Rethinking the Empirical in Higher Education: Post-qualitative Inquiry as a Less Comfortable Social Science

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Abstract

In recent years 'post-qualitative new empiricist' research has been gaining ground. Such work questions the humanist ontological and epistemological orientation of much mainstream qualitative inquiry and insists on the need to take into account the more-and-other-than-human. Post-qualitative research draws on an eclectic range of theories as a means to reformulate the methodological assumptions on which humanist research rests. In doing so, it problematizes key aspects of the research process – the objects of inquiry, methods used to produce 'data', what 'data' is, coding as a practice of meaning-making, and the formal conventions of academic article writing for journal publication. Given the relative unfamiliarity of post-qualitative inquiry, this article provides an introduction to its methodological and theoretical terrain. The article has three aims: first, to provide an overview of post-qualitative new empiricisms and outline its five key foci; second, to put to work three theoretical approaches – Jane Bennett's 'thing-power', Graham Harman's object-oriented ontology and Karen Barad's agential realism – via a specific example, as a means to formulate some empirical starting points for post-qualitative work in higher education; and third, to assess the promise of post-qualitative inquiry in rethinking the empirical more broadly.

Keywords

Post-qualitative; empirical; methodology; thing-power; object-oriented ontology; agential realism

Introduction

Proponents of 'new empiricism' or post-qualitative research have been conducting a sustained assault on traditional qualitative research for a number of years now. This initially may have seemed something of a North American affair originating in a reaction to what Lather (2013 635) has spoken of as the 'discipline and punish' approach of the US federal government in its efforts to 'dictate "gold-standard" research methods via the "scientific based research"

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movement (Committee on Scientific Principles for Education Research 2002)'. However, recent new empiricist work by UK researchers (Holmes 2015; MacLure 2013; Taylor 2013), in Australia (Gannon 2016; Senior and Solomon 2013), and in Scandinavia (Lenz-Taguchi 2012; Boden 2013) dispels this notion. New empirical post-qualitative research is an international endeavour oriented towards rethinking the empirical on two main fronts. The first of these is grounded in a desire to critique neo-liberal research audit cultures and the new managerialist, instrumentalist, perfomative regimes they instate via the valorization of big data, key performance indicators, and evidence-informed practice, and which seek to discipline and regulate what counts as qualitative research (Childers 2013; Koro-Ljungberg and MacLure 2013; Lather 2013). The second coheres around a commitment to unpick the epistemic codes underpinning what Brinkman (2015) has called 'good old-fashioned qualitative inquiry'. While both fronts are equally important, it is the latter this article principally engages with. As Brinkman explains, Good Old-Fashioned Qualitative Inquiry (GOFQI) is, more or less, the standard approach to qualitative research found in many disciplines, in many countries, and in many textbooks. It is unified around a set of assumptions, namely: that human beings differ from all other creatures in their interpreting and self-interpreting capabilities; and that humans are subjects (rather than merely objects) who, as acting and speaking beings, each possess a unique perspective on the world. The anthropocentric assumptions of such qualitative inquiry posits the role of the researcher as one whose job it is to 'capture and understand these perspectives, usually via *dialogue* (often framed as qualitative research interviews), and try to give them *voice* (especially those whose voices are rarely heard), with the researcher's display of *empathy* being an important virtue in this regard' (Brinkman 2015, 620). Furthermore, qualitative analysis, in order to take cognizance of individuals' *narratives*, employs the method of *coding* the *data* in order to understand the *meaning* of the person's experiences. Moving beyond GOFQI has, in recent years, seen an increasing number of *post-qualitative* methodological scholars engaged in the interrogation and re-purposing of the central humanist pillars of qualitative inquiry – dialogue, voice, empathy, narrative, meaning, method, coding, data. Their purpose has been to recast how qualitative research gets done in order to produce different sorts of knowledge leading to potentially different outcomes.

Post-qualitative methodological work resonates with other endeavours to highlight the inadequacy of the 'methods as usual' approach. Law (2004), for example, has criticised traditional sociological methods approaches for their analytic grasping and holding tight to notions like clarity, rigour and regularity which, he argues, leave social scientists ill-equipped

for dealing with the 'vague, diffuse or unspecific, slippery, emotional, ephemeral, elusive or indistinct' which constitute the kaleidoscope of experience in the everyday social world (Law 2004, 2). Likewise, Back and Puwar (2012) and Lury and Wakeford's (2012) work on methods have a similar intent: to rethink methods in order to rethink the mission of social research. These sociological interrogations of methodology share a suspicion that methods-as-usual act as 'normative blinkers' (Law 2004, 4) which entrain thought and research practice in established grooves.

