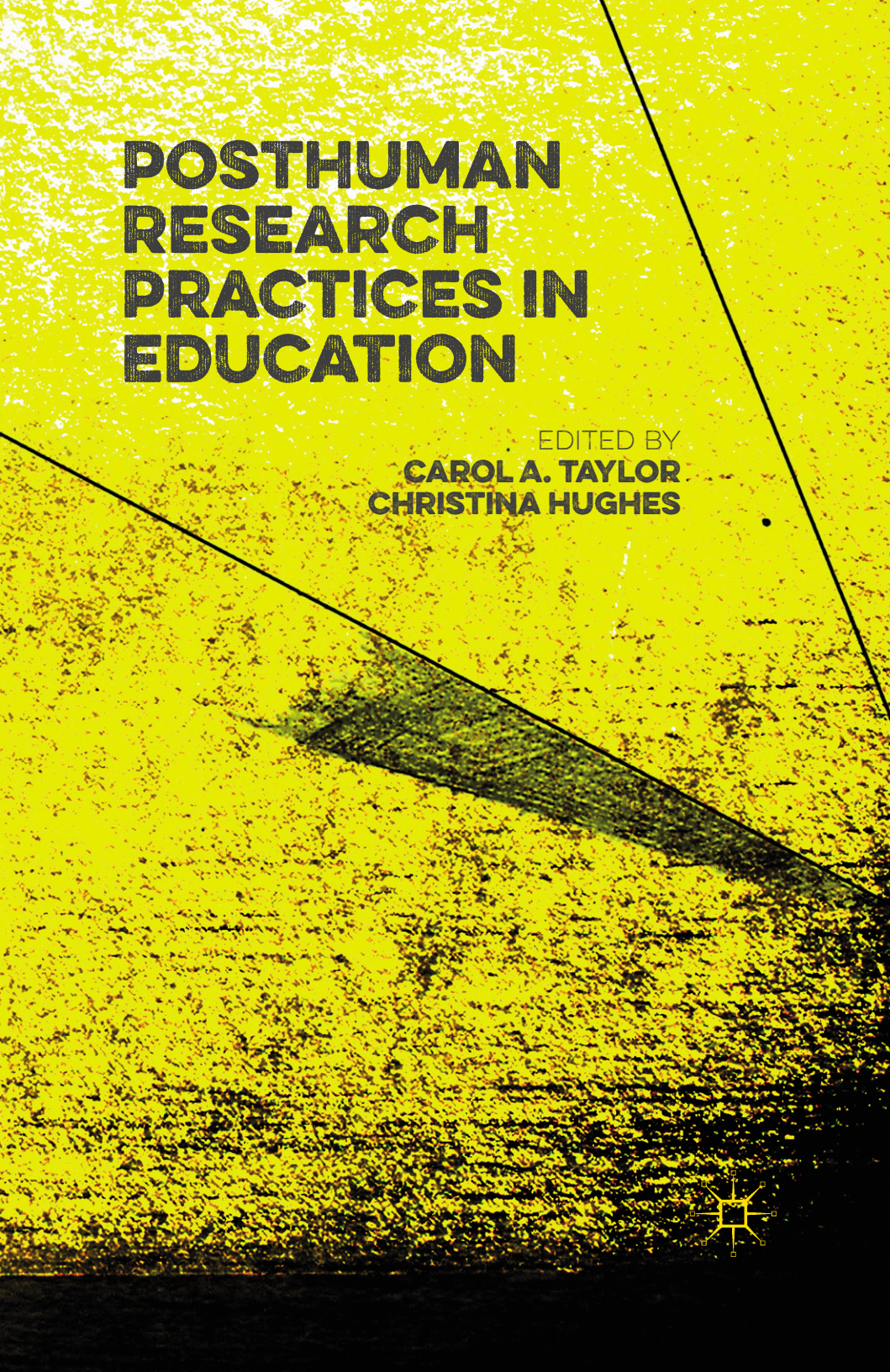
# POSTHUMAN RESEARCH PRACTICES IN EDUCATION

