its focus on the development of man’s artistic, literary and moral capabilities. The Western Enlightenment built on these earlier conceptions but, via colonialism and science, generated a version of humanism grounded in the separation of, and domination by, a small-ish section of ‘mankind’ from/of the ‘rest of’ nature, humanity, and nonhuman ‘others’ in accordance with its god-given civilizing mission. Postmodern, post-structuralist and feminist theorists worked, rightly, to destabilise the origin myths of humanism and reincorporate those inappropriate/d others. Much of this theorising (although Haraway’s critique of speciesism is an exception), did not sufficiently unsettle the primacy of the ‘human’ as a central category of political privilege, thus leaving the systematic oppressions and ontological erasures that earlier forms of humanism had instituted largely intact. It is this unsettling that posthumanism seeks to accomplish for good. The aim is, as Snaza (2015, p.27) notes, to undo the *telos* of humanism and its ‘humanizing project’ so that posthumanist thought can engage ‘a future politics not reducible to anthropocentric

institutions and practices'. In essence, this involves replacing the idea that the human is a separate category from 'everything else' with an ethic of mutual relation.

Furthermore, like posthumanism, humanism is and always has been heterogeneous. As Braidotti (2013, pp.50-51) notes 'there are in fact many humanisms.' There are romantic, revolutionary, liberal, secularist, antihumanist humanisms (Davies, 1997); there are intellectualist, spiritualist and metaphysical humanisms (Derrida, 1972); and there are Renaissance, academic, catholic or integral, subjective, naturalistic and religious humanisms (Lamont, 1997), as well as various versions of critical humanism (Plummer, 2012). The philosophical foundations of humanism are varied, and some humanisms do away with universalizations and recognize the material, concrete, pragmatic and partial basis of human experience. That humanism, like posthumanism, never was (or is) singular is, according to Braidotti, part of the problem: as soon as we express the desire to 'overcome humanism', we very quickly realize how utterly entwined we are within humanism's affordances and problematics, as feminisms and poststructuralists already know. Any dis-entangling, therefore, has to be a continuing and incisive critical practice, not one done easily or 'once and for all'. Yet the desire to 'overcome' humanism is urgent and necessary. One only has to think for a moment of the geopolitical suffering, ecological depredation, and epistemological violence that humanism, particularly in its alliance with neo-colonialism and hyper-capitalism, has given rise to, to appreciate the urgency of the task. Thinking for a moment longer, though, might bring to mind humanism's legacy of universal Human Rights, communitarian politics and disability equality legislation. These are things we humans would probably not want to do away with albeit that they often work as positive guises beneath which humanism seeks to hide its wreckages. One can

appreciate that the larger project of *becoming* posthuman is fraught with difficulty, just as inventing practices which *use* posthumanist frames of reference in educational research are contentious.

Shifting <> Subjectivity

‘Trippers and askers surround me,
People I meet ... the effect upon me of my early life ... of the ward and city I live in
... of the nation, [...] But they are not the Me myself.
Apart from the pulling and hauling stands what I am,
Stands amused, complacent, compassionating, idle, unitary,
Looks down, is erect, [...]
Both in and out of the game, and watching and wondering at it’.

(Whitman, 1855, extract from *Song of Myself*, l. 58–70).

‘Since each of us was several, there was already quite a crowd’ (Deleuze and Guattari, 1987, p.3).

‘I stood at the entrance ... I also stood some forty meters away, in the temple itself ...
Outside the doors of the temple I also stood in the cyanophyte-stained plaza ... I
patrolled [the upper city] as well. When I walked the edge of the water I could see
myself standing in the plaza ... That accounted for almost half of my twenty bodies.
The remainder slept or worked in the house Lieutenant Awn occupied.’ (Ann Leckie,
2013, *Ancillary Justice*, pp.12–15).