However, while there is a clear resonance between the methodological aims of post-qualitative new empiricists and some more mainstream sociological scholars, there are also some differences in orientation to the empirical in the two endeavours. Post-qualitative research is more overtly sympathetic to techniques of postmodernist deconstructionism which privilege epistemological doubt and interpretive multiplicity, and which foreground textual experimentation (Burman and MacLure 2005; Koro-Ljungberg *et al*. 2015). In contrast, sociological concerns are more likely, according to Savage and Burrows (2007), to be exercised by the declining expert status of the discipline of sociology in an age when other forms of knowledge and expertise have come to territorialise knowledge production beyond the university. This, as Adkins and Lury (2009) point out, has led to fundamental questions within the discipline about what the empirical is and how it matters. Nevertheless, perhaps what both the 'new' post-qualitative empiricists and those interested in developing 'new' sociological methods (broadly) share is the view that recasting the empirical urges a fundamental reconsideration of ontology, epistemology and ethics, and that doing so surfaces new questions about *post*-humanism and transdisciplinarity. Indeed, these questions become particularly acute when methods-as-usual approaches are confronted by the agency of nonhumans, whether in the form of, for example, technology (c.f. concerns about big data), or virology (c.f. the recent outbreak of ebola in West Africa), or animals (c.f. the failure of the UK badger cull in combating bovine TB); and researchers working on problems such as global inequality or climate change, for example, consider these problems to be so 'big', pervasive or intractable that only a transdisciplinary approach can offer sufficient traction. It seems appropriate, then, to begin to recasting research in a new empirical key if we wish to use research to produce knowledge that makes a difference to our entangled human-nonhuman lives. My aim in this article, then, is to open up ways of rethinking the empirical in higher education via a post-qualitative new empiricist lens. I begin by identifying five key aspects which characterise new empiricist post-qualitative research. I then consider these aspects in relation to three new theoretical approaches – Jane Bennett's 'thing-power',

Graham Harman's object-oriented ontology, and Karen Barad's agential realism – which I put to work via a specific example from higher education. I end with a brief overview assessment of the promise of post-qualitative inquiry in rethinking the empirical.

Rethinking the empirical: A less comfortable social science[i]

Post-qualitative new empiricism gathers together a variety of philosophical orientations characteristic of the ontological turn and my purpose in this section is to provide an introductory overview. Readers should bear in mind that the post-qualitative new empiricist field offers a nuanced, diverse, uneven and emergent set of approaches. Nevertheless, it is possible to map five key foci across these endeavours:

- One: to de-centre the human in order to recognise the agency of the other-than-human and more-than-human bodies, objects, things and matter with which we (humans) share the world; this 'flatter' ontology reworks will, intention and causality, seeing them not as the properties of individual bodies but as post-personal events in an emerging confederation;

- Two: to recast epistemology by breaking open the individualised, rational and binary representational logics on which the Cartesian knowing subject and his (*sic*) knowledge-making practices rest; thereby displacing views which posit 'truth about' and 'power over' by forms of immanent, embodied and embedded knowing-in-being which better attend to indeterminacy, uncontainability, excess, flow, dynamics, multiplicity, happenstance;

- Three: to move from a consciousness-based, cognitive, interiorised, phenomenological view of experience to a materialist, relational, co-constitutive, affective, vitalist, corporeal, notion of experience which foregrounds entanglement; this move is productive of responsible and ethical accountability for-and-with-others, such that the category of 'other' is rendered redundant;

- Four: to recentre the focus on practices, doings and actions as material-discursive enactments of the real in all its messiness, and to shift away from interest in epistemological correspondence between culture and nature (as in constructivist approaches), or language and culture (as in post-structuralism); in doing so, it sees the future as radically open;

- Five, to write inventively in order to undo the 'god-trick', the presumption of objectivity, or the view from nowhere; instead, to recognise the partiality of our

knowing, acknowledge that which is beyond our interpretation, and appreciate our situatedness and uncertainty.

Lather and St. Pierre (2013, 630) are clear that post-qualitative research involves giving up 'all the categories of humanist qualitative research'. By displacing the (human) 'I' with its privilege of knowing from a distance, and the depth models of reality and representation that this 'I' leans on and recreates, methodology as we currently know it becomes unthinkable. Such an undoing of method/ology is a new empiricist call to 'imagine forward' (Lather and St. Pierre 2013, 631) into a post-anthropocentric future for research inquiry. While undoubtedly producing profound discomfiture, post-qualitative new empiricists also hope that 'breaking methodological routine' will enable us to 'savor […] our critical edges, aporias, and discontents' such that incompletion and non-mastery become 'a positive norm' (Lather 2013, 642).

The question then become: what happens method/ologically when we do post-qualitative research? In what follows, I consider how the machinery that constitutes 'methods' shifts in the new empiricism in relation to three theoretical framings: thing power, object-oriented ontology and agential realism. All three framings share a posthumanist orientation which recasts ontological questions, reworks epistemological considerations and reshapes ethical relations. I use the humble table – that usually ignored but material object at which students sit in seminars to imbibe, disregard or co-construct whatever it is we as higher education educators think we're imparting in the way of knowledge – as a means to engage a post-qualitative new empiricist thought experiment. In the case of thing-theory, I explore where it takes us when we think of the table's agency in the agentic assemblage that is higher education. In an object-oriented ontologist vein, I speculate on how and whether we can know that table and ponder the ways to produce knowledge about an object which may remain withdrawn from us. And, in an agential-realist frame, I explore the table as a constitutive material phenomenon which brings into being relations of differential mattering.

Why focus on the table? Sara Ahmed (2010, 235) discusses how 'tables function as [theoretical] orientation devices.' She shows how the table does some good ontological and epistemological work for Husserl in enabling him to have a starting point for the development of phenomenology; she also discusses the Marxist table which works as a commodity made up of matter and labour; and the Feminist table oriented to the woman's writing body, which conceals the 'politics of housework', which is 'shaped by attachments', and which 'involves

racial and class-based divisions of labour' (Ahmed 2010, 253). Tables, then, matter. And, in indicating how tables work as orientation devices for bodies which are usually presumed to be a) human, b) male, and c) have an 'interior' consciousness, Ahmed illuminates not just *that* tables matter but *how* tables matter – primarily, that is, through their functioning as material objects which ground ontological and epistemological presumptions which underpin humanist research methodology. In what follows, I take the table and look at its functioning in higher education – at its key but ignored role in arranging and governing bodies in higher education time and space – from three different theoretical stances. This shifts the question from what a table is to *what a table does*, and how a new post-qualitative empirics might help get a purchase on this.