EDITED BY
CAROL A. TAYLOR
CHRISTINA HUGHES



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Edited by

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September 2015

# Contributors

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**Mindy Blaise** is a professor in the College of Education at Victoria University, Melbourne, Australia. She publishes across both early childhood education and gender studies. Her book *Playing It Straight! Uncovering Gender Discourses in an Early Childhood Classroom* brings together feminism, queer theory and early childhood to rethink childhood, teaching and learning. Her most recent book, *The SAGE Handbook of Play and Learning*, was co-edited with Liz Brooker and Susan Edwards and showcases how postdevelopmentalism is being taken up in early childhood.

**Ken Gale** works in the Institute of Education at Plymouth University and has published widely and presented at a number of international conferences on the philosophy of education and anti-positivist approaches to education research and pedagogy. His co-authored books include *Between the Two: A Nomadic Inquiry into Collaborative Writing and Subjectivity*, *Deleuze and Collaborative Writing: An Immanent Plane of Composition*, *How Writing Touches: An Intimate Scholarly Collaboration* and *Philosophy and Education: An Introduction to Key Questions and Themes*. He has recently co-edited journal special editions on collaborative writing for the *International Review of Qualitative Research* and on collaborative

writing as a method of inquiry for *Cultural Studies<=>Critical Methodologies*. He is an associate member of the Higher Education Academy, and a member of the International Association of Qualitative Inquiry and the Narrative Inquiry Centre at the University of Bristol, where he is also a visiting fellow.

**Susanne Gannon** is an associate professor and equity theme leader in the Centre for Educational Research at Western Sydney University, Australia. Her expertise includes diverse qualitative methodologies for investigating racialized and gendered subjectivities and place; media, popular culture and policy; aspirational trajectories of young people from diverse backgrounds; and creativity and writing. She draws on theories of place, bodies, affects and new materialities in order to better understand how particular ways of being are enabled or closed down for young people. She is interested in all sorts of materialities and representations, including and exceeding the 'real' accounts of lived experience that are privileged in much empirical research.

**Anna Hickey-Moody** is Senior Lecturer in Educational Studies and Head of the Centre for the Arts and Learning at Goldsmiths University, and her work focuses on disability, arts practice, gender and cultural geography. She is interested in generating new stories about disadvantaged and disabled youth in ways that do not re-inscribe marginalization. Her work is philosophically informed and can broadly be described as a cultural studies approach to youth arts as a subcultural form of humanities education. Her recent publications include (edited with Page) *Practice, Pedagogy, Resistance: A New Materialism* (2015); *Youth, Arts and Education* (2012); (edited with Vicki Crowley) *Disability Matters: Pedagogy, Media and Affect* (2011); and *Unimaginable Bodies* (2010).

**Marc Higgins** is Social Sciences and Humanities Research Council of Canada Doctoral Fellow and a doctoral candidate in Cross-Faculty Inquiry in Education at the University of British Columbia. Drawing from longstanding involvement in Indigenous education, science education and media-technology education, he continues to explore pedagogical possibilities in and across these fields. His interdisciplinary work explores the spaces between Indigenous, decolonizing, postcolonial, poststructural and posthumanist theories in order to think and practice education in ways that make space for Indigenous ways-of-knowing (i.e., epistemology) and ways-of-being (i.e., ontology). He has recently been involved in the design, development, delivery, as well as

assessment of one of the first required Indigenous education courses for pre-service teachers in Canada at the University of British Columbia. He also continues to support Faculty of Education/school district collaborations by facilitating professional development for teachers on the topic of Indigenous and decolonizing science education in the Metro Vancouver area.