In 1855 Whitman wrote confidently of the ‘Me myself’ as a secure place of observation and knowledge, founded in the essentialising masculine ego of the

Western Enlightenment modernist self. *Song of Myself* is an undoubtedly exuberant epic but one which exemplifies Descartes *cogito*, the knowing subject who stands apart from the world to observe, describe, measure and know it. This knowing figure keeps his distance from the world and aims to keep himself, his 'essence', intact. He sometimes paradoxically desires to consume/subsume 'it' (the world, woman, all those 'others') into 'his' identity, but doing so would dissolve the foundations of t/his separate knowing, thinking, feeling, and seeing self, and with it the ontological and epistemological presumptions on which it is founded. This separation of self/world, the division of self/other it inaugurates, is his triumph, his tragedy, and, through postcolonial, feminist, post-structuralist, or posthumanist eyes, a principal cause of his demise. Such a self-centre cannot hold as many postcolonial, feminist and poststructural critics have shown, and as many indigenous peoples have perhaps always known. The Enlightenment ego cannot function (or, in some mode, can only function) through repression, violence and subjection.

Deleuze and Guattari (1997: p.3–4) play with the Enlightenment 'I', throw its basis for producing truth, facts, knowledge, into doubt, pluralize it, and multiply it. They do so, they say, 'not to reach the point where one no longer says I, but the point where it is no longer of any importance whether one says I.' The I they posit is immanent to the social field, world and nature. This I is an intensity, an affective meld, a convergence of forces, always unstable, mobile, emerging, becoming. There is no *cogito* to centre and stabilise this I as it gets plugged into temporary assemblages, themselves composed through heterogeneity and multiplicity. This I does not reproduce itself by constituting binaries, divisions, hierarchies or any distinctions that separate out human/other. This I is, instead, detachable, reversible, open and

connectable. It makes maps not tracings of the terrain, that is, it does not seek to copy and reproduce what is already there but works via creative ‘experimentation in contact with the real’ (*ibid*, p.13). The knowledge this I produces does not require succour from a system of logical, objective rationalism with its linear and root-based presumptions that the ‘right’ research methodology and methods will disclose the ‘truth’ of the subject under inquiry. Instead, it unpicks the Enlightenment package of teleology, progress and development, operating instead with an idea of knowledge as a machinic network for knowing, replacing arborescent, lineage and root-based images of thought with rhizomic modes of knowing characterised by non-linearity, multiplicity, connectivity, dimensions (rather than a pivot), flatness (rather than depth), and ruptures which may (or may not) tie unforeseen things together so that they work. The rhizome as a-centred image of thought shifts the focus from knowledge ‘about’, procedures for producing knowledge, and concerns about what knowing ‘is’ to questions about what knowledge does, how it works, and how its effectivity may generate more (not less) of life.

The voice of the third extract belongs to One Esk Eleven, AI ancillary and former human, who inhabits multiple bodies, and is also materially manifest as the troop carrier ship, Justice of Toren who/which has a taste for antique choral and folk songs. Over two thousand years old, Justice of Toren has more than five senses, vast memory powers, and a tact, courtesy and sensitivity which make her communicative powers exemplary. One Esk is called ‘she’ for convenience because the Radchaai, the ‘race’ that colonised her, don’t recognise gender difference. She is a complicated more-than-human entity with a conscience, a consciousness and multiple identities. She is the cyborg we (humans) all already are, as Haraway (1991, pp.150–151)

reminded us a while ago: we are ‘theorized and fabricated hybrids of machine and organism which operate with ‘partiality, intimacy, irony and perversity’ to undo any origin stories that institute difference. Cyborgs, as oppositional and utopian entities, signal the breakdown of the three boundaries which have held in place our ‘last beachheads of [human] uniqueness’: human/animal; animal-human organism/machine; physical/ non-physical. The posthuman possible the cyborg heralds and institutes works through alliance, coalition, relationality.