Thing-power: Higher education as an agentic assemblage

What does a table do? What force, power and agency does a table have? The deep ecology movement has produced new ways of thinking about human-natural relations arising from our current predilection for environmental ecocide (Clark 2011) while animal studies and studies of forests have shown the human as fundamentally caught-up in the sentient non-human (Kohn 2013; Pedersen 2010). But what of inert things? The things that we live amongst yet rarely notice until they fail to work, we trip over them, bump into them, or are emotionally touched by them anew? Jane Bennett's (2010, 4) concept of things as vibrant matter – 'things [as] vital players in the world' – makes a decisive move away from thinking things as dead, dumb, brute and passive matter waiting for some human to come along, notice and make use of them. Instead, taking up Latour's (2004) notion of actant, she proposes that things, in their vital materiality, have capacities that enable them to 'act as quasi agents or forces with trajectories, propensities, or tendencies of their own' (Bennett 2012, viii). Things (Bennett's examples include a dead rat, a plastic work glove, a bottle cap, a stick of wood and mat of pollen) enfold the human and nonhuman and have 'the ability to make things happen, to produce effects' (5). Bennett is at pains to point out that while the term thing-power, 'the curious ability of inanimate things to animate, to act, to produce effects dramatic and subtle' (Bennett 2010, 6), might suggest a conceptualisation of things in their individuality, stability and separateness, it is, rather, their force and intensity, and the fact that things don't act alone but in congregation with other things, humans and bodies, that a theory of thing-power aims to evoke.

Bennett develops the concept of an agentic assemblage to get across the idea that 'an actant never really acts alone. Its efficacy of agency always depends on the collaboration, cooperation, or interactive interference of many bodies and forces' (Bennett 2010, 21). While Deleuze and Guattari's (1987) notion of assemblages as heterogeneous groupings of diverse elements, a swarm of intensities, bodies, discourses and doings underpins Bennett's notion, what she wants to do is emphasise the *material agency* of assemblages:

> Assemblages are ad hoc groupings of diverse elements, of vibrant materials of all sorts. Assemblages are living, throbbing confederations that are able to function despite the persistent presence of energies that confound them from within. They have uneven topographies, because … power is not distributed equally across its surface. Assemblages are not governed by any central head …The effects generated by an assemblage are, rather, emergent properties (Bennett 2010, 23–24).

The effectivity of an assemblage inheres in its grouping-together of particular materialities in the here-and-now; its energy comes from its open-endedness and capacity for change; and its lifespan depends on its history and its immanent ability to self-order its forces into temporary and changing coherences.

How might thing-power be useful as a post-qualitative methodology for approaching higher education? Does it make sense to conceive of higher education as an agentic assemblage? Certainly, where agency is distributed via a confederation of human-nonhuman materialites all possessing thing-power, then the table in the seminar room is as good a place as any to start an empirical investigation. Tables are normally thought of as the inconsequential things that hold student bodies in place in classroom spaces while the important interior work of the intellect goes on. They are things to be moved in the service of interactive pedagogies as, for example, in pair tasks, group work or problem-based learning. Tables distribute students to ensure their visibility to the disciplinary gaze of the lecturer. In contrast, considered as a material actant, the table cooperates in concert in an ongoing human-nonhuman dynamic flow. The table affords a flat, smooth material surface for elbows (and sometimes feet), iPads, drinks bottles, tissues, items of clothing, paper, pens, skin tissue from scratched areas, cells that flake from fingers, and hair that falls from heads. Sometimes its inscriptions (graffiti from a previous human host) provoke affects (laughter maybe), conversation, or a responsive mark-making. Knees knock against its legs leaving fibres from jeans and shoes, chairs bump into it leaving scratches and surface marks. If my cells enter the table and some of the table's matter enters my body and clothing, along with material traces from the many other human and

nonhuman actants who come into contact it, then where does the table end and I begin, and vice versa?

When pressed into service and required to move, tables generate an energetic force-field in conjunction with human bodies, whose muscles they condition, and whose movements they determine, assisting humans to establish material patterns in space, as tables conglomerate next to each other in a together-ness that looks if not right then at least right-enough to get down to the task. Then, add the light – in perceptual range from windows, or the buzzing of the electric strip lights just audible overhead, or the smell and taste of the air in the closed seminar room – and the projector, screen, whiteboard, marker pens, rubbish bin, coat-hooks, door, carpet, chairs, all of which in their positioning and sensory qualities possess an affective, vibrational force, then it becomes very apparent that learning in higher education contexts is not simply about human cognition, intellect, or ability; it is not just about what knowledge in what subject or discipline is currently valorized and, therefore, worthy of dissemination. Rather, it is about how things acting in a kaleidoscopic confederacy create the texture, atmosphere, mood, and affects which condition what higher education is and means, what it does, and how it is experienced.