**Rachel Holmes** has been a teacher for 19 years, working across the fields of early years, Key Stage 1, further and more latterly higher education. She works in the Educational and Social Research Institute at Manchester Metropolitan University as a professor, leading the Children and Young People Research Group. Her research moves across the interstices of applied educational research, social science research and arts-based research within cultures of childhood. Her interests are located around notions of 'childhood territories' such as ways childhood becomes imag(in)ed through fictional, documentary and ethnographic film; children's child(self)hood, identities and objects and ways to (left)field childhood via opening up off-centre research methodologies.

**Te Kawehau Hoskins** is a Maori writer, scholar and activist from the tribal groups Ngāti Hau and Ngāpuhi. She is a senior lecturer in Te Puna Wānanga, School of Maori Education, University of Auckland, New Zealand. Her main academic interests are in governance, environment and settler–Indigenous relationships. Her community activism is focused on school governance as partnership, and her most recent writing brings 'face to face' the philosophical work of Levinas with Maori political thought.

**Christina Hughes** is Professor of Sociology at the University of Warwick and serves as Pro-Vice Chancellor. Her research focuses on equity and gender issues and her most recent work has been with jewellery designer makers. She has longstanding interests in methodological issues: see *Disseminating Qualitative Research* (2003); *Feminism Counts: Quantitative Methods and Researching Gender* (2011, with Rachel Cohen); *Researching Gender* (2013); Feminist Research Methods, *International Journal of Social Research Methodology* Virtual Special Issue, http://explore.tandfonline.com/page/bes/tsrm-vsi-feminist-methods (2015). She is co-editor (with Ros Edwards and Malcolm Williams) of the *International Journal of Social Research Methodology* and serves on the boards of *Gender and Education* and *Gender, Work and Organisation*.

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trans- and interdisciplinary research specifically focusing feminist theories and continental philosophy in her studies of higher education, teacher education and early childhood practices. She is much involved with the theoretical development and transgressive methodologies as part of the posthumanist, new materialist and post qualitative turns. Her work has appeared extensively in international journals such as *Feminist Theory*, *Gender and Education*, *Qualitative Inquiry*, *International Journal of Qualitative Studies in Education*, and *Educational Philosophy and Theory*, and she is the author of the book *Going Beyond the Theory/Practice Divide in Early Childhood Education: Introducing an Intra-active Pedagogy* (2010). Nationally, she is a well-known author and Lecturer in Early Childhood Education and Gender Pedagogy, and as of 2015 a project leader of a large-scale educational neurology project with grants from the National Research Council.

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**Jocey Quinn** is a professor at Plymouth Institute of Education, Plymouth University, UK, where she leads the Learning outside Formal Education research group and is Director of the Centre for Culture Community and Society. She has published widely in the field of higher education and lifelong learning. Her research monographs include *Powerful Subjects: Are Women Really Taking over the University?* (2003) and *Learning Communities and Imagined Social Capital: Learning to Belong* (2010). She has conducted a wide range of research projects including those funded by the ESRC, British Academy, Joseph Rowntree

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**Emma Renold** is Professor of Childhood Studies at the School of Social Sciences, Cardiff University. She is the author of *Girls, Boys and Junior Sexualities* (2005) and *Children, Sexuality and Sexualisation* (2015), and the co-editor of *Routledge Critical Studies in Gender and Sexuality in Education*. Inspired by feminist and queer posthumanist theory, her research investigates how gender and sexuality come to matter in children and young people's everyday lives across diverse sites, spaces and locales. Recent projects (see www.productivemargins.ac.uk) explore the affordances of co-productive, creative and affective methodologies to engage social and political change on young people's experiences of gendered and sexual violence.

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**Elizabeth Adams St. Pierre** is a professor in the Educational Theory and Practice Department and affiliated professor of both the Interdisciplinary Qualitative Research Program and the Institute of Women's Studies at the University of Georgia, USA. Her work focuses on theories of language and the subject from critical theories and poststructural theories in what she has called post-qualitative inquiry – what might come after conventional humanist qualitative research methodology. She is especially interested in the new empiricisms/new materialisms enabled by the ontological turn.