And yet. The dispersals, possibilities and polymorphous becomings offered by posthuman identities are not equally available to all. For some the same old same old striations operate along class, gender, ‘race’, able/bodied, sexualised lines. Consider the UK House of Commons vote (3rd February 2015) to amend the 2008 Human Fertilisation and Embryology Act to enable mitochondrial transfer allowing ‘three-person-embryos’ to be artificially produced. Medically justified by its supporters on the grounds that it will help eliminate one strain of mitochondrial disease – a cause of liver failure and brain damage at embryo stage – the amendment enables the development of new IVF treatments in which the nucleus from the genetic mother’s egg is transferred into a donor’s egg either before or after the donor egg is fertilized with sperm. While the case for the alleviating of human suffering is (perhaps) worth considering, the most striking concern is the commodification, invasion, appropriation of women’s bodies as the primary genetic matter for this technological experimentation (mitochondria are passed on genetically by women not men) and their genetic exploitation under the ruthlessly competitive conditions released by the flows of global capital, illuminating how ‘market forces [now] happily trade on Life itself’ (Braidotti, 2013, p.59). Also consider the recent film *Ex Machina* which

features a contemporary-posthuman future ruthlessly gendered along binary lines in which (perennial) masculine fantasies of sexual compliance and desire for a beguiling female robot possessing youth and beauty, play out alongside fears of the return of the monstrous feminine, the true possessor of the phallus, the castrating ‘other’ to the vulnerable male human. In the posthuman now-and-to-come, whose future matters more? And if, as Braidotti (2013, pp.80 - 81) hopes, posthuman feminism provides a rebel stance against ‘the political economy of phallogocentrism and of anthropocentric humanism’, then how might this work in education?

For many, the posthuman promise of human dis-placement brings with it profound anxieties in contemporary conditions of rapid social, cultural, economic and technological change. Braidotti (2013, p.9) comments on how unmanned drones have brought a form of ‘necro-politics’ to posthuman global armed warfare which profoundly transform the practice of war by distancing human decision-making from the act of killing. Shiny, clean, easy death by machine: we (humans) have no part in it and, therefore, no messy guilt or shame to deal with. And if our collective conscience/individual consciousness is momentarily troubled by the thought that ‘real’ people, animals, plants, things and buildings are destroyed, we can always comfort ourselves with the fact that the ‘war on terror’ is a necessary thing carried out on our behalf to safeguard democracy from those not quite as politically-morally-civically-educationally ‘advanced’ as ‘us’ i.e. those ‘others’ who don’t share ‘our’ commitment to human life and the attendant civilized Enlightenment values that follow. If ‘death by drone’ illuminates how ethics are being recast under posthuman conditions, it also sharply highlights how (particular versions of) humanism are entwined with posthumanism.

Shifting <> Relationality

‘Nature has been given a baton and she is conducting musical interpretations of the forest's creatures and plant life as they interact with each other, resulting in a “live” and “ever-changing” performance in response to the atmosphere’ (Barber, 2014).

‘The animal looks at us, and we are naked before it. Thinking perhaps begins there’ (Derrida, 2002, p.397).

‘The 90-minute performance [of Cloakroom] sees [Tilda] Swinton taking clothes that have been checked in by audience members on arrival, and treating them as her co-stars. She nuzzled a red mohair coat, buried her face in a suit jacket and had a conversation with a gilet’ (Singh, 2015).

New material feminism, eco-philosophy, and object-oriented ontology and other posthuman approaches emphasise an ecology of human-nonhuman relations in which we (all) are embedded and entangled. They undo easy/old notions of the ‘we’ in order to move beyond the speciesism and anthropocentrism of humanism (Wolfe, 2010) towards modes of interbeing, interspeciesbeing and worlding. Manning (cited in Springgay, 2015, p.76) refers to ‘ecologies of encounter’ which unfix agency with its humanist ontological grounding in individuality and instead recognise a plurality of interrelationality. The posthuman promise of ecologies of encounter has been articulated in a variety of ways. For example, Braidotti’s (2013, p.100) affirmative posthuman feminism leads her to propose a materialist, vitalist, embodied and

embedded politics of/for Life itself which gives priority to the ‘irrepressible flows of encounters, interactions, affectivity and desire.’ Bennett’s (2010, p.6) concern is with the vitality of things and she praises ‘the curious ability of inanimate things to animate, to act, to produce effects both dramatic and subtle.’ For Bennett, thing-power reconceptualises ontology as a distributed swarm and agency as ‘congregational’ and ‘confederate.’ Haraway (2008, p.182) talks of her ‘encounters in dogland, with people and dogs, that have reshaped my heart, mind, and writing.’ She avows her love and desire for Cayenne, her dog, which motivates her ‘to be good for and with her. Really good.’ Forget distance, be-with the dog on the floor, in the grass, because these ‘meetings make us who and what we are in the avid contact zones that are the world’ (Haraway, 2008, p.287).