And this rather mundane example is scaleable. As lecturers, we spent our time living alongside, interacting with, and working in concert with things, including policy and strategy documents, students' assignments, and the ubiquitous computers, as well as the numerous tables and chairs, each one as individual as a student or colleague who may occupy it. Higher education, conceived as an agentic assemblage, is a product of thing-power as much as, and in concert with, human will; as such, it is a material choreography of doing and effecting by non-human and human agents. Teaching and learning has always had something of the ineffable about it, something not quite able to be tied down to quality criteria, something which evades measures of effectiveness, an excess not captured by learning outcomes. Thing-power is entwined in this elusive 'something'. Many of us know this in our bodies and feel this intuitively. Putting human intentionality on a par with the things, bodies and spaces that work as vibrant matter within an agentic assemblage in the here-and-now will create new possibilities for considering the meaning and modes of higher education.

Thinking higher education as an agentic assemblage which 'owes its agentic capacity to the vital [human and non-human] materialities that constitute it' (Bennett 2010, 34) requires a new methodological starting place and a new empirics to investigate its emergence and

happening. Bennett herself provides some clues. She advises us to 'suspend suspicion and adopt a more open-ended comportment' (xv); to 'follow […] the scent' (vx) of thing-power'; and to allow oneself to get 'caught up in it' (xv). Such a methodology invites uncertainty – she speaks of how the rat, bottle cap etc 'issued a call, even if I did not quite understand what it was saying. At the very least, it provoked affects in me' (4). It also slows down time – Bennett invites those pursuing a thingly methodology to 'linger in those moments during which they find themselves fascinated by objects' (17) – so that the physical force of what you apprehend can be felt: here, Bennett's phrase of 'being struck' carries visceral as well as intellectual import. Developing a methodology *for* an appreciation of thing-power is centred in a resistance to anthropocentrism, and brings to the fore the epistemological limit of human knowledge – thinking the agency of things cannot easily be dissolved into human knowledge (a point object-oriented ontologists take even further). In reframing questions of agency as always distributed, never individualised, and in positing ontology as an always material, flatter confederation of human-nonhuman doing, thing-power offers a new empiricist post-qualitative impetus to research endeavours, as this example of the table illustrates. Its ethical aim – 'to distribute value more generously' (13) because there is no ontological justification for the human/nonhuman divide – is also important, and a point I return to in relation to agential realism.

The table looks back: object-oriented ontology and higher education

Both object-oriented ontology (also called TripleO and OOO) and agential realism (which I deal with in the next section) make a claim on Bennett's thing-power. For object-oriented ontology, thing-power asserts the independence of objects from human capture and Graham Harman, the originator of object-oriented ontology, speaks approvingly of Bennett's approach which 'dissolves the usual strict opposition between free human subjects and inert material slabs' (Harman 2010, 774).[ii] For agential realism, in contrast, thing-power asserts the vitality of materiality. What object-oriented ontology and agential realism share is the wish to move beyond dualist structures, that is, human binary constructs, such as subject/object, mind/matter, nature/culture and the social categories, divisions and hierarchies they instate and regulate. They diverge on the nature of reality, or rather, on the question of how we can know reality. Object-oriented ontology wants to move beyond correlationism, which is the name Meillassoux (2008) has given to the belief, derived from Kantian mind-dependence, that we can never have access to thought or being in themselves but only ever to the 'correlation' between them – a view based in the presumption that whatever is 'known' can only be known

by an active mind or a knowing subject, for whom it is impossible to 'know' reality outside our own thinking of it. In developing object-oriented ontology, Harman urges us to put aside correlationist questions about how we know reality and focus instead on recognising that objects are beyond human experience. Karen Barad (2007), the originator of agential realism, opposes this. Her view is that no disentangling of mind and matter is ever possible; the two are so intrinsic to and inseparable from each other as to be mutually co-constitutive.

Harman's TripleO has an affinity with Mitchell's (2005, 156–7) views about the 'otherness' of the object:

> 'The moment [when] the sardine can looks back … when the subject experiences the object as uncanny and feels the need for what Foucault calls a "metaphysics of the object … that depth from which objects rise up" to challenge our superficial knowledge of them.'

Object-oriented ontology conceives of objects as real, individual, and autonomous from all perception. In *The Quadruple Object* (2011), Harman defines an object as anything that has a 'unified reality that is autonomous from its wider context and also from its own pieces' (115). He explains that: 'to be an object means to be itself, to enact the reality in the cosmos of which that object alone is capable' (74); that 'an object is not used or known, but simply is what it is' (73); that objects 'include those entities that are neither physical nor even real' (5), such that 'everything inside and outside the mind is an object' (143). In Harman's terms, a hammer is an object just as a unicorn is an object just as The Labour Party is an object, Amnesty International, the British Educational Research Association, this journal, you the reader, the screen I'm looking at, my finger nail, my dog's dreams, Andy Murray's second Wimbledon win, and the Confederation of British Industry are objects. Higher education then, likewise, is an object in Harman's terms. However, it's worth pursuing the contention that 'objects withdraw' from us and each other into their own inaccessible realms. Harman (2011, 47) writes:

> 'The object is a dark crystal veiled in a private vacuum: irreducible to its own pieces, and equally irreducible to its outward relations with other things.'

This belief in the object's withdrawal distinguishes object-oriented ontology from other philosophical traditions and theories and, while Harman draws much of value from Actor Network Theory, in the end for him ANT evades the irreducible 'objectness' of the world by insisting that it is the *relations* between things, not the thing-in-itself, that matter.