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# Introduction

*Carol A. Taylor and Christina Hughes*

The post-qualitative turn, new empiricisms, and new feminist materialism, coupled with the interest in ecological perspectives, are all manifestations of a rapidly growing engagement with posthumanism. However, in such a theoretically and philosophically rich field, insufficient attention has been paid to the specifically methodological import of these debates. What do empirically grounded explorations of posthumanism look like in practice? How can they be designed? What sorts of 'data' are produced and how might they be analysed? And, importantly, what are the social, cultural and educational effects or impacts of empirically driven posthuman research?

Stemming, in rhizomatic ways, from the single term 'posthuman' are multiple genealogies, intents and concerns that create a rich landscape of debate and engagement. Putting posthumanism to work through concepts such as assemblage, thing-power, vital materiality, entanglement and nomadism, many of our contributors have been inspired by the work of Gilles Deleuze, Felix Guattari, Jane Bennett, Karen Barad and Rosi Braidotti. This demonstrates a powerful constellation of philosophical, political, ethical, ontological and epistemological deliberation. Taken together, the chapters illuminate how posthuman research requires, and is underpinned by, a fundamental recasting of ontology, epistemology and axiology. In doing so, this book identifies and unpicks the normalized and normative codes of dominant contemporary research and presents a series of radical, creative and innovative research engagements.

For those new to this area, the cacophony and complexity of voices within the field of posthumanism can be confusing as one works through the histories and implications of alternative arguments. Designed to be a framing for this text, Carol Taylor's opening chapter

provides an initial sketch of this ground by situating posthumanism as both a reaction to humanism and an activation of new practices in educational research. Carol's chapter can be read as a mapping of key shifts from humanist to posthumanist modes of knowing, being and doing; and/or an introduction to the main contours of posthuman thought; and/or an introduction to the theories and concepts dealt with more largely in the chapters that follow.

Yet creating knowledge change is no easy task and, with clarity and analytic care, our contributors detail the dilemmas and complexities they have encountered, their approaches to, and experiments in researching differently. Because, if Cartesianism is totalizing, as Marc Higgins notes, it is never fully totalized. Elizabeth St. Pierre takes this issue up directly through a reflexive account of learning, doing and teaching qualitative methodology. As she points out, we are caught within the formative knowledge of our own academic histories and, indeed, as teachers we pass these on to our students. In doing so, we perpetuate the dominant approaches we critique. St. Pierre argues forcefully that what we need are not new methodologies and their knowledge practices but new concepts and new conceptual practices.

And so we see in this text. A key element of the posthuman is that it asks us to pay attention to a 'more-and-other-than-human' world (Hughes and Lury, 2013). And our contributors do this in a number of domains ranging from the brick (Luke Bennett), the mattress (Alecia Jackson and Lisa Mazzei), a Maori facial tattoo (Alison Jones and Te Kawehau Hoskins), doors (Rachel Holmes and Liz Jones), bear suits (Susanne Gannon), the sea (Jocey Quinn), the camera (Gabrielle Ivinson and Emma Renold), Portakabins and classrooms (Jessica Ringrose and Emma Renold) to dogs and earthworms (Veronica Pacini-Ketchabaw, Affrica Taylor and Mindy Blaise). The posthuman approaches they activate shift anthropocentric thinking by challenging presumptions of human exceptionalism.

In doing so, the chapters in this text change the parameters of research and what is counted as relevant. This requires us to think relationally with other beings/matter and to draw out the confederacy of objects, bodies and materialities. Many contributors employ the concept of assemblage to recognize such heterogeneous connections, each element having its own characteristics and dynamics and different temporal and spatial scales. Certainly, it is recognized that we are always in the realm of the not-known in terms of the indeterminacy of research and its effects. This serves to highlight an always becoming rather than a fixed state of being (Ken Gale), asking questions, and more questions, rather

than seeking absolutist answers (Susanne Gannon) and contesting linear causality through, for example, fractal thinking (Alicia Jackson and Lisa Mazzei).