Inspired by quantum physics, Barad’s (2007) agential realism is a posthuman performative account of the onto-epistemological beings, becomings and knowings made possible when these differing modes and understandings of relationality are set in motion. Agential realism proposes that intentions are not the interior possessions of individuals but cohere and are expressed in human-nonhuman networks, that subjectivity is not the property and possession of a separately bodied individual but that all that exists comes to being through intra-active material processes of emergence (not as pre-existent separate entities), and that causality as a linear and traceable series of effects between isolated objects has to be rethought as a material practice in which who/whatever makes an agential cut – and in a classroom that doing could be done by a coat, a chair, a pen, an ipad, a computer screen, the atmosphere, the temperature, just as much as any human – generates ongoing and continually differentiating interconnections that constitute the mattering of the world. Causality,

hence, 'is an entangled affair ... of cutting things together and apart within and as part of phenomena' (Barad, 2007, p.394). Proceeding from our material entanglement agential realism, as a posthuman practice of mattering, profoundly reworks ontology, epistemology and ethics.

Posthuman forms of hybrid human-natural-object-animal intermixing instantiate Derrida's (2002, p.381) hoped-for 'multiple and heterogeneous border' which does away with 'the abyssal limit of the human'. Looking at his cat looking back at him, Derrida felt that 'everything can happen to me, I am like a child ready for the apocalypse'. In valuing the inhuman and ahuman, the posthuman opens an onto-epistemological opportunity space for that 'everything' to happen but that doesn't mean we (humans) can content ourselves with the luxury of being wide-eyed/ wild-eyed innocents. We (humans) are responsible for producing 'the human' as a separate political, ontological and epistemological category in the first place so, some posthumanists of the dark ecology movement (Morton, 2009) might argue, if there is a coming apocalypse perhaps it is both deserved and ought to be invited.

Presumptions that the world is as it is *for us* are nothing other than an idealized myth of anthropocentric dominion. In this vein, Wallin (2015, p.135) argues, that the world we have made and now know is a world of contamination and decay; the earth is not the pristine blue planet but a planet gripped by geotrauma. This *post* human 'alter Earth' (*ibid*, p.139) is utterly indifferent to human life, human action is futile, and humans have to learn to deal with 'the superabundant material realities unthinkable by humans' (*ibid*, p.140). Such narratives of human obsolescence provoke varying responses, from a recuperated cosmopolitan humanism grounded in our shared

humanity (Skillington, 2015) to the mobilization of pessimism ‘as an ethical force’ (Wallin, 2015, p.134) in thinking a posthuman world without privilege.

Shifting <> Ethics

Encounters, meetings, contacts. Responsibility, accountability, commitment. These are some of the key terms through which posthuman ethics are currently figured and which offer some ways out of the ethical cul-de-sac of humanism – with its phenomenal grounding of moral conceptions in the anthropos of individual bodies and its abstract and universalising rights-based discourses – in which we have been rather too complacently and comfortably sequestered for too long (despite the fact that all along only some individuals and some peoples’ rights count for anything at all). Thinking posthuman ethics, therefore, begins by re-thinking interdependence, by including nonhumans in an ethics of care, by understanding the human always and only in-relation-to nonhumans who are no longer ‘others’ but are, intimately and always, ourselves as the body multiple. Embodying and enacting ethics-in-relation is anxiety provoking to the extent that it dispenses with the privileged position of human separability and the fantasy of distance it installs. So Barad (2007, p.394) writes: ‘Responsibility entails an ongoing responsiveness to the entanglements of self and other, here and there, now and then’ in an emergent process that is, at one and the same time, the ongoing material co-constitution of the world *and* an instantiation of practices of mattering (i.e. agential cuts which mean that some bodies count for more than others). Posthuman ethics, from a ‘new’ material feminist perspective, is an ethic of ‘worlding’ and proceeds from the presumption that ethics is not about trying to see the world from inside someone else’s shoes – which presumes individuated bodies.