Nevertheless, Harman recognises that, while objects may recede infinitely from us and each other, they interact or 'touch', albeit asymmetrically through their surfaces or sensuous qualities. It is through objects touching that stabilisations temporarily occur, although every such stabilisation produces another object, so that there is a 'kind of infinite nesting of objects within objects within objects' (Brassier *et al*. 2007, 316). Despite their differences, we can see from this that, like thing-power, TripleO has an egalitarian ontology; that it dispenses with human exceptionalism; and that it questions the basis of the ontological rift between the human and non-human. It is also the case that Harman recognises that not all objects are as 'capable' as others, noting that some objects don't write poetry or have nervous breakdowns (Harman 2011, 119). However, an object-oriented ontologist would in any case consider poetry and nervous breakdowns as peculiarly human attributes that don't deserve any special recognition or priority over what any other object may (or may not) experience.

Does object-oriented ontology provide any methodological pointers to begin re-thinking higher education from a post-qualitative perspective? To approach this question, I'd like to return to the table in the seminar room. In *The Third Table* Harman (2012) makes a distinction between the 'everyday table' that is subject to use, the 'physical table' made up atoms, and the 'third table' which lies somewhere in-between these two others. For Harman, this third table is the 'real table', because it can't be reduced 'down' to its atoms or quarks or 'up' it its effects on humans. The real table has 'a genuine reality deeper than any theoretical or practical encounter with it' (10), and its reality is not exhausted by the use we make of it. Epistemologically, then, we cannot 'know' the seminar table in anything other than a superficial way. Human relations with, and experiences of, the table take place in too narrow a dimension, which falsifies both the possible perceptual modes in which tables live their lives and have their being and the causal relations into which they enter with other objects. The 'real' table remains beyond our human ken. Object-oriented ontology, in this move, takes its place with those variants of posthumanism which are interested in the nonhuman 'for its own sake' and is concerned with what Bennett (2016, 60) calls *'the world without us'*, in contrast with other variants of posthumanism, such as thing-theory and agential realism, which remain anchored in an appreciation of human positionality and projects (*'the world with us'*). It is this 'world without us' orientation that has led some to see object-oriented ontology as nihilistic and dystopian, in its literal reach toward a *post*-human future, where the human is eradicated as, for example, in the work of Brassier (2007) and Meillassoux (2008).

Given the new methodological orientations proposed by object-oriented ontology, does it have anything useful to offer in terms of empirical investigations into higher education? As the preceding section has suggested, we live our lives with objects which are in-themselves inaccessible and withdrawn. Indeed, we ourselves are objects inside other objects (real and conceptual), so perhaps it is the case that we ought to give the life of objects a little more attention. But how? There is little practical, emprical help to be gleaned from Harman (2012) whose main aims are philosophical – to recast ontology from an object's perspective and thereby displace correlationist thinking – although he does suggest we pursue objects via allusions albeit that they remain forever inaccessible. Bogost (2012), follows up Harman's vein of allusion, and develops 'alien phenomenology' as a means for operationalising object-oriented ontology. The two methods Bogost deploys are: one, carpentry, which involves using technology to make things that work without human intervention, with humans co-opted into the process in order to trace the 'exhaust of their effects on the surrounding world' (Bogost 2011, 100); and two, the creation of speculative fictions, that is, the use of metaphor, fiction, and narrative to express, evoke, and summon up the 'life' of objects. Bogost sees such methods as pragmatic and applied. As techniques for knowing, he argues that carpentry and speculative fictions offer a constitutive empirics that turns object-oriented ontology into a practical philosophy whereby we (humans) get to know just a little more about objects. Pursuing these methods at least puts us in good company. For example, in 1949, Aldo Leopard invited future US environmentalists to 'think like a mountain' (cited in Bennett 2016, 63) and some years later Thomas Nagel (1974) asked 'what is it like to be a bat?'

Speculating on 'what it's like to be a table' could (perhaps) lead to all sorts of interesting points, such as: use, exchange and commodity value in late capitalism; the built environment and material culture of seminar rooms; design, architecture and spatial use: the relation between pedagogy, learning and biographical history in one's experiences in higher education, for starters. Furthermore, unmooring tables from their conventional contexts need not be a solipsistic empirical endeavour but one which can assist us in the act of producing the 'other' kinds of knowledge that engage our imaginations in different ways but are productive of mess, uncertainty and perplexity. These moments of 'productive errancy' can, according to Joy (2013 34) be a release from the deadening status-quo of the known in order to effect a heightened contact with the world itself, in all of its extra-human (but also co-implicate) vibrations'. Speculative fictions, along with other research practices such as collective biography, autoethnography, performance ethnography, memory stories, and art-based investigations, all of which are currently hovering at the edges of mainstream educational

research, may provide some useful empirical tools to into the orbit of post-qualitative research and, from there, help generate a less comfortable social science.

One other theoretical proposal worth considering is the notion of higher education as a 'hyperobject'. This is Morton's (2010) term for a massively distributed object. Hyperobjects have five characteristics: one, they are non-local, in that they instantiate themselves beyond local borders (think how many universities have global manifestations and partners across the globe); two, they are viscous, in that they touch other objects and overcome their resistance (think how the audit culture or the measurement of student engagement has colonised so many of our teaching, learning and research activities); three, they are molten (higher education happens via the learning and knowing it provokes in all sorts of places, not just the space and time of the university building but at home, on the bus, in the garden); four, they are phased, in that it is hard to conceive of their extent (if we could 'see' all its manifestations and outcomes the object that is 'higher education' would both escape our view and look different to what we can see at 'ground' level); and five, they are interobjective, in that they connect with other objects (higher education exists in its relations to schools, families, economies, political systems, individuals etc). Thinking higher education as hyperobject – or as an object nested within other objects in Brassier's terms above – makes sense: higher education is a pedagogic-cultural-economic-political object which continually achieves temporary stabilisation of its heterogeneous parts but parts of 'it' or 'it' in its object-entirety remain hauntingly withdrawn from thought.