Methodologically it requires us to operationalize the unself (Jocey Quinn), give focus to shadow stories (Rachel Holmes and Liz Jones), the co-implication, interdependency and entanglement of the researcher and research apparatus (Susanne Gannon). It also requires us to recognize the vitality and agency of other beings and materialities (Alecia Jackson and Lisa Mazzei). And it provides us with analytic tools such as rhizomatic readings and cartography mapping (Hillevi Lenz Taguchi), diffraction (Gabrielle Ivinson and Emma Renold), diffractive writing (Ken Gale), Indigenous storywork (Marc Higgins), intra-action (Jessica Ringrose and Emma Renold) affective pedagogy (Anna Hickey Moody), and the practice of Edu-crafting (Carol Taylor). The chapters demonstrate ways of reworking and transforming known methodologies, such as participatory research (Gabrielle Ivinson and Emma Renold), qualitative approaches (Jessica Ringrose and Emma Renold) and photo-voice (Marc Higgins) into posthuman frames.

As our contributors also detail, posthuman research provides a critique of the practices of 'othering' through, for example, an undoing of colonialism. Indeed, we still have much to unlearn in respect of Western assumptions of superior intellectual thought with respect to the entanglement of nature-culture. Thus, Alison Jones and Te Kawehau Hoskins detail how Maori ontology has never radically separated these spheres and indeed has much to say, and to which, we would suggest, we should humbly listen.

Central to the concerns in this text also are ethical accountabilities to human, more-than-human and other-than-human actors. Luke Bennett draws attention to what he refers to as bleak variants of posthumanism that suggest we should/can access a world without us. Luke demonstrates both the political reductionism of such an approach and its impossibility. Hillevi Lenz Taguchi also cautions that we should not 'go to war' based on judgemental attitudes or universal truth claims when, as we understand here, they are qualified, cultural and situated truths. And Jocey Quinn highlights how ethical responsibility shifts the time frame to thinking beyond our own lifetimes.

The concluding chapter in our text sets out a Femifesta (Anna Hickey Moody), written with passion and verve to argue the case of how art teaches in ways we are only beginning to see. We would extend this point to posthuman research practices more generally. For us, and our contributors, posthuman research provides more engaged ways to do,

write about and present research. It focuses on the co-connections – or articulations to use Haraway's (1988) phrase – between practices and being in the production of knowledge. It requires us to 'dream along with' other disciplines in constructive ways (Stenger, 2000) and integrates issues of ethics, power and politics with ontological and epistemological concerns.

We trust you will gain much from the chapters in this text and that they help support your own research or encourage you, if you have not done so already, to experiment and innovate with our entanglement with the world around us. Do let us know.

September 2015

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# 1

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

*Carol A. Taylor*

## 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 those 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 centrings <> Posthumanist profusion

Posthumanism is a mobile term 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 and 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 concretizing, 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 'recognizably' 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, conceptualize a genealogy of 'the human' through its relation to various 'constitutive outsides: the animal, the machine, the savage, the slave, nature, the thing'. These conceptualizations 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 destabilize the origin myths of humanism and reincorporate those inappropriate/d others. Much of this theorizing (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 feminists and post-structuralists 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, 1977, extract from *Song of Myself*, l., pp. 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.
>
> (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 essentializing 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 post-structuralist critics have shown, and as many indigenous peoples have perhaps always known. The Enlightenment ego cannot function (or, in some modes, can only function) through repression, violence and subjection.

Deleuze and Guattari (1997, pp. 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 stabilize 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

characterized 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 above 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 2,000 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 colonized her, don't recognize 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 striations operate along class, gender, 'race', able/bodied, sexualized lines. Consider the UK House of Commons vote (3 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 in vitro fertilization 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 and 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' that is, 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, object-oriented ontology and other posthuman approaches emphasize 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 recognize 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 reconceptualizes ontology as a distributed swarm and agency as 'congregational' and 'confederate'. Haraway (2008, p. 182) talks of her 'encounters in dog-land, 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