Rather, it means recognising skin not as a barrier-boundary but as a porous, permeable sensorium of connectivity with/in a universe of dynamic co-constitutive and differential becomings.

MacCormack (2012), too, is interested in developing ethics as an incarnate relation. Whereas Barad looks to quantum entanglements, MacCormack tracks back beyond the Cartesian bifurcation of body and mind to Spinoza's conception of the corporeality of the mind. For Spinoza, there is 'no body without mind, no individuality without connection, no connection without another individuated life with its own concomitant reality, no affect without expression, will as appetite beyond consciousness and, perhaps most importantly, no thought or theory without materiality' (MacCormack, 2012, p.4). A posthuman ethics, therefore, must be situational, emergent and unique, located in capacity and action, play out in living bodies as the point of ethical address, and be orientated to practices that are a positive affirmation of life. Because in Spinozist ethics 'the gift of liberty is allowing the power of the other to expand toward unknown futures' (*ibid*, p.1) ethics becomes a material practice of passion, difference and expansion.

Spinozan ethics are activated in Bennett's (2010) posthuman conceptualisation of thing-power. Derived from Spinoza's account of *conatus* (a substance which is itself in its continuing and creative self-differentiation), conative bodies are associative, social and affective; they form alliances and enter into assemblages with all manner of other bodies, forming ad hoc grouping of vital materialities. For Bennett (201, p.23), these 'living, throbbing confederations' with their horizontal and heterogeneous ontological capacities and the distributed agentic dance they engage in, are the site for

posthuman ethics. As Bennett (2010, p.37) suggests: ‘the ethical responsibility of an individual human now resides in one’s response to the assemblages in which one finds oneself participating.’ Such flattened ontologies and epistemologies of knowing-in-being not only recalibrate modes of responsibility and accountability, they also ‘chasten our will to mastery’ (Bennett, 2010, p.15). Similar points are made by Braidotti (2013, p.129) for whom our shared vulnerability provides the condition for an ‘affirmative ethics based on the praxis of constructing positivity’ which will enable new social conditions and productive relations to be forged ‘out of injury and pain’ (*ibid*, p.130).

Braidotti says we need to be worthy of the present and time and again the word ‘humble’ and ‘humility’ appears as a desired goal in considerations of posthuman ethics. Perhaps the desire for a posthuman ethics which displaces the morality of man with interspecies relationality may be best and cautiously ‘propelled by the tasty but risky obligation of curiosity among companion species, once we know, we cannot not know. If we know well, searching with fingery eyes, we care. That is how responsibility grows’ (Haraway, 2008, p.287). While this ethical project must be ‘a permanent critique of ourselves’ (Wolfe, 2010, p.xvi), the obligations it gives rise to will not be known in advance because each and every encounter keeps the matter of ethics open.

Unmoorings <> Method/ology undone

What happens to method/ology in the posthuman if, as Rotas (2015, p.102) suggests ‘human beings are not the only “participants” within a research study?’ The question

is a profound one which destabilises many, if not all, of the ways knowledge has been produced about education during the last few centuries. Snaza and Weaver (2015) point out that posthumanism hasn't yet had much impact on educational studies but even a cursory glance at the mundane aspects of everyday lives within educational contexts indicates the necessity of taking the nonhuman into account alongside and with the human. Think, for example, of the chains of techno-chemical processing which have already transformed the 'food' in children's school dinners before it enters their mouths; or the millions of other-than-human microbes, bacteria and parasites that circulate amongst school populations each day as young people touch computer keyboards, share ipads or books, and sit or play together; or the pervasive use of social media within schools, the peer cultures that require belonging through particular items of clothing and objects; as well as the ways in which schooling practices are integrated with technological apparatuses such as interactive whiteboards; and the surveillance regimes that deploy nonhuman actors including computerized registers, webcam security systems, and classroom video observatories. These examples are from schools but conceptualizing the co-production of further and higher education by posthuman-human agencies is also a necessary and urgent task.