Object-oriented ontology, like thing-power stubbornly resists anthropocentrism. In doing, it recasts agency, ontology and epistemology. It necessitates a rethinking of the empirical beyond a humanist orbit. So does the final theory I consider, agential realism, but from a different starting point.

The matter of the table: Agential realism as an ethico-onto-epistemology for higher education

This section focuses on agential realism, the theory Karen Barad (2003; 2007) devised and elaborated in *Meeting the Universe Halfway* to explain her view that matter and meaning are iteratively reconfigured by a whole range of participating agencies in each and every moment in the ongoing re-constitution and mattering of the world. As a feminist philosopher-scientist Barad, along with Alaimo and Hekman (2008), Coole and Frost (2010) and Ahmed (2013),

has been particularly influential in developing feminist neo-materialisms, a loose and heterogeneous set of theories which seek to decentre the human in order to emphasise the agentic and co-constitutive power of matter (Taylor and Ivinson 2013). Barad's agential realism is based in a conception of matter's dynamism (a common point of reference with Bennett's thing-power). This moves her to reconceptualise ontology as a material entanglement of human, non-human and other-than-human bodies, all of which emerge as co-constitutive agents, that is, as dynamic co-producers of the social. The 'agential' refers to a rethinking of (human) will and intentionality, which recasts agency as a material enactment, no matter who or what is doing the acting; whereas 'realism' does not refer to representations of an independent reality but to 'the real consequences, interventions, creative possibilities, and responsibilities of intra-acting within and as part of the world,' (Barad 2007, 37). Agential realism, therefore, erases any of the usual (man-made/human) boundaries between nature and the cultural, which is why Barad speaks of the *naturalcultural*.

This ontological move has implications for ethics. Recall that Bennett's (2010, 13) thing-power aimed to 'to distribute value more generously' because there is no moral justification for the human/nonhuman divide. Barad (2007) shares this intention, which is why she focuses on questioning the boundary-making practices which designate some material bodies as less significant than others (usually as less significant than 'us' humans). By paying attention to how matter comes to matter differentially, agential realism offers a new ethical account of how different distinctions get made, materialise and solidify. That the material world we inhabit is composed of matter which matters differentially is not, for Barad, a mere play on words but is an invocation of an ethical reckoning and a call to greater responsibility.

Just as an agential realist ontology reworks ethics, so it also necessitates a reworking of epistemology. For Barad, ideas are materially entangled with the world. She comments that 'our knowledge making practices, including the use and testing of … concepts, are material enactments that contribute to, and are part of, the phenomena we describe' (Barad 2007, 32). In agential realism, knowledge is seen as an entangled material-discursive practice of knowing-in-being. While this is the correlationist offense that separates agential realism from object-oriented ontology, it is also the thing that alters radically how we think knowledge is made and what counts as knowledge. Entanglement pushes feminist critiques of the 'god trick' – the 'objectivist', 'rational' view from nowhere (Haraway 1988) – further and ensures we take seriously our own (human) embodied, corporeal and implicated participation in knowledge production. Agential realism proposes that many agencies partake in the

production of knowledge, and that knowledge is pluralised and distributed rather than being a matter of individual minds or bodies.

Barad (2007) collapses any separation between ontology, epistemology and ethics and, instead, proposes the term 'ethico-onto-epistemology' (185) to describe the ways that our entangled materiality makes us responsible for our knowing-in-being in the world as accountable agencies alongside other agencies. We know, Barad says, because we are *of* the world, because 'knowing is a matter of part of the world making itself intelligible to another part' (185). Knowing is a material enactment of being. The term, ethico-onto-epistemology, term takes its place alongside others in a new agential realist lexicon. Some of these I have already used: 'intra-action' is a neologism that:

> 'Signifies the mutual constitution of entangled agencies. That is, in contrast to the usual "interaction," which assumes that there are separate individual agencies that precede their interaction, the notion of intra-action recognizes that distinct agencies do not precede, but rather emerge through, their intra-action' (Barad 2007, 33).

In agential realism, there are no 'things', that is, there are no separate entities which have 'inherently determinate boundaries' (138). Instead, drawing on quantum philosophy-physics, there are 'phenomena' and there is 'entanglement':

> 'The primary ontological unit is not independent objects with inherent boundaries and properties but rather phenomena' whereby 'phenomena are the ontological inseparability/entanglement of intra-acting agencies' (139).

Intra-active emergence proceeds from the entanglement of phenomena in a dynamic intra-activity which does away with 'traditional' notions of object and subject. While agential realism affirms that matter and meaning are not separate entities, it also wishes to account for practices of differential mattering, and Barad here brings in the concept of the 'agential cut'. Cuts are material practices which separate out something from something else and, thereby, institute exclusions and produce boundaries. However, 'cuts' remain constitutive parts of the phenomena produced, and are entangled within ongoing intra-actions. For this reason, she says:

> 'Cuts cut "things" together and apart … "they" and "we" are co-constituted and entangled through the very cuts "we" help to enact,' (Barad 2007, 179).

On this account, agency is re-thought as an 'ongoing ebb and flow' (140), matter is re-thought as 'an active 'agent' in its ongoing materialization', and cuts call us to account for the choices we make. The final term is 'apparatus' by which Barad means material- material-discursive practices (most emphatically *not* laboratory set-ups). Apparatuses are:

> 'The material conditions of possibility and impossibility of mattering (148) … they are open-ended practices … materially of the world, not simply 'in' the world' (146).

Apparatuses are the conditions within which boundary drawing practices via cuts are materialised and come to matter. They are non-deterministic practices which condition and produce the differences that matter. This rather brief introduction has outlined the concepts which underpin agential realism, and indicated the challenge to methodology it poses. Returning to the seminar table will provide a useful example of how Barad's concepts may be empirically activated in order to allow matter its due as an active participant in the world's becoming. In what follows, I use an agential-realist frame to highlight the table as a material phenomenon constituted by and constitutive of relations of differential mattering.

This table does not withdraw as the table of the object-oriented ontologists might; it doesn't possess thing-power in any straightforward way; rather, its importance lies in the fact that this table's existence is a dynamic 'coming to matter' in the space-time of here-and-now. The agential realist table emerges via its entangled intra-active agency with other co-implicated agencies and, in doing so, materializes (however small they may be) differences that matter. One example of the important work of mattering done by tables in a seminar room I recently taught in was to insistently bring to the fore matters of dis/ability. The wheelchair-user-student had to sit at the end of a row, uncomfortably near the door, due to a small room overstocked with too many large, heavy and immovable tables, the materialities of the room signalling, sedimenting and becoming entangled with her and our immobility. In this room, the tables produced a cut: that is, they materially highlighted whose bodies 'fitted' comfortably here (those positioned behind tables, in orderly if rather narrow rows) and whose body did not (and was required to sit in relative isolation unable to fit behind a table). In this instance, the table illuminates its agency in an apparatus of mattering. The table emerges via its material entanglement in this particular room alongside and with a student who co-constitutively emerges as being *disabled* by the room's materialities. In a different room this may not have happened. Therefore, honing in on the table in its intra-active production of who matters and how they matter brings to the fore in unexpected ways the normative

presumptions pertaining to size, shape and mobility of student bodies which, despite many years of widening participation work and work to promote the social model of disability, still in some ways underpin the material arrangements that condition higher education pedagogy in some (perhaps many) seminar rooms.

It is because we don't usually notice the generative mattering work that tables do that we don't pay any attention to how, when students enter a room for the first time, the distribution of tables presents them with an apparatus – a material arrangement – they are required to accommodate themselves to. And, usually without question, they do accommodate themselves and keep on doing so in an ongoing intra-active production of mattering which cuts together and apart the pair work, the group work, the friendship groups, the rivalries, that constitute the emergent pedagogic work in that particular classroom ecology. Thus, tables as entangled phenomena in the material apparatuses of seminar rooms, help to iteratively reconfigure what is possible and what is impossible' (Barad 2007, 234); they help constitute higher education pedagogy in its moment-by-moment emergence through the specificity of *these* intra-actions with *this* particular table in *this* particular place in *this* specific time with *these* particular bodies. Thinking with Barad's agential realism shows higher education as an unrepeatable, always emergent, configuration of knowing-in-being, an entangled material-discursive practice of instances that, however fleeting and happenstance, contribute to the possibilities of the world-to-come. In an agential realist frame, what happens at each and every table is not only about 'meeting each moment, being alive to the possibilities of becoming' it is also 'an ethical call, an invitation that is written into the very matter of all being and becoming' (Barad 2007, 396) in which taking responsibility for what we say and do, the marks we make, the practices we instantiate, and the relations we engender in each intra-action, really do matter.

Thinking ethico-onto-epistemologically about just one table, one class, one room in one university as intra-actively entangled phenomena in which we are responsible for each other and every thing is perhaps a promising place for an agential realist post-qualitative empirics of higher education to begin. The separation between categories (such as human/ nonhuman; person/environment; interior/ external) collapse and with them the individualsing, competitive, instrumental cultures presumed by neoliberal cultures of higher education. If we are entangled, and we are participating in the world's contingent becoming, then higher education in agential realist frame is an incitement to a different more hopeful future, one that distributes agency differently, recasts causality as material enactment of human-nonhuman

bodies in an ongoing, practice of mattering, and materialises in each moment as a politics of encounter and an ethic of relation.

Rethinking the empirical: assessing the promise of post-qualitative research

This article has shown that tables matter, and for all sorts of reasons. For those who follow Bennett (2010), the table's thing-power is an indicator of its agentic force, its affective capacity, and its scope to act as lively matter in a human/nonhuman confederation. In contrast, object-oriented ontology sees a table as an object whose power resides in its capacity to withdraw into its own depths in ways which preserve its independence from capture by human thought, even though its sensuous (surface) qualities may be visible to us. Conversely, agential realism conceptualises the table as an intra-active and dynamically emergent instance of mattering which is both entangled with and makes material-discursive cuts into the iterative becoming of the world. I have used the example of the table as a mundane item in the everyday world of higher education both to show how the three theories may be 'applied' and to highlight a more fundamental point – that each theory, in different ways, shares an affiliation with the growing post-qualitative research 'movement' which proposes new methodological starting points and, from that, invents new modes of empirical inquiry.