Mapping the posthuman within educational research is a complicated and lively endeavour, given our location *after* method (Law, 2004) and already *in* post-qualitative research which seeks to dispense with all the presumptions and categories of humanist qualitative research (Lather and St. Pierre, 2013). Yet, as Brinkman (2015, p.621) has recently indicated, 'good old-fashioned qualitative inquiry' (GOFQI) with its centerings in dialogue, voice, empathy, narrative, meaning, method, coding, data (and I would add, rigour, trustworthiness and validity) 'lives by constant

self-destruction and resurrection like a phoenix.’ Which means that the presumptions it entails – that one can access, know about, and represent the ‘experience’ of an ‘other’s’ ‘reality’ – are not so easily dispensed with, no matter how reflexively one tries, as various feminisms and ‘posts-’ have already shown. And which is why Lather (2013, p.635) points out that ‘there is no methodological instrumentality to be unproblematically learned’, what we have instead is ‘methodology-to-come’ which means that we ‘begin to do it differently’ with every new project and ‘wherever we are in our projects.’

Being methodologically in the mess (Law, 2004), in the middle (Deleuze and Guattari, 1997), and in the mesh (Ingold, 2007), makes the question many doctoral students (including myself) were invited to struggle with – ‘do I choose a paradigm first within which to shape the research, or does the research question dictate paradigm choice’ – now seems rather beside the point – because beginning in the *here* of posthuman research dis-places the whole panoply of what arrives with one’s ‘choice’ of research paradigm. As Barad (2007) illuminates, practices, doings and actions are enactments of presumptions about ontology, epistemology and ethics. Taking this up in posthumanist research practices means we begin with immanence, relation, non-separability, values, partisanship, responsibility for each and every choice or cut, immersion, emergence. Beginning with the embodied idea that posthumanist research is an ethico-onto-epistemological practice of materially-emergent co-constitution what emerges as ‘research’ cannot be ‘about’ something or somebody, nor can it be an individualised cognitive act of knowledge production. Rather, posthumanist research is an enactment of knowing-in-being that emerges in the event of doing research itself. In opening new means to integrate thinking and doing, it offers an

invitation to come as you are and to experiment, invent and create both with what is (already) at hand and by bringing that which might (or might not be) useful *because you don't yet know* into the orbit of research.

Posthuman scholars such as Maclure, Lather, St Pierre, Koro-Ljunberg and Mazzei and Jackson, amongst others, encourage researchers to track down the very many ways the human is enfolded within and intercedes in the research process, encouraging vigilance to the unwitting ways that humanist remnants smuggle themselves into posthuman research intraventions. You can't simply mix and stir posthumanism into a research design. Neither it is enough to 'adapt' a familiar method to posthumanist ends, as Kuntz and Presnall's (2012) reconceptualisation of the interview as intra-view shows. Nor will it do to 'add' a posthuman analysis to the interpretation of data that has been conventionally collected, instead new analytic practices such as attending to moments of 'productive disconcertion' and the rebel becomings induced by data 'hotspots' are needed (MacLure, 2013). So, if the 'usual' methodological procedures are no longer possible in the posthuman, if we invite emergence and take the question '*can* posthumanist research be 'planned' in advance' seriously, then how to proceed?