Above, I mapped the five key foci around which new empiricist post-qualitative revolves. These indicate that the implications for method/ology of pursuing research in a new empiricist, post-qualitative vein are profound. As the new methodological starting places offered by the three theoretical orientations I have used in this article indicate, taking up Lather and St. Pierre's (2013, 630) invitation to dispense with 'all the categories of Humanist qualitative research' is challenging work. Indeed, the work needed to be done to cut agency loose from human subjectivity in ways which fundamentally contest the legitimacy of the Enlightenment rationalist knowing subject and include a host of other bodies, objects and things as agencies, actants, forces and powers is an adventure into the methodological unknown: if there are no methodological 'templates' for this work, then what 'counts' as a research problem? How can we 'design' a research project? How do we know what our 'data' might be? How might we analyse it? How to present it to others? How to evaluate its worth? These questions are familiar to all those involved in research, from doctoral students, to early career researchers, to experienced scholars. For those engaged in forging a post-qualitative empiric, the answer that's emerging seems to be: we don't yet know but the trying is worth it,

where the 'trying' is oriented to envisioning something beyond the present framing for research, and to inaugurating creative interferences to current practices.

Here, I briefly outline how some post-qualitative scholars have shaped the empirical in their work. Childers (2013, 605) considers fieldwork as 'an affective event where the materiality of the field rises up to meet us, rubs up against us, pushes back on our interpretations'. She urges the inclusion of buildings, books, spaces, and other animate and inanimate objects, as well as the more familiar policies, theories, practices within the orbit of ethnography, arguing that this shifts how we conceptualise what counts as the research object *and* how the researcher engages with it. Moor and Uprichard (2013) foreground a dense and unwieldy materiality, in their case of the Mass Observation Archive. In their view 'paying attention to the materiality of method has significant advantages when it comes to studying social change and continuity' (1.4) and they note how 'sensory judgement' about paper, handwriting or typed notes, for example, may lead to new forms of knowledge creation. Koro-Ljungberg *et al*. (2015) propose paying attention to 'events' and 'particles' which both attest to our 'raw partiality' as researchers in initially selecting them as objects of attention, and forgo the pretence that of 'purification and cleaning' that transform experience and events into 'data'. Kuntz and Presnall's (2012) re-shape the interview as intra-view in which the method of 'diffractive seeing' is used to visiblize the limit of power via the embodied and emplaced nature of the interview exchange. MacLure (2013, 660) argues that post-qualitative practices require post-representational modes of data analysis, and suggests we focus on data 'hotspots' or 'the emergence of [a] glow … not under our conscious or intentional control as analysts', as a means to unpick the humanist mastery of the coding and thematizing practices on which the presumed analytical rigour and validity of data analysis procedures are said to depend. And post-qualitative research requires post-qualitative modes of writing and communication, that is, writing which shows that the dirt from fieldwork is still under the fingernails, that the data that refused to 'speak' hasn't been left on the shelf, and the meanings that evade the cover story of the 'finished' research remain to puncture that smooth and soothing narrative surface (Holmes 2014; Koro-Ljungberg *et al*. 2015; Senior and Solomon 2013).

The 'undoings' of methods-as-usual in post-qualitative inquiry promises, in my view, to open a new empirical landscape for higher education research investigations. This article has been an experiment in methodological thinking forward about the nature of the empirical in that landscape. Rethinking and reworking the empirical in this vein is not easy. Creating knowledge-making practices which are immanent, embodied, embedded, entangled and

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situated; which privilege indeterminacy, uncontainability, excess, multiplicity, and the happenstance; and which make space for the human alongside and with the nonhuman is a very real challenge. It requires making methodology anew with each research endeavour; it means attentiveness to the micro, to the instance, and to singularity; it is productive of multiplicity; and it is about entangled responsibility and accountability. It is much easier to say you will evade the humanist legacy, than to actually do so in practice. Take as a simple example the 'I' that I(!) have used throughout this article. I might justify this usage as a means to facilitate clarity of communication (always a good thing in a journal article), as an elucidation that I as 'owner' of a 'voice' have an intention to express an academic argument, as a signifier of the reflexive researcher of highr education practices, as an assertion of presence, as a device to declare my values and research commitments. Okay. However, in doing so, I – in using the 'I' – re-inhabit and reinstall one of the very things I wish to abjure: the humanist singular subject, the rational instrumental actor. But how can we exist without the 'I'? How can knowledge be produced without an 'I' doing the producing? These are 'big, risky questions' as Lather and Pierre (2013, 361) note. Nevertheless, they are questions worth asking because, ultimately, the promise of post-qualitative research is political: it keeps methodology on the move in order to better attend to the gaps, silences, excisions and exclusions, thereby to work out ways of approaching a future which is more inclusive, collaborative and kind for *all* human, nonhuman entities and other-than-human creatures. Such a task will, indeed, involve us in a less comfortable social science.

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Notes

[i] The subtitle for this section is taken from Patti Lather's (2007) book *Getting Lost: Feminist Efforts Toward A Double(d) Science*. Lather's (2014) keynote at the International Congress of Qualitative Inquiry (2014) was an important influence on my thinking about the 5 key foci of the new empiricism.

[ii] In this article I focus on object-oriented ontology as elaborated by Graham Harman. There isn't time here to discuss the relation of OOO to speculative realism. For those interested in this, Peter Gratton's (2014) book is an excellent introduction. Those interested in the difference between agential realism and object-oriented ontology might want to look at C.A. Taylor (2016) 'Close encounters of a critical kind: A diffractive musing in/between material feminism and object-oriented ontology.' *Cultural Studies <=> Critical Methodologies*, 16 (2): 201–212.