Many of those putting posthumanist research practices to work take up Deleuze and Guattari's (1987) invocation regarding 'the logic of the AND', developing rhizomic means to interrogate educational instances in their manifold multiplicity. Others take up Barad's (2007) agential realism, using the concepts of intra-action, entanglement, cut, apparatus, and phenomena to drive their research intra-ventions. Others, like Bennett (2010, p.xiii), propose following 'the scent' of the thing, where to follow

means ‘always to be in response to call from something, however nonhuman it may be.’ For Bennett, following entails lingering in moments so as to avail oneself of the fascination of objects, of letting sense wander so that it may become attuned to things and their affects. Harman (2011), following Latour, offers the love of lists by which to adumbrate the beauty of the real that surrounds us which, he avers, cannot be known but can only be loved. Bogost (2012), also in speculative realist vein, prefers speculative fictions as a means to imaginatively capture alien phenomenology, that is the trails left by things as they withdraw to pursue their thingly lives without us. Stewart (2007, p.1) practices speculation and curiosity to provoke attention to the forces, resonances and impacts of moments, events and sensations of the ‘weighted and reeling present’ she seeks to approach.

These practices dis-place ‘methodol/ogy’ and call forth new ways of finding out. Springgay (2015) suggests that these new ways of doing may be better approached as ‘techniques’ than methods or research tools in that techniques are processual, emergent and continually reinvent themselves. As a way of leaning into a posthuman practice that is ‘a mode of thought, already in the act’ (Manning and Massumi, 2014, p.ix), techniques activate modalities of thought, rhythmns, affects from inside the act, techniques activate a practice from within, thinkings-in-the act set practice in motion, so that practice *becomes* interference, always diffractive, multiple, uneasy and intense. And it is perhaps because of the profound questions posthumanism raises about what research is and how it may get done differently that posthumanist researchers lean towards arts-based, visual, sensory, movement, sonic and creative writing practices (as in some of the chapters in this volume). Such post-disciplinary conversations give rise to questions about what data are, how they matter, and how we may interpret the

empirical materials (Denzin's phrase for those entities formerly known as 'data') generated in any act of research. These questions work as a practical means to push forward the open question about what constitutes educational research in the posthuman.

Edu-crafting <> The *potentia* of posthuman research practices in education

Immanent, vitalist, materialist, embedded, embodied, relational, sensory, affective, contingent, experimental. These are the modes of thinking-in-being which issue a call to those interested in posthumanist research practices in education. Such research cannot be 'done' or 'carried out', it may only be activated, enacted, instantiated, so that it strives to set in motion a 'cacophonous ecology' (Manning and Massumi, 2014, p.viii) of bodies, objects, materialities, affects, sensations, movements, forces. Posthuman research enactments are a practice of the plunge: letting go, diving, freefall, surfing, swimming, waving *and* drowning. They are a plunging into particularity that collapses scale, structure and level – to (try to) see a world in a grain of sand, indeed – and a committed ethico-onto-epistemological venture to (try to) do away with the binaries that have held 'man' and 'human' so securely in place as a means to other everything/everyone else. Plunging is a messy, ungainly and sometimes dangerous business: there are no methodological safeholds, handholds or niches for secure knowing. Yet one of the forces that traverse and propel us in the not-known of posthumanist research in education is *potentia*: energy, vitality, the constitutive desire to endure. *Potentia*, Braidotti (2013, p.137) says, 'disintegrates the ego with its capital of narcissism, paranoia and negativity' and installs an affirmative power; it provokes experiments with posthuman modes of subjectivity; and it

generates relational posthuman encounters productive of new forms of sociality.

Potentia may also help activate modes of radical experimentation to propel posthuman research practices that the field of education can benefit from.

Edu-craft is a neologism I've made up to think about how to join the impulse behind craftivism (a movement which uses craft for critical thinking, questioning and considered creative activism) with 'new' material feminist/ posthuman research practices. Edu-crafting, as a posthuman research experiment, puts bodies, things and concepts in motion. One example of an edu-craft intervention I've enacted with undergraduate students entails a collaborative investigation of how the curriculum is brought into being and enacted through a mutable range of posthuman materialities and spatialities. Activities include focusing on the nonhuman matter that textures the seminar room space, tuning into embodied enactments of space in classrooms, and experimenting with noise, atmosphere and light. The challenging of working out how to describe these activities, account for their effects, and explain the passages of affect they make possible draws us further into the human-nonhuman conjunctions within the 'fielding of the event' (Manning and Massumi, 2014, p.14). From this, assessment becomes a practice of making some 'stuff' (a mood board, photos, poems, objects) as a spatio-material record of our immersion in educational spaces; of connecting these to a post-disciplinary analysis of the space and matter of educational experience which draws resources from a range of disciplines (sociology, education, organisation studies, material culture studies); and of producing a collaborative journal to collect our texts and products. These emergent workings out of the affective, material and spatial happenings *as* curriculum practices interrogate inherited educational categories and knowledge boundaries, helping to foreground agency as a posthuman 'commotion of co-activity' (*ibid*, p.14). This edu-craft intervention, as a *matter* of knowing-in-

doing, draws theoretically, on Barad's (2007, p.170) view that 'bodies do not simply take their place in the world ... rather "environments" and "bodies" are intra- actively constituted.' It also summons Debord's (1955) notions of the *dérive* (getting lost) and the *détournement* (re-routing or hijacking) by undoing the 'tight' modular package within which undergraduates' usual modes of knowing, learning and writing are normally contained. These edu-crafting activities sometimes produce profound discomfort and sometimes generate desires for greater risks. This particular example of edu-crafting sits uneasily on the boundaries between educational research, pedagogic practice and reflective practice; it blurs individuality by trying to think self in motion in spatio-material assemblages; it destabilises student assessment by provoking the production of things and objects not just written assignments; and it invites consideration of the confederate activity of all manner of bodies, not just human bodies, in the production of the curriculum. It is just one instance of how an experimental research/pedagogy/practice can open a way to think the unforeseen, temporary, unpredictable and contingent, and draw attention to the regimes of normalcy and oppressive institutional sedimentations that higher education spaces often entail and require us to embody.

Concluding <> continuing

Posthumanism is a mobile term, a concept in motion, an active theoretical assemblage. As an itinerant constellation of differing intellectual vectors and scholarly convocations, it gives rise to a complex mix of anxieties and fears as well as pleasurable fantasies, hopes and dreams about the newly possible in educational research.

This chapter has introduced posthumanism as a theoretical field, explored some of its conceptual moorings, and considered how empirical research in education is recast when the implications of posthumanism are taken as a starting point. It has proposed that there is no one line *from* humanism *to* posthumanism but, rather, various complicated genealogies. What is not in question is that the exclusions, hierarchies and violences imposed by Eurocentric, colonialist, and patriarchal forms of humanism have been instrumental in provoking new modes of posthuman thinking and doing to contest these denigrations.

Far from being a future event, posthumanist practices and ways of thinking and doing are already with us. Posthumanism is entangled with the philosophical and everyday frames of reference through which ethical judgements are filtered and reconstituted; it informs the cultural categories, biological framings and technological procedures by which we make ourselves up as individual humans and as humans in relation to our human and other-than-human earthy cohabitants; and it is imbricated in the hyper-capitalist neo-liberal economic imperatives that have gained precedence in constituting and explaining who ‘we’ are at this moment in the world’s history. The ‘everydayness’ of posthumanism supports Braidotti’s (2013, p.2) point that the posthuman condition has introduced a ‘qualitative shift in our thinking about what exactly is the basic unit of common reference for our species, our polity and our relationship to the other inhabitants of this planet.’

The challenge for posthumanist educational research is how to produce knowledge about education which undoes the humanist presumptions that have thus far grounded educational research. The approaches and practices outlined in this chapter try in

various ways to do away with method/ology-as-usual by opening a wider purview for transdisciplinarity, and by activating *potentia*, with its promise of more ecological modes of being, based on relationality and co-constitutive worlding. The innovative posthuman practices touched on here generate concerns which resonate throughout the book. I have included brief mention of edu-crafting as an experimental approach I have developed in my own field of higher education to illuminate my own (here, now, emerging, provisional) response to the posthumanist challenge to (try to) do educational research and pedagogy differently.